Does Gratitude Promote Prosocial Behavior?
The Moderating Role of Attachment Security

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As part of a general turn toward positive psychology (e.g., Gable & Haidt, 2005; Seligman & Csikszentmihalyi, 2000), psychological researchers have begun to examine the nature and effects of classical virtues, one of which is gratitude. Emmons and McCullough (2004), for example, portray gratitude as a remedy for many of life’s hardships and a way to achieve peace of mind, happiness, physical health, and improved relationships. The sacred writings of the three major monotheistic faiths, Judaism, Christianity, and Islam, as well as Buddhist and Hindi writings emphasize the desirability and benefits of gratitude (Emmons & Crumple, 2000). Even before the advent of positive psychology, Graham (1988) and Peterson and Stewart (1996) reported that people who feel more grateful after receiving a benefit are later more likely to help the benefactor and other people as well. Even earlier, Baron (1984) found that more grateful people are less likely to engage in hostile, destructive behavior. In short, gratitude seems to foster prosocial behavior, which makes it worth considering in the present volume.

For centuries gratitude was a prominent topic in philosophy, and philosophers were divided into two major groups – those who glorified gratitude and those who viewed it as tinged with egoistic motives and feelings of obligation (McCullough, Emmons, & Tsang, 2002). In other words, gratitude, like empathy (Batson, Chapter 1, this volume) has a mixed reputation. It may lead naturally to prosocial behavior, but it may also be contaminated or distorted by selfish, self-protective motives. If so, the link between gratitude and prosocial behavior may not be so straightforward.

From ancient Greek philosophers to contemporary thinkers, gratitude has often been viewed as an important contributor to harmonious relationships. Cicero (1851), for example, believed that gratitude is “not only the best, but the parent of all other virtues” (p. 139). The influential economic philosopher Adam Smith (1790/1976) defined gratitude as “the sentiment which most immediately and directly prompts us to reward” (p. 68). The prominent child psychoanalyst, Melanie Klein (1957), suggested that the development of gratitude in childhood goes together with the development of generosity, because a grateful person wishes to benefit
others by sharing the gifts he or she has received. In a more recent analysis, Tsang (2006) suggested that “the receipt of a benefit from another may trigger the norm of reciprocity, which states that individuals should help, as well as refrain from harming, people who have helped them” (p. 139). And Bartlett and DeSteno (2006) claimed that gratitude contributes to trust, which is especially likely to develop when a benefactor engages in costly acts of generosity (see Rusbult & Agnew, Chapter 16, this volume).

We are interested in the possibility that the beneficial effects of gratitude on prosocial behavior are moderated by attachment security. In our previous work (e.g., Mikulincer, Shaver, Gillath, & Nitzberg, 2005), we found that attachment insecurity interferes in various ways with prosocial attitudes and behavior; thus, it seems likely that insecurity will also disrupt the link between gratitude and prosocial behavior. We begin by considering evidence for that link in general. We then explain parts of attachment theory (Bowlby, 1982) in sufficient detail to allow their use in our examination of gratitude. Next we review some of our previous work on attachment insecurities and prosocial caregiving, which provides a model for research on gratitude and prosocial behavior. We then present new research, including two previously unpublished studies, on the moderation of the gratitude-altruism link by attachment insecurities. Our overriding goal is to explain how attachment insecurities affect both the texture of gratitude experiences and the effects of those experiences on prosocial behavior.

*Gratitude and Prosocial Behavior*

In psychology, gratitude has been portrayed in diverse ways: as a positive emotion, a personality trait, a positive attitude toward others, a moral virtue, and a constructive approach to interpersonal relations (Emmons & McCullough, 2004; Heider, 1958; Weiner, 1986). Emmons and McCullough (2004) concluded, despite these different perspectives, that gratitude can be conceptualized in terms of three propositions. First, the object of gratitude is always an “other,” whether a human being, a nonhuman natural being (e.g., an animal, the weather), or a supernatural being (e.g., God). Second, gratitude is a response to a perceived personal benefit (e.g., a material, emotional, or spiritual gain) resulting from another’s actions, a benefit that has
not necessarily been earned or deserved. Third, gratitude stems from appraising the benefactor’s actions as intentionally designed to benefit the recipient, even if the intention is metaphorical, as in the case of good weather (“Thank you for not raining on my parade”). According to Lazarus and Lazarus (1994), gratitude results from recognizing another’s goodwill and appreciating the other’s generous action as an altruistic gift. Agreeing with this conception, Tsang (2006) defined gratitude as “a positive emotional reaction to the receipt of a benefit that is perceived to have resulted from the good intentions of another” (p. 139).

Given her psychoanalytic perspective, Klein (1957), focused on the mother-infant relationship and equated the ability to feel gratitude with the ability to love. She proposed that warm, comforting interactions with a sensitive, responsive, and supportive caregiver foster positive mental representations of others (an idea taken up later by Bowlby, 1973, who had studied under Klein). These positive representations soften or dilute destructive emotions such as greed and envy, and cause infants to feel they have received a unique gift from their mother that they wish to keep. This feeling makes it easier, later on, to feel grateful for other people’s kindness and generosity. Klein (1957) also viewed gratitude as part of a child’s assimilation of a “good object” (mental representation of another person), which enriches the self and provides inner resources for coping with frustrations and hardships without bitterness.

Viewing gratitude as an inner resource is also part of positive psychology (e.g., Aspinwall & Staudinger, 2003; Seligman, 2002). Happiness and life satisfaction are viewed not only as consequences of luck or genetics (although they also play a part; Lyubomirsky, 2007) but as results of personal strengths shaped by social experiences and of deliberate personal effort. The capacity for gratitude is one of these strengths, which can improve people’s physical and mental health (Snyder & McCullough, 2000). In support of this view, Emmons and McCullough (2003) found that priming thoughts of gratitude each day over a period of weeks measurably improved people’s sense of health and well-being.

McCullough, Emmons, and Tsang (2002) constructed a self-report scale to measure individual differences in dispositional gratitude (the Gratitude Questionnaire-6, or GQ-6). They
viewed the “grateful disposition” as a tendency to recognize others’ generous contributions to
one’s own achievements and to feel thankful. People who score high on dispositional gratitude
are expected to feel more grateful than low scorers following positive events, and to feel grateful
for more aspects of, or more people in, their lives. In support of this prediction, Watkins,
Woodward, Stone, and Kolts (2003) found that grateful people tended to experience greater
“abundance” in their lives, feel grateful for others’ contributions to their personal well-being, and
appreciate even small pleasures in life.

McCullough et al. (2002) found, in support of a hypothesized link between dispositional
grate fully disposition and prosocial behavior, that people who scored higher on the GQ-6 were more
empathic toward others who were distressed. Moreover, such people engaged more frequently in
prosocial behavior and were rated as more generous and helpful by their friends and relatives
(McCullough et al., 2002). As mentioned earlier, Graham (1988) and Peterson and Stewart
(1996), studying state rather than dispositional gratitude, found that people who felt more
grate fully after being benefited by another person were more likely to be helpful later on. Because
these findings were based on self-reports of helping behavior and on cross-sectional research
designs, however, they do not provide strong evidence for the causal hypothesis that gratitude
increases the occurrence of helping behavior rather than merely being correlated with it.

Bartlett and DeSteno (2006) and Tsang (2006) recently overcame these methodological
limitations by experimentally manipulating gratitude and then assessing actual helping behavior.
In Bartlett and DeSteno’s (2006) study, participants in a gratitude condition performed a tedious,
repetitive, aversive eye-hand coordination task and were informed after completing it that, due to
a computer problem, they would need to perform it again. Just then, a confederate (the
“benefactor”), who had completed the task without any difficulty, solved the computer problem
and made it unnecessary for the study participant to repeat the task. This gratitude condition was
compared with a neutral condition (in which there was no computer problem and the confederate
merely conversed briefly with participants) and a positive mood condition (in which participants
watched a humorous video clip after the tedious task). At the end of the experiment, participants
were approached by either the confederate or a stranger and asked if they would be willing to help with a cognitively taxing problem-solving survey. Time spent on the survey was the index of helping behavior. Bartlett and DeSteno (2006) found that participants in the gratitude condition spent more time helping the benefactor or the stranger than participants in the neutral and positive mood conditions. Moreover, this effect was mediated by feelings of gratitude and could not be explained by other measured positive emotions.

In Tsang’s (2006) study, participants performed three rounds of a resource-distribution task with a confederate and received, by “chance,” less money than the confederate in the first round. In the second round, the confederate in the gratitude condition gave most of the money he or she had gained (9 out of 10 dollars) and wrote to the participant, “I saw that you didn’t get a lot in the last round—that must’ve been a bummer” (p. 142). In the control condition, participants received $9 by chance. All participants received $10 in the third round and were asked to distribute the money between themselves and the confederate and to write the reasons for their distribution decision. Participants in the gratitude condition gave more money to the confederate than participants in the chance condition and were more likely to write that they were expressing appreciation or gratitude.

Although these two studies demonstrate that experimental manipulations of gratitude can facilitate prosocial behavior, they do not take into account the possibility that people differ in their reactions to receiving a valued benefit from others. For example, one person may react to the benefit with appreciation, whereas another may mistrust the benefactor’s intentions. Hence, one person may express gratitude as a means of strengthening his or her relationship with the benefactor, while another may believe that such an expression is a threat to his or her sense of personal freedom and dignity (“I was so weak that I needed help”). In addition, the designers of these studies did not consider that research participants may differ in relationship history, their mental representations of other people, or their disposition to feel empathic concern for other’s needs. Such individual differences may moderate people’s reactions to generous behavior and the extent to which gratitude leads to prosocial behavior.
We believe that attachment theory (Bowlby, 1973, 1980, 1982), the framework motivating our research (see Mikulincer & Shaver, 2007, for a review), offers an integrative explanation of individual differences that affect the link between gratitude and prosocial behavior. The theory deals specifically with the long-term effects of relationship history, beginning in infancy, on mental representations of others, empathic concern, and prosocial behavior. In the next section we explain key components of the theory.

*Attachment Theory and the Mental Representation of Others*

According to attachment theory (Bowlby, 1982), human infants are born with a repertoire of behaviors (*attachment behaviors*) designed by evolution to assure proximity to supportive others (*attachment figures*), because such proximity protects an infant from physical and psychological dangers and threats, and fosters emotional stability (good affect regulation) and healthy exploration. Seeking safe proximity to attachment figures is organized by an *attachment behavioral system* that 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 especially important early in life, Bowlby (1988) claimed it is active over the entire lifespan and is evident in thoughts and behaviors related to seeking proximity in times of need.

Bowlby (1973) also proposed that the parameters of the attachment system are gradually shaped and altered by experiences with particular attachment figures. This shaping process produces fairly stable individual differences in mental representations of past attachment experiences and a broadly applied *attachment style* – a systematic pattern of relational expectations, emotions, and behaviors that results from a particular attachment history (Fraley & Shaver, 2000). Research, beginning with Ainsworth, Blehar, Waters, and Wall (1978) and continuing through recent studies by social and personality psychologists (reviewed by Mikulincer & Shaver, 2007), indicates that individual differences in attachment style can be measured along two orthogonal dimensions, attachment-related *anxiety* and *avoidance* (Brennan, Clark, & Shaver, 1998). A person’s position on the anxiety (or anxious attachment) dimension
indicates the degree to which he or she worries that a partner will not be available and responsive in times of need. A person’s position on the avoidance dimension indicates the extent to which he or she distrusts relationship partners’ goodwill and strives to maintain behavioral independence and emotional distance from partners. People who score low on these dimensions are said to be secure or to have a secure attachment style. The two dimensions can be measured with reliable and valid self-report measures, such as the Experience in Close Relationships inventory (ECR; Brennan et al., 1998), and they are associated in theoretically predictable ways with interpersonal functioning, affect regulation, and relationship quality (see Mikulincer & Shaver, 2007, for a comprehensive review).

Mikulincer and Shaver (2003, 2007) proposed that variations along the dimensions of attachment anxiety and avoidance reflect both a person’s sense of attachment security and the ways in which he or she deals with distress. People who score low on both dimensions hold internalized representations of comforting attachment figures, which create a continuing sense of attachment security, positive self-regard, and reliance on constructive strategies of affect regulation. Those who score high on either attachment anxiety or avoidance possess internalized representations of frustrating or unavailable attachment figures and hence suffer from a continuing sense of attachment insecurity. These insecure individuals rely on what Cassidy and Kobak (1988) and Cassidy and Berlin (1994), following Main (1990), called secondary attachment strategies (contrasted with the primary strategy of seeking proximity to an attachment figure in times of need). These strategies involve either hyperactivating or deactivating the attachment system in an attempt to regulate distress. High scores on the attachment anxiety dimension are associated with hyperactivating strategies: energetic attempts to attain greater proximity, support, and love combined with a lack of confidence that it will be provided. High scores on avoidant attachment are associated with deactivating strategies – inhibition of proximity-seeking tendencies, denial of attachment needs, maintenance of emotional and cognitive distance from others, and compulsive reliance on oneself as the only reliable source of protection.
According to attachment theory, differences in attachment histories are evident in a person’s mental representations of others (Bowlby, 1973; Shaver & Hazan, 1993; Shaver & Mikulincer, 2002), which Bowlby called *internal working models of others*. Whereas security-enhancing interactions with available and responsive attachment figures promote a positive representation, or working model, of others, emotionally painful, frustrating interactions with cold, unavailable, or rejecting attachment figures weaken a person’s sense of security and contribute to negative working models of other people. These models are gradually generalized across interactions with a particular attachment figure, and then combined with models of other partners to create general models that can have a “top-down” or schematic effect on perceptions of and expectations about others.

Bowlby’s (1973) conceptualization of working models of others implies that insecure individuals, who score high on one or both attachment-insecurity dimensions, are likely to harbor negative beliefs about other people’s intentions and traits. We (Mikulincer & Shaver, 2003, 2007) have shown how avoidant, deactivating strategies exacerbate negative views of others by diverting attention away from attachment-relevant information, including information about others’ positive traits, intentions, and actions. In this way, genuine signals of a partner’s love and support or the receipt of a valued benefit from the partner can be missed. And even when noticed, they can easily be forgotten and remain inaccessible when later appraisals of the partner are made.

Anxious, hyperactivating strategies are associated with complex, ambivalent mental representations of others. Although anxiously attached people have a history of frustrating interactions with attachment figures, they still believe that if they intensify their proximity-seeking efforts, they may force relationship partners to pay attention and provide adequate support (Cassidy & Berlin, 1994). This hopeful attitude stems from previous relationships in which parents or other relationship partners were sometimes responsive and sometimes not, thereby placing the anxiously attached person on a partial reinforcement schedule that inadvertently rewards persistence in proximity-seeking (Grossmann, Grossmann, & Waters,
2005; Shaver & Hazan, 1993). As a result, anxiously attached people, unlike avoidant ones, do not form a simple negative view of others and decide that proximity seeking is hopeless. They tend instead to take some of the blame for relationship partners’ unreliable attention, which lowers their self-confidence, but they also tend to become angry or jealous when a partner seems not to care enough (Mikulincer & Shaver, 2003). In other words, they hold out hope for true love and security while doubting their ability to attain and hold onto them. This leaves anxiously attached individuals vulnerable to false or premature beliefs that their relationship partners are not sufficiently available and responsive, and to a tendency to ruminate on real or imagined signs of partners’ lack of immediate availability.

Numerous studies have shown that attachment anxiety and avoidance are related to negative views of human nature (e.g., Collins & Read, 1990; Hazan & Shaver, 1987). Moreover, people who score relatively high on measures of attachment anxiety and avoidance tend to describe relationship partners in less positive trait terms (e.g., Feeney & Noller, 1991; Levy, Blatt, & Shaver, 1998), to perceive partners as less supportive (e.g., Davis, Morris, & Kraus, 1998; Ognibene & Collins, 1998), and to feel less trusting than their less anxious peers (e.g., Collins & Read, 1990; Hazan & Shaver, 1987). In addition, people high on attachment anxiety or avoidance have more negative expectations about their partners’ behavior (e.g., Baldwin et al., 1993; Baldwin et al., 1996) and tend to explain partners’ negative behavior in less positive, less tolerant terms (e.g., Collins, 1996). For example, Collins (1996) asked people to think about hypothetical negative partner behaviors and to write open-ended accounts of them. The more anxious and avoidant participants provided explanations implying lack of confidence in their partner’s love, attributed the partner’s negative behavior to more stable and global causes, and were likely to view these behaviors as malignantly motivated.

**Attachment Insecurities, Caregiving, and Prosocial Behavior**

Beyond conceptualizing the attachment behavioral system, Bowlby (1982) proposed that human beings are innately equipped with other behavioral systems (exploration and sexual systems, for example), including one aimed at providing nurturance (the caregiving behavioral
The function of this system is to respond to another person’s attachment behaviors. Theoretically, the caregiving system evolved because providing care for dependent or injured individuals (e.g., infants, frightened or injured family members) increased inclusive fitness (Shaver, Mikulincer, & Shemesh-Iron, Chapter 4, this volume). Its operation is most evident in parents’ emotional and behavioral reactions to their offsprings’ signals of need or distress. But we believe this system is also the innate foundation of empathy, compassion, and prosocial behavior.

According to Bowlby (1982), there is a dynamic interplay between the attachment system and other behavioral systems. This interplay was first demonstrated with respect to the exploration system. Ainsworth et al. (1978) showed that a child’s exploratory interests and inclinations are inhibited or distorted by activation of the attachment system in strange or threatening situations. Secure children know, however, that if they encounter difficulties their security-providing attachment figure will be available to help. Over time, this sense of security supports exploration even when an attachment figure is not immediately available. Anxious children, in contrast, are so preoccupied with parental availability and responsiveness that they explore less confidently and coherently, which eventually interferes with skill development and a sense of self-efficacy. Avoidant children use exploration as a distraction from anxiety, and therefore tend to play in a rather rigid, uncreative way (Ainsworth et al., 1978).

We (Gillath, Shaver, & Mikulincer, 2005; Kunce & Shaver, 1994; Mikulincer, Shaver, & Gillath, in press) and others (e.g., Collins & Feeney, 2000; George & Solomon, in press) have argued that the natural tendency to provide care to dependent or needy others can also be suppressed or overridden by attachment insecurity. Under conditions of threat, adults often think of turning to others for support and comfort rather than thinking first of providing care to others. At such times they are likely to be so focused on their own vulnerability that they lack the mental resources necessary to attend compassionately to other people’s need for help. Only when relief is attained and a sense of attachment security is restored can a person easily direct attention and energy to other behavioral systems. Only a relatively secure person can easily perceive others not
only as sources of security and support, but also as human beings who themselves need and
deserve support. An insecure person may have difficulty finding the mental resources necessary
to provide sensitive and effective care to others.

From the perspective of attachment theory (as well as that of Batson, Chapter 1, this
volume), people are inherently altruistic. The tendency to be empathic and relieve others’
distress was presumably selected over the course of human evolution because it contributed
indirectly to inclusive fitness (Hamilton, 1964). Originally, the recipients of care would have
been mainly children, siblings, and tribe members with whom a person shared genes. Once
caregiving motives became a universal part of the human psychological repertoire, however, they
could also be extended, by generalization or specific ethical training, to anyone who was
suffering or in need (Shaver et al., this volume). From this perspective it is reasonable to wonder
what interferes with the innate tendency to provide care to needy others and what sustains and
facilitates the expression of the presumed innate tendency. Attachment theory suggests that
attachment-related insecurities impede altruism, just as they impede exploration, whereas
attachment security makes empathy, compassion, and prosocial behavior more likely.

Recently, we have begun to examine associations between attachment security, on the
one hand, and prosocial feelings and behaviors, on the other. For example, Mikulincer and
Shaver (2001) showed that subliminal or supraliminal enhancement of people’s sense of security
increases their willingness to interact with threatening out-group members, and that higher scores
on attachment anxiety are negatively associated with this willingness. Moreover, Mikulincer et
al. (2001) found that contextual heightening of the sense of attachment security increased
compassionate responses to others’ suffering. They also found that higher scores on avoidant
attachment were negatively associated with empathic reactions to others’ suffering. Higher
scores on the anxiety dimension were associated with personal distress in response to another’s
suffering, but not with empathic responses. (The distinction between empathic concern and
personal distress is discussed by Batson, Chapter 1, this volume.) In other studies (Mikulincer et
al., 2003), experimentally engendered security increased the endorsement of two “self-
transcendence values” (Schwartz, 1992; see also Schwartz, Chapter 11, this volume), benevolence and universalism, which encourage prosocial behavior. In these studies, higher scores on the avoidance dimension were negatively associated with endorsement of these values.

Attachment insecurities are also negatively related to offering care to a mate. Individuals who score high on anxiety or avoidance are less sensitive to their romantic or marital partner’s needs, report less cooperative caregiving, and spontaneously offer less comfort and reassurance to their distressed partner (e.g., B. Feeney & Collins, 2001; J. Feeney, 1996; J. Feeney & Hohaus, 2001; Simpson, Rholes, & Nelligan, 1992). For example, Simpson et al. (1992) unobtrusively videotaped dating couples while the female partner waited to undergo a stressful procedure, finding that secure men recognized their partner’s worries and provided more emotional support and more supportive comments if their partner showed higher levels of distress. In contrast, men who scored high on avoidance actually provided less support as their partner’s distress increased. In another example, Collins and B. Feeney (2000) videotaped dating couples while one partner disclosed a personal problem to the other. Among participants who were assigned the role of caregiver (listening to the partner’s disclosures), the attachment-anxious ones were less likely to provide instrumental support than the ones who scored low on attachment anxiety.

In an attempt to examine attachment-caregiving dynamics in the wider social world, we (Gillath et al., 2005) examined associations between attachment insecurities, involvement in altruistic volunteer activities, and motives for volunteering. The findings were similar across the three countries that were sampled – the US, Israel, and the Netherlands. Avoidant attachment was associated with engaging in fewer volunteer activities, devoting less time to such activities, and being less motivated by desires to express altruistic values and to learn about oneself and the world. Attachment anxiety was not generally related to engaging or not engaging in volunteer activities or to devoting more or less time to such activities, but it was associated with more egoistic reasons for volunteering. That is, anxious individuals were not less likely to engage in volunteer activities than their less anxious counterparts, but their reasons for volunteering were
often tinged with wishes to fit in, be thanked and appreciated, and be distracted from or relieved of their own problems. We also found that the associations between attachment and volunteering were not attributable to other factors, such as self-esteem and interpersonal trust.

In a recent series of studies, Mikulincer, Shaver, Gillath, and Nitzberg (2005) examined the actual decision to help or not to help a person in distress. In the first two experiments, participants watched a confederate while she performed a series of aversive tasks. As the study progressed, the confederate became increasingly distressed, and the actual participant was given an opportunity to take her place, in effect sacrificing self for the welfare of another. Shortly before this scenario unfolded, participants were primed with either representations of attachment security (the name of a participant’s security provider) or attachment-unrelated representations (the name of a familiar person who was not an attachment figure or the name of a mere acquaintance). This priming procedure was conducted at either a subliminal or a supraliminal level. Both kinds of security induction increased participants’ compassion and willingness to take the distressed person’s place. This made us wonder whether gratitude might work similarly to empathy and compassion.

**Attachment Insecurities and Gratitude**

From an attachment perspective, the experience of gratitude should be similar to feelings of being protected, accepted, and valued, in which case it should contribute to working models of others as available, responsive, supportive, and loving (Bowlby, 1973; Shaver & Hazan, 1993). In other words, attachment security should be associated with dispositional gratitude. In contrast, avoidant individuals would be expected to react with less gratitude to others’ generous behavior. They tend not to believe in others’ goodwill even when it is demonstrated, they do not wish to depend on or be supported by other people (Mikulincer & Shaver, 2003, 2007). Moreover, expressions of gratitude toward a relationship partner can be interpreted as a sign of closeness or dependence, which is incongruent with avoidant people’s preference for emotional distance and self-reliance.
People who score high on attachment anxiety are expected to react ambivalently to others’ generous behavior. They tend not to believe they deserve others’ kindness, and tend to worry that they will not be able to reciprocate fully or meet a partner’s needs and expectations. This, in turn, may contaminate gratitude with fear and anxiety. In addition, for attachment-anxious people, positive interpersonal experiences may be reminiscent of previous experiences that began well but ended poorly. Once attuned to negative memories, the anxious mind suffers from a spread of negative affect (Mikulincer & Orbach, 1995), which is likely to interfere with pure gratitude.

In two recent studies, we (Mikulincer, Shaver, & Slav, 2006) tested these ideas. In the first study, 142 Israeli undergraduates completed the Experiences in Close Relationships inventory (ECR; Brennan et al., 1998), a measure of attachment-related attachment anxiety and avoidance; the GQ-6 scale (McCullough et al., 2002); and the Gratitude Experience Scale (GES; Mikulincer et al., 2006) – a 29-item measure of the subjective experience of gratitude. In the GES, participants were asked to recall a specific situation in which they felt grateful to someone and then rate the extent to which they experienced each of several feelings, thoughts, and wishes. A factor analysis revealed that the GES comprised seven experiential factors: secure-base feelings (e.g., “I felt there was someone who cared for me”), feelings of happiness and love (e.g., “I felt happy and satisfied,” “I felt love for the person I was grateful to”), narcissistic threats (e.g., “I felt I was risking my personal freedom”), generosity and positive outlook on life (e.g., “I felt appreciative of the good things in my life”), a sense of distrust in the other’s goodwill (e.g., “I doubted that person’s motives”), a sense of inferiority and vulnerability (e.g., “I felt weak and needy”), and feelings of obligation (e.g., “I felt a need to find a way to repay that person”). This structural analysis indicated that the subjective experience of gratitude is multifaceted, potentially conflictual, and quite complex. It can include positive feelings of happiness, love, security, and a positive outlook on life, but in some cases it can also include fears, feelings of vulnerability and obligation, and distrust of others’ intentions.
In line with predictions based on attachment theory, both attachment anxiety and avoidance contributed uniquely to explaining variance in dispositional gratitude and in the experience of gratitude. In particular, avoidant attachment was inversely associated with dispositional gratitude and with the experience of secure-base feelings, happiness/love, and generosity. Moreover, avoidant attachment was positively associated with the experience of narcissistic threats and distrust while feeling grateful. Although attachment anxiety was not significantly associated with dispositional gratitude, it was positively related to secure-base feelings, happiness/love, and generosity, and to narcissistic threats and feelings of inferiority and obligation. In other words, anxious attachment was associated with ambivalent experiences of gratitude.

These findings correspond with avoidant and anxious individuals’ models of others. On the one hand, avoidant attachment, which includes negative models of others, is associated with lower dispositional gratitude and a more negative experience of gratitude (more narcissistic threats and distrust, fewer secure-base feelings, and less happiness/love). On the other hand, attachment anxiety, which includes ambivalent models of others, is not significantly associated with dispositional gratitude, but is associated with an ambivalent form of gratitude (happiness, love, security, and generosity combined with narcissistic threats and feelings of inferiority). These associations were not explained by alternative constructs such as self-esteem and interpersonal trust.

In the second study, we examined whether the observed attachment-gratitude links also occurred in marital relationships and could be observed in daily reactions to specific partner behaviors. For this purpose, 55 newlywed couples (both husbands and wives) completed the ECR inventory, the GQ-6, and the GES. In addition, they completed a questionnaire each evening for 21 days, listed positive and negative behaviors exhibited by the partner that day, and rated the extent to which they felt grateful to their spouse during that day.

The results for the GQ-6 and the GES replicated the findings of the first study, again illustrating avoidant people’s generally negative characterization of gratitude experiences and
anxious people’s ambivalent experiences. For both husbands and wives, avoidant but not anxious attachment significantly predicted lower levels of daily gratitude toward one’s partner across the 21-day study period. Interestingly, husbands’ avoidant attachment interacted with daily perceptions of wife’s behavior in determining daily feelings of gratitude. Whereas less avoidant husbands reported more gratitude on days when they perceived more positive spousal behavior, more avoidant husbands reported relatively low levels of gratitude even on days when they noticed their wife’s positive behavior. In other words, a husband’s avoidant orientation not only inhibited gratitude overall, it also interfered with feeling grateful for a wife’s specific beneficial behavior on a particular day.

Overall, Mikulincer et al.’s (2006) findings indicate that both forms of attachment insecurity, anxiety and avoidance, are related to reductions in or distortions of gratitude. Avoidant attachment is related to lower levels of gratitude even in relational contexts that might make gratitude seem natural. Anxious attachment has a more complex signature: It does not necessarily eliminate gratitude, but it sullies it with conflicting feelings that may erode its beneficial effects.

Do Attachment Insecurities Moderate the Link between Gratitude and Prosocial Behavior?

Based on the findings reviewed so far, we hypothesized that the receipt of a valued benefit from another person, and even the expression of gratitude per se, is not sufficient to increase the likelihood of prosocial behavior. Rather, the link between gratitude and prosocial behavior is likely to depend on a person’s attachment orientation: Attachment security should allow gratitude to strengthen prosocial behavior, and attachment insecurities should erode the natural compassion and altruism we would otherwise expect to see following receipt of a valued benefit from another person.

As explained earlier, people who have enjoyed a gratifying history of interactions with attachment figures and who generally feel secure and valued as a result tend to hold positive beliefs about other people’s goodwill and character traits, and to be predisposed to feel empathic concern for others’ needs and to engage in prosocial behavior aimed at alleviating others’
suffering. Moreover, they are likely to express gratitude following the receipt of a valued benefit from another person and to experience gratitude as positive. Hence, for securely attached people, the receipt of a valued benefit from another person and the resulting experience of gratitude should increase the likelihood of prosocial behavior. The secure person’s positive mental representations of others should make it easy to perceive the valued benefit as a manifestation of other’s goodwill. Moreover, the secure person’s familiarity with true empathic concern and endorsement of the norms of reciprocity and fairness should encourage them to help others even when prosocial behavior is somewhat costly in the short term.

In contrast, avoidant attachment should reduce gratitude and break the natural link between being benefited and wishing to benefit others. Avoidant people’s negative models of others should raise doubts about the benefactor’s intentions and interfere with the experience and expression of gratitude. Moreover, their wish to maintain interpersonal distance and to avoid interdependence should further inhibit any empathic concern for others and tendency to act generously after being benefited themselves.

Although attachment anxiety has not been found to inhibit gratitude, it may still interfere with the prosocial effects of this virtue. As explained earlier, attachment-anxious people possess ambivalent models of others and are not confident of others’ goodwill, even after receiving a valued benefit. They are so focused on their worries and doubts – their personal distress (Batson, Chapter 1, this volume) – that they may have insufficient resources for attending to other people’s needs. Moreover, because they experience gratitude as involving mixed, ambivalent feelings (of being loved and supported but also inadequate and indebted), they may not be able to attend confidently to another person’s needs even after being the recipient of an act of kindness.

In two previously unpublished studies, we examined the hypothesized role of attachment insecurities in moderating the link between gratitude and prosocial behavior. In the first study, 80 Israeli undergraduate students (59 women and 21 men) completed the ECR measure of attachment anxiety and avoidance during regular class time. Some weeks later, they came to the laboratory individually and were randomly assigned to one of two conditions. In the gratitude
condition \((n = 40)\), participants received the gratitude exercise developed by Emmons and McCullough (2003). They were asked to think about the many things in their life, large or small, for which they might feel grateful: supportive relationships, sacrifices another person has made for them, the advantages and opportunities they have been granted, and even gratitude for life itself and the world they live in. They were then asked to write about these things in as much detail as possible in the time allowed. In the control condition \((n = 40)\), participants were asked to think and write about their typical day and the kinds of things that usually happen, in as much detail as possible in the time allowed. Following this exercise, the experiment seemed to end. But after leaving the room, each participant was approached by a confederate who asked if they would be willing to help with a cognitively taxing problem-solving survey (identical to the one used by Bartlett & DeSteno, 2006). The major dependent variable was the time spent working on the survey, which we interpret as a measure of helpful behavior.

A hierarchical regression analysis examining the unique and interactive effects of the gratitude exercise (a dummy variable contrasting the gratitude condition with the control condition), avoidant attachment, and attachment anxiety revealed significant main effects for the all three predictors (see Table 1). Replicating previous findings, participants in the gratitude condition spent more time helping with the survey than did participants in the control condition, and more anxious and/or avoidant participants spent less time helping. However, the main effects were qualified by significant interactions between gratitude and avoidant attachment and between gratitude and attachment anxiety (see Table 1). Simple Slope tests examining the source of the significant interactions revealed that the gratitude exercise led to more helping behavior than the control condition mainly when participants scored relatively low on anxiety and/or avoidance, \(\beta\)s of .57 and .55, \(p < .01\). This prosocial effect of the gratitude exercise was lower when attachment anxiety or avoidance was relatively high, \(\beta\)s of .19 and .21, \(p < .05\). As expected, attachment insecurities of either the anxious or avoidant variety disrupted the link between gratitude and prosocial behavior.
In the second study, we primed representations of attachment security or attachment insecurities and examined whether and how these manipulations moderated the gratitude-behavior link. For this purpose, 120 Israeli undergraduates (93 women and 27 men) participated in a two-phase laboratory experiment. They were divided into 8 experimental conditions, with 15 participants in each. In the first phase, we primed representations of a particular interpersonal relationship: a security-enhancing relationship, an avoidance-enhancing relationship, an anxiety-enhancing relationship, or a neutral relationship. In the security, anxiety, and avoidance conditions, participants received the prototypic description of either secure, anxious, or avoidant relational attitudes and feelings (taken from Hazan & Shaver’s, 1987, descriptions) and were asked to think and write about an actual close relationship of theirs that best fit this description. For example, in the security priming condition, participants were asked to think and write about a close relationship in which “you found it relatively easy to get close to your partner and were comfortable depending on him/her and having him/her depend on you. You did not worry about being abandoned or about the partner getting too close to you.” Participants in the neutral priming condition were asked to think and write about a student they knew but with whom they did not have a close relationship.

In the second phase of the experiment, participants performed Tsang’s (2006) resource distribution task with a confederate. Then, each priming group was randomly subdivided into two conditions – gratitude and chance – according to whether or not the confederate intentionally gave them a large amount of money and wrote them a generous note. The amount of money participants gave to the confederate in the third round was use as a measure of prosocial behavior. The entire procedure, including instructions, the gratitude vs. chance manipulation, and the dependent variable, was identical to that developed by Tsang (2006).

A two-way analysis of variance with priming condition (security, avoidance, anxiety, neutral) and gratitude manipulation (gratitude, chance) as the independent factors and amount of money given to the confederate as the dependent variable revealed a significant interaction between priming and gratitude, $F(3, 112) = 3.03, p < .05$. Simple Main Effect Tests indicated
that participants in the gratitude condition gave more money to the confederate than participants in the chance condition only when they were primed with neutral or secure attachment representations, but not when they were primed with anxious or avoidant representations (see Table 2). Additional Simple Main Effects Tests revealed that security priming caused participants in the gratitude condition to give more money to the confederate than given in the neutral priming condition (see Table 2).

In line with our predictions, priming insecure attachment representations, either anxious or avoidant, interfered with the prosocial effect of the gratitude induction. Moreover, priming a sense of attachment security strengthened the prosocial effects of the induction, suggesting that even short-term attachment security (induced in this case by memories of a good relationship) strengthens the connection between the receipt of benefits and generous behavior. The two new studies support our belief that gratitude and its links with prosocial behavior are complex and dependent on other factors, especially attachment security. It is relatively easy for a secure person to be generous, especially after being rewarded by someone else. It is difficult for an insecure person to be unambivalent about receiving a benefit from another person, and difficult for the benefit to be passed along to someone else. To an important extent, moral virtue depends on feeling loved, valued, supported, and cared for, both in the moment and over the years.
References


## Table 1

Standardized Regression Coefficients from an Analysis of the Effects of a Gratitude Induction and Attachment Insecurity Scores on Time Spent on a Problem-Solving Task

<table>
<thead>
<tr>
<th>Effect</th>
<th>β</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong></td>
<td></td>
</tr>
<tr>
<td>Gratitude induction</td>
<td>.38**</td>
</tr>
<tr>
<td>Attachment anxiety</td>
<td>-.37**</td>
</tr>
<tr>
<td>Attachment avoidance</td>
<td>-.32**</td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
<td></td>
</tr>
<tr>
<td>Gratitude x attachment anxiety</td>
<td>-.19*</td>
</tr>
<tr>
<td>Gratitude x attachment avoidance</td>
<td>-.17*</td>
</tr>
</tbody>
</table>

Notes: * p < .05; ** p < .01
Table 2
Means and Standard Deviations for Amount of Money Given to the Confederate as a Function of
Gratitude Induction and Priming Conditions

<table>
<thead>
<tr>
<th>Priming Conditions</th>
<th>Control</th>
<th>Secure</th>
<th>Anxiety</th>
<th>Avoidance</th>
</tr>
</thead>
<tbody>
<tr>
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<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>4.93\textsuperscript{c}</td>
<td>6.53\textsuperscript{d}</td>
<td>2.33\textsuperscript{a}</td>
<td>3.20\textsuperscript{a}</td>
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<tr>
<td>SD</td>
<td>1.71</td>
<td>1.68</td>
<td>1.95</td>
<td>1.78</td>
</tr>
<tr>
<td>Control condition</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>3.66\textsuperscript{b}</td>
<td>4.20\textsuperscript{b}</td>
<td>2.53\textsuperscript{a}</td>
<td>2.80\textsuperscript{a}</td>
</tr>
<tr>
<td>SD</td>
<td>1.41</td>
<td>1.93</td>
<td>1.99</td>
<td>1.27</td>
</tr>
</tbody>
</table>

Notes: Means with different letters are significantly different at p < .05.