From Stress to Learning:
Attachment Theory Meets Goal Orientation Theory

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Few investigators have explored connections between attachment theory and goal orientation theory. Although the theories differ in important ways, we suggest there is a striking similarity in their depiction of an adaptive pathway leading from stress to learning goals and constructive strategies, and a contrasting pathway leading from stress to self-validation goals and defensive strategies. We review evidence from two leading investigators—Mario Mikulincer in adult attachment theory and Carol Dweck in goal orientation theory—to show that, following failure and other setbacks, learning as compared to self-validation goals are more likely to lead to cognitive openness, problem-solving, support-seeking, and adaptive emotion regulation. The theories differ in their understanding of the views underlying learning and self-validation goals, and those differences have led to qualitatively different interventions. We suggest how attachment and goal orientation theory interventions can be integrated to maximize optimal functioning in stressful conditions.

Keywords: goals, attachment, self-worth, stress, interventions

An area of longstanding and growing interest in psychology is how people deal constructively with stress. In this paper, we bring together two theories particularly concerned with constructive responses to stress that allow for learning: attachment theory (Ainsworth, Blehar, Waters, & Wall, 1978; Bowlby, 1969/1982; Cassidy & Shaver, 1999; Mikulincer & Shaver, 2007a) and goal orientation theory (Ames & Archer, 1988; Dweck, 1999; Elliot, 1999; Kaplan & Maehr, 2007; Midgley & Urdan, 2001).

To date, these two highly influential psychological theories have been almost completely segregated from one another. We argue that the theories each contribute to an understanding of what allows for and what interferes with learning in stressful conditions. Attachment theorists and goal orientation theorists examine the views of people who are likely to reengage in learning and exploration following stressful experiences. They also examine people’s views that interfere with learning. A comparison of the views that these theorists emphasize suggests two complementary pathways for fostering people’s ability to respond constructively to failure, loss, and other stressors.

Why have these theories rarely been brought together in either theoretical discussion or research studies? In some ways, their segregation is not surprising. The two theories occupy fundamentally different domains: attachment theory focuses primarily on intimate relationships, and goal orientation theory focuses primarily on school and other achievement settings. There is also an age difference: the bulk of attachment research has been on the first years of life and on adulthood, whereas goal orientation research has focused on the years in between, from elementary school to college. Perhaps most importantly the two theories stem from a different mix of theoretical backgrounds: attachment theory was developed primarily from psychoanalytic, developmental, cybernetic, and ethological traditions (Ainsworth & Bowlby, 1991; Bretherton, 1997; Schore, 2000) while goal orientation theory grew primarily out of behavioral, cognitive, and social-personality psychology traditions (Dweck, 1999; Elliot, 2005).

However, we see essential commonalities between the two theories. Both theories are concerned with the question of what leads some people to respond constructively to stress and other people to respond defensively. In this review, we highlight the similarities in goals and differences in views, and suggest how combining the views from each theory could lead to more effective interventions to support learning and constructive strategies in response to stressors. Our objectives are both ambitious, in that we bring together two extraordinarily popular but almost completely segregated theories, and yet modest, in that we are only focusing on the experimental research of one investigator from each tradition. We identify important areas of overlap that lead to suggestions for further research and potential interventions.

An Overview of the Theories and Their Similarities

We first review key theoretical claims of each theory. We then highlight the similarity in the goals they identify and the dissimilarity in the beliefs that lead to those goals.

Attachment Theory

A major concern of attachment theory is the ways in which the caregiver-child relationship influences socioemotional functioning
Overview of Similarities in the Theories

Despite considerable differences, we maintain that attachment theorists and goal orientation theorists are similar in that they address an adaptive goal of seeking to learn and a maladaptive goal of seeking to validate self-worth. In addition to the goal of learning, another adaptive goal that is even more highlighted in attachment theory is seeking proximity and contact with the caregiver; the goals of learning and proximity/contact-seeking are seen as closely linked to one another (Ainsworth et al., 1978; Bowlby, 1973). Seeking proximity and contact with a caregiver is not of fundamental concern to goal orientation theorists (but see Crocker & Park, 2004; Ryan, Pintrich, & Midgley, 2001).
The conceptualization of learning as intrinsically motivating is fundamental to attachment theory as well as goal orientation theory. Bowlby wrote, “Another basic component of human nature is the urge to explore the environment, to play and take part in varied activities with peers” (Bowlby, 1988, p. 163). Ainsworth et al. (1978) and Bowlby (1969/1982) viewed exploratory behavior as an evolutionarily adaptive way for the infant/child to learn about the physical and social environment.1

We see intrinsically motivated learning in adulthood as similar in character to the urge for exploration described by attachment theory in infancy, characterized by curiosity, playfulness, interest in novelty, and an orientation to experimentation and discovery. Like us, some goal orientation theorists, such as Dweck, emphasize that learning goals are focused on process—ways of improving one’s understanding—rather than on products—outcomes of understanding (Dweck, 1999; Kaplan & Maehr, 2007). The process of learning and expending effort to learn (e.g., practicing a sport, engaging in meaningful work) is viewed as inherently satisfying—this is distinguished from the satisfaction and benefits derived from performing well on the task (Dweck, 1999; Flum & Kaplan, 2006).

In both theories, defensively focusing on self-validation interferes with learning. Bowlby (1979) observed that the caregiver’s responsiveness to a child’s distress—and acceptance of the child’s desire to explore—determines whether the child will develop a sense of self as worthy of protection and care. A child who has experienced a secure base from which to explore develops a “representational model of himself as being both able to help himself and as worthy of being helped should difficulties arise” (Bowlby, 1979, p. 136). When a caregiver is not consistently responsive, children develop insecure representations of self and other, and rely on defensive strategies to deal with distress. People with the avoidant pattern engage in “defensive self-enhancement” strategies for dealing with distress—they seek to convince others of their self-sufficiency and superior abilities;2 people with the anxious-ambivalent pattern seek others’ approval to defend against the sense that one’s self is “not worthy of anyone’s care” (Mikulincer & Shaver, 2007a, p. 468).

Similarly, goal orientation researchers define people with self-validation goals as focused on “demonstrating and validating their own worth, competence, and likability” (Baer et al., 2006, p. 6; see also Dykman, 1998). As Dweck (1986, p. 1041–1042) observes, self-validation goals “appear to promote defensive strategies that can interfere with challenge seeking.” People with self-validation goals view stressors, such as failure, as a threat to their self-worth and react by defensively trying to prevent self’s and others’ judgments that self is worthless (Crocker & Park, 2004; Dykman, 1998).

Goal orientation researchers’ subtypes of performance (self-validation) goals relate to the subtypes of insecurity identified by attachment researchers. People with performance-approach goals often appear to function well, and may even exaggerate their accomplishments in a self-aggrandizing manner (Diener & Dweck, 1978; Dweck & Leggett, 1988); but under prolonged stress their functioning deteriorates (Darnon et al., 2007; Grant & Dweck, 2003). Those with performance-avoidance goals exhibit more overt signs of distress, including negative emotion and withdrawal from the environment (Kaplan & Maehr, 2007; McGregor & Elliot, 2002). Elliot and Reis (2003) provide evidence of a link between performance-avoidance goals and anxious-ambivalent attachment.

A fundamental concept in attachment theory is that in the face of threat, the goal of seeking security (reducing insecurity) is activated and the goal of exploration or learning is deactivated (Bowlby, 1980). The goal of obtaining security is deactivated through reassurance of care and protection from one’s caregiver. Bowlby (1969/1982) and Ainsworth et al. (1978) emphasized the interconnections between self-protection and learning: the protective function of attachment behavior makes possible exploratory behavior “which promotes learning to know and to deal with features of the environment” (Ainsworth et al., 1978, p. 22). When the provision of care is experienced as insufficient, the individual remains mired in goals involving reassurance (either seeking it or avoiding it), rather than in the goal of learning.

Goal orientation theorists’ model of motivation also depicts the goals as potentially in conflict. Self-validation goals—seeking to prove one’s ability and, ultimately, one’s sense of worth—can interfere with learning goals (Baer et al., 2006). “The tasks that are best for learning are often challenging ones that involve displaying ignorance and risking periods of confusion and errors. The tasks that are best for looking smart are often ones that students are already good at and won’t really learn much from doing” (Dweck, 1999, p. 161). There is often a tradeoff between pursuing self-validation goals and pursuing learning goals.

Dykman (1998) discusses a similar connection between attachment and goal orientation theories. He suggests that secure attachment leads to exploration and goals for learning and growth. He presents evidence that self-validation goals—seeking to prove one’s basic worth, competence, or likability—“increase[s] one’s susceptibility to self-esteem loss, task disengagement, and depression in the aftermath of a negative event” (Dykman, 1998, p. 152). Dykman also found that the difference in goals occurs primarily under conditions of stress. We build on these connections, providing further evidence from attachment and goal orientation studies of differences in outcomes between self-validation and learning goals under stress.

We define stressors as demands that individuals perceive as exceeding their resources and endangering their well-being (Lazarus & Folkman, 1984). Attachment researchers typically study interpersonal stressors, such as loss and separation; in contrast, goal researchers typically focus on achievement stressors, particularly failure. However, as discussed below, there is some attachment research that involves failure or rejection in achievement

1 Bowlby rarely used the term “learning” when discussing his theory and instead used terms such as exploration, interest, novelty, and construction of knowledge. He reserved the term “learning” to refer to social learning theory from which he was departing. In contrast, his colleague Ainsworth often used the term “learn” along with “explore” (e.g., Ainsworth et al., 1978; Ainsworth & Bell, 1970). An article by Ainsworth and Bowlby (1991), which Ainsworth completed and published shortly after his death, brings exploration and learning together in the phrase, “a secure base from which to explore and learn” (p. 2).

2 Individuals with avoidant attachment may appear to engage in exploration, but their exploration or play is considered to have an “affectless, superficial quality” (Sroufe & Waters, 1977, p. 8). Their exploration is considered a deactivating strategy that differs from the exploration of secure individuals (Ainsworth et al., 1978; Cassidy & Kobak, 1988).
situations, and there is a growing body of goal theory research examining interpersonal stressors. In addition, there is some research applying each theory to stressors in general or across situations (Dykman, 1998; Fortuna & Roisman, 2008; Lindsay & Scott, 2005; Mikulincer & Shaver, 2007a).

Differences in Views

Although we emphasize the ways in which attachment and goal orientation theory overlap in people’s goals and the outcomes of those goals, the two theories have different ideas about the views or beliefs leading to the goals. Attachment theorists see exploration and learning goals as resulting from secure views—the belief that support is available when needed (e.g., Ainsworth, 1972; Bowlby, 1988; Hazan & Shaver, 1994; Mikulincer & Shaver, 2007a). By contrast, goal orientation theorists see exploration and learning goals as resulting from incremental views—the belief that, through effort and practice, one can change one’s ability (e.g., Dweck & Leggett, 1988; Dweck & Molden, 2005).

The idea of secure views leading to learning goals is central to attachment theory. An attachment figure who provides support when needed is seen as a “secure base from which to explore and learn” (Ainsworth & Bowlby, 1991, p. 2). Secure views reflect the individual’s expectations that the caregiver will be able to meet their needs for proximity and contact, and ultimately for care and protection. This sense of security becomes internalized over time (Bowlby, 1969/1982; Mikulincer & Shaver, 2004). Evidence has accumulated that secure views foster exploration in children (e.g., Ainsworth et al., 1978; Grossmann, Grossmann, & Zimmermann, 1999) and adults (e.g., Crowell & Waters, 1994; Feeney, 2004, 2007; Hazan & Shaver, 1990; Mikulincer & Shaver, 2007a). For example, in a major longitudinal study by Sroufe, Egeland, Carlson, and Collins (2005), children with responsive and sensitive caregivers as infants continued into preschool and middle school to be more confident in dealing with stressors and difficulties, and to be more “curious and exploring” (p. 357). Similarly, Green and Campbell (2000) found adults primed with descriptions of secure attachment were more open to exploratory activities, such as traveling to new places and meeting new people.

Whereas attachment researchers have shown that secure views promote learning goals, goal orientation researchers, particularly Dweck, have shown that incremental views promote learning goals (Dweck, 1999; Dweck & Leggett, 1988; Kamins, Morris, & Dweck, 1996). For example, children who read a passage that presented an incremental view of intelligence were significantly more likely to choose a task based on learning goals than were children who had read a passage describing an entity view of intelligence (Dweck, Tenney, & Dinces, 1982). Blackwell, Trzesniewski, and Dweck (2007) found that students with incremental views of intelligence, as compared to students with entity views, were more likely to affirm learning goals and to believe that working hard led to achievement.

Figure 1 summarizes similarities and differences between attachment and goal orientation theory in their notions of the views, goals and strategies involved in responding to stressors. According to attachment theory, when an individual encounters a stressor, it activates the attachment system and the goal of seeking proximity and closeness to an attachment figure. People who do not see a caregiver (actual or an internalized working model) as responsive have insecure views. People who see a caregiver as responsive have secure views. The figure does not show antecedents of entity and incremental views, because goal orientation theorists are much less concerned than attachment theorists with antecedents of views.

The main purpose of the figure is to illustrate that insecure views and entity views foster self-validation goals, which lead to defensive strategies; in contrast, secure views and incremental views foster learning goals, which lead to constructive strategies. For example, consider individuals who experience a major loss. If they do not believe they have support and cannot change their ability to deal with the situation, then they are likely to become concerned with self-worth and use defensive strategies to deal with the loss. In contrast, if they believe they can receive support and can improve their ability to deal with the situation, then they are likely to have learning goals and to use constructive strategies to deal with the loss.

Of course, dealing with stressors is a more complex process than depicted in the figure. As both theories recognize, handling stressors involves multiple levels of dynamic interaction between people and contexts (e.g., Cassidy & Shaver, 1999; Kaplan & Maehr, 2007). Nonetheless, we see the model in Figure 1 as highlighting an overlooked aspect of overlap in the theories. As revealed in the review of the findings below, in both theories the two goals lead to significantly different outcomes and have important implications for interventions.

Our Strategy for Comparing Attachment and Goal Orientation Research

Rather than attempting to review the broad literature of outcomes and interventions in attachment and goal orientation theory, we have taken a much more modest approach. We focus our review on the studies of two investigators who have conducted extensive research in their respective domains: Mario Mikulincer who has more than 50 studies reporting experimental findings on attachment in adults, and Carol Dweck who has equally impressive experimental findings in the realm of goal orientation.

![Figure 1. Views and goals that foster defensive versus constructive strategies in response to stressors.](image-url)
We recognize that focusing on the studies of two investigators is necessarily narrow. However, we believe this provides a reasonable scope and manageable means for comparison. Both investigators regularly employ behavioral as well as self-report measures (see Kaplan & Maehr, 2007, on behavioral measures in goal orientation research; and Waters, Crowell, Elliott, Corcoran, & Treboux, 2002, on behavioral measures in attachment research). Moreover, Mikulincer and Dweck investigate individual differences as well as situational influences on patterns of motivation and behavior. They each explicitly investigate the gamut of psychological processes including: beliefs (views), goals, strategies, behaviors, and emotional responses. We are not aware of other attachment theorists, nor goal orientation theorists, who have so thoroughly examined the effects of experimental inductions, manipulating beliefs hypothesized to be associated with self-validation or learning goals, or the goals themselves, and studying various consequences of those manipulations.

Similar Strategies in Response to Stress

In a number of their studies, Mikulincer and Dweck have investigated similar responses to stress: cognitive openness, problem-solving, remediation, and emotional reactions. In the following section, we review their findings in each of these areas, highlighting the strikingly similar patterns of constructive versus defensive strategies that they have identified.

The studies by Dweck reviewed below either examine the goals directly or the views that she has found are closely related to the goals (Blackwell et al., 2007; Dweck et al., 1982; Hong, Chiu, Dweck, Lin, & Wan, 1999). The studies by Mikulincer investigate secure views or mental representations rather than goals. However, Mikulincer and colleagues claim and provide evidence that mental representations of secure attachment relationships (secure views) are associated with goals to seek proximity and explore, and mental representations of insecure attachment (insecure views) are associated with goals to avoid or control proximity and defend self-worth (Gillath et al., 2006; Mikulincer & Shaver, 2003, 2007a).

Although attachment styles tend to be relatively stable, they are not fixed. Attachment styles are influenced by major life events and contextual factors (Gillath, Hart, Nofle, & Stockdale, 2008; Weinfield, Whaley, & Egeland, 2004) and differ across relationships (e.g., Baldwin, Keelan, Fehr, Enns, & Koh-Rangarajoo, 1996; Howes & Spike, 2008). Much of Mikulincer and colleagues’ work involves experimental induction of attachment security or insecurity that is triggered by cues or primes in the environment (Mikulincer & Shaver, 2007b). Achievement goals are typically thought of as depending on classroom or other environmental context. However, achievement goals are also studied as a relatively stable individual difference variable (Dweck, 1999; Kaplan & Maehr, 2007). Thus, as noted in the research reviewed below, secure views and achievement goals are sometimes investigated as trait variables and other times as state variables.

Cognitive Openness

Openness to new information is important not just for learning, but also for adapting to new situations and psychological well-being. Mikulincer and Dweck each have a number of studies investigating cognitive openness, that is, the willingness to pay attention to new information, even when it contradicts one’s previous knowledge.

Mikulincer (1997) investigated the relationship between attachment style and information processing. Attachment styles were assessed through self-report questionnaires and cognitive openness was measured by both questionnaires and a series of experimental tasks (e.g., asking participants to make social judgments based on new information). Mikulincer found that people with secure attachment became engaged in searching for new information, whereas insecure individuals tended to reject evidence that would have required them to revise their existing knowledge. Consistent with this finding, Mikulincer and Arad (1999) found that individuals with secure attachment were more likely than those with insecure attachment to be open to changing their perceptions about a partner in response to information that went against their previous expectations. They concluded that, “In general, secure attachment seems to be related to the integration of new data within cognitive structures” (Mikulincer & Arad, 1999, p. 722).

Grant and Dweck (2003) found that, in a high-pressure academic situation, learning goals were negatively correlated with mental disengagement, and that participants with self-validation goals were less likely to engage in deep processing of information. Mangels and Dweck (see Dweck, Mangels, & Good, 2004) found that there was a difference in level of attention for participants with views associated with learning goals versus self-validation goals. After finding out about a mistake they had made, participants holding learning goal-related views were more likely to pay attention in order to learn the correct answer than those with self-validation goal-related views. Erdley and Dweck (1993) also found that children with learning goal-related views were more likely to revise their negative evaluations when confronted with counter-evidence than were those with self-validation goal-related views.

Both researchers also have looked specifically at openness about oneself. Dweck and colleagues found that, after experiencing an initial rejection from a potential pen pal, children focused on self-validation goals were less likely to share information about themselves than those focused on learning goals (Erdley, Cain, Loomis, Dumas-Hines, & Dweck, 1997). They suggest that those with self-validation goals responded defensively, attempting to protect themselves from further evaluation, whereas those with learning goals were willing to share additional information to improve their chances of developing a relationship. Kammrath and Dweck (2006) found that people with self-validation-related goals were less likely to voice (and thus try to resolve) their concerns in romantic conflicts and daily social conflicts. Mikulincer and colleagues have found that people with insecure attachment are less likely to trust their relationship partners (Mikulincer, 1998b) and less likely to share personal information with their relationship partners (Mikulincer, Florian, Cowan, & Cowan, 2002) than individuals with secure attachment. As Mikulincer and Shaver (2007a) conclude, “lack of attachment security is likely to be associated

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3 Mikulincer and colleagues use self-report measures to assess adult attachment styles. For a discussion and comparison with the Adult Attachment Interview, see Shaver and Mikulincer (2006).
with fragile views of self and world, which make new information seem threatening and destabilizing” (pp. 255–256).

Persistence and Problem-Solving

Mikulincer and Dweck have each conducted investigations examining task persistence and problem-solving. Both have identified an optimal and nonoptimal pattern for dealing with failure and other difficulties.

In a series of studies on group interactions (involving college students as well as new military recruits), Rom and Mikulincer (2003) found that individuals with insecure attachment diverted attention away from effectively engaging in group tasks. A study by Mikulincer and Shaver (2004) found that people with insecure attachment had the least access to security-based self-representations and the most cognitive interference on a task after a threat (feedback about failure on a cognitive task). In a recent study, Mikulincer and Shaver (2007a) found that college students primed with security expressed more willingness to persist on complex reasoning tasks than those primed with insecurity or with a neutral prime.

In a study by Elliott and Dweck (1988), when a self-validation goal was highlighted, children were significantly less likely to persist after failure than when a learning goal was highlighted. Dweck and Legget (1988) also discuss evidence that self-validation goals are associated with low persistence, whereas learning goals are associated with high persistence. Blackwell and colleagues (2007) found that students with self-validation goals were less likely to be willing to invest additional effort after a setback than those students with learning goals.

Thus, Mikulincer and Dweck both found that after encountering a failure or other difficulties, individuals in the more adaptive group were able to respond with persistence and continued attention to the task at hand, while individuals in the less adaptive group were distracted or gave up. In each case, the individuals who failed to persist in problem solving can be seen as pursuing self-validation goals: their attention became focused on protecting their sense of self in relation to others. Those who persisted were not distracted with defensiveness about self-worth, and therefore were able to engage in learning.

Remediation

Another similarity in strategies between the two theories is in the area of remediation. Both researchers have investigated how likely individuals are to seek support during times of stress or difficulty.

Florian, Mikulincer, and Bucholtz (1995) found that individuals with insecure attachment were less likely to seek instrumental and emotional support in times of need. In another study, Mikulincer, Florian, and Weller (1993) found that insecure individuals were less likely to seek support after a life-threatening event (a nearby missile attack). Mikulincer and Shaver (2007a), in summarizing their findings (as well as those of other adult attachment researchers), state that “attachment security fosters support seeking, generally in constructive and effective ways, whereas attachment insecurities inhibit or interfere with effective support seeking” (p. 199).

Hong and colleagues (1999) found that after being told that their language skills needed improvement, individuals with learning goal-based views were more likely to agree to participate in a remedial program than individuals with self-validation goal-based views. A 2004 study by Nussbaum and Dweck (see Dweck & Molden, 2005) examined how students responded to failing a difficult test. Students were given the choice of looking at strategies of students who either did worse or better than they had. Students primed with views leading to learning goals chose to look at strategies from students who performed better than they had. In contrast, students primed with views leading to self-validation goals chose to look at strategies of others who performed worse than they had. In other words, those with views associated with self-validation goals sought to reassure themselves and “repair their self-esteem” (Dweck & Molden, 2005, p. 131) rather than learning from others.

Thus, in both theories, willingness to seek help is seen as an optimal response to stress. Individuals with the goal of protecting their sense of worth may avoid seeking support or seek support in ineffective ways, such as repetitive expression of worries rather than expression of interest and openness to learning from others.

Emotion Regulation

Mikulincer and Dweck have each investigated differences in emotional reactions to stressful situations. They also have investigated how people handle or regulate those emotions.

Dweck (1999) reports being surprised in her early studies that some children respond to failure on a task with positive emotion, for example exclaiming, “I love a challenge!” (Dweck & Leggett, 1988, p. 258). This finding on positive responses to stress relates to research in the coping literature on challenge versus threat appraisals (Lazarus & Folkman, 1984). Those who interpret stressors as a challenge, rather than as a threat, are more likely to respond in constructive ways, including the repair of negative emotion and increased likelihood of positive emotion (Lazarus & Folkman, 1984).

Birnbaum, Orr, Mikulincer, and Florian (1997) found that secure persons viewed divorce in less threatening terms and perceived themselves as more capable of dealing with the crisis than individuals with insecure attachment. Mikulincer and Florian (1995) found that secure individuals viewed the combat training as less threatening and more challenging than those with insecure attachment, particularly those in the anxious-ambivalent subgroup.

In their review of adult attachment research, Mikulincer and Shaver (2003) summarize these and a number of other studies demonstrating that individuals with secure attachment experience the lowest level of threat and feel the most capable of dealing with stressors.

Dweck and Legget (1988) state that when people have self-validation goals, failure is viewed as a threat to self-esteem, whereas for people with learning goals, failure is seen as an opportunity for learning. A study by Mangels, Butterfield, Lamb, Good, and Dweck (2006) found preliminary neurological evidence suggesting that people with learning goals respond to negative feedback as less threatening and more challenging than those with self-validation goals. Both researchers have thus found that people
who are concerned with validating self-worth are more likely to respond to stress as a threat, whereas those with learning goals are more likely to respond to stress as a challenge.

In addition to these differences in challenge-threat appraisals, both researchers have investigated more general differences in emotional reactions to stressful situations. Mikulincer and Shaver (2007a) summarize studies showing that attachment insecurity is associated with higher levels of distress and lower levels of psychological well-being, and attachment security with lower levels of distress and higher levels of psychological well-being. For example, Mikulincer and Florian (1999) found pregnant women with secure attachment had lower levels of distress than those with insecure attachment. Similarly, Dweck and colleagues have consistently found that, following failure, negative emotion is more common and more pronounced among those with self-validation goals than those with learning goals, and among those with views leading to self-validation as opposed to learning goals (Dweck, 1999). For example, Elliott and Dweck (1988) examined the effects of telling children they had made mistakes. They found that, for children told they have low ability, highlighting learning goals, as contrasted with self-validation goals, led to less negative emotional responses to mistakes.

A further similarity is that, in both lines of research, people with goals of defending self-worth have been found to engage in maladaptive emotion regulation strategies. Grant and Dweck (2003) found that one subgroup of adults with self-validation goals (who sought to prove their ability) responded to failure with pronounced negative emotion and rumination and another subgroup (who wanted to perform better than others) responded with denial. Similarly, Mikulincer and Shaver (2007a) note that one subgroup of those with insecure attachment engage in more overt expressions of negative emotion and rumination, while another engages in more covert expressions and suppression.

What is particularly striking is both investigators’ identification of a subgroup of self-validating, defensive individuals who often perform well and appear to be fine, except under a high cognitive load or high level of stress. Research by both investigators indicates that the appearance of well-being is because of suppression of negative emotion, a coping style that has been shown to backfire under conditions of stress (Wenzlaff & Wegner, 2000). Based on substantial evidence of these individuals’ “hidden vulnerabilities” (p. 940), Mikulincer, Dolev, and Shaver (2004) concluded that, “Although avoidant people often display adequate levels of psychological adjustment and well-being in daily life, they exhibit relatively poor coping and high levels of distress in severely and persistently stressful situations” (Mikulincer et al., 2004, p. 952). Similar findings—the appearance of doing well except when stressors continue—are reported by Grant and Dweck (2003) for a subgroup of participants with self-validation goals.

Both researchers found that the subgroup of people who cope with stress through suppression are likely to engage in shallow processing during problem-solving (Grant & Dweck, 2003; Mikulincer & Shaver, 2007a). Both researchers also suggest that shallow processing may result from defensively blocking out any information that might hint at failure or other threats to self-esteem. This echoes findings, reviewed earlier, that those with self-validation goals lack cognitive openness under stress.

Summary of Findings on Responses to Stress

Both lines of research have demonstrated how individuals with learning goals and the views associated with those goals, are more likely than those with self-validation goals and associated views to be open to new ideas, to persist in the face of failure, and to seek support in times of difficulty. Both lines of research also reveal that those with self-validation goals are more likely to respond to stress as threatening, and to exhibit more negative emotion, and those with learning goals are more likely to view stress as a challenge, to experience positive emotion, and to engage in adaptive emotion regulation strategies.

We maintain that the similarities outlined above reflect attachment theorists’ and goal orientation theorists’ concerns with the same goals and, consequently, the same strategies for responding to stressors. In the next section, we claim that Mikulincer’s and Dweck’s interventions provide different yet complementary pathways for shifting from self-validation to learning goals.

Toward an Integration of Attachment Theory and Goal Theory

We have documented areas of overlap between attachment theory and goal theory, both in the processes hypothesized and in the findings of two leading investigators. To move from identifying areas of overlap to a true integration, research grounded in both theories is needed. In this section, we briefly summarize studies that have explicitly borrowed from both theories, and we propose new research linking basic processes from the theories. In addition, we describe research on interventions from each theory, and suggest ways of combining the interventions to promote learning goals and constructive strategies.

Prior Studies Linking the Theories

Using measures of attachment security and achievement goals, Elliott and Reis (2003) found that secure attachment was positively associated with “mastery-approach” goals, which are equivalent to learning goals (Kaplan & Maehr, 2007). They also found that attachment insecurity was associated with avoidance motivation, including performance-avoidance goals (Elliot & Reis, 2003, p. 327). These findings are consistent with our thesis that attachment security is associated with learning goals and that attachment insecurity is associated with self-validation goals. Similar findings have been found in other studies. Secure attachment relates to learning goals in young children (Moss & Laurent, 2001). Kogot (2004) found that anxious attachment was positively related to performance-avoidance goals and negatively related to learning goals, while avoidant attachment was positively related to performance-approach goals.

Crocker and her colleagues provide evidence that contingencies of self-worth are related to the views and goals in attachment.
theory and goal theory. Contingencies of self-worth are the domains in which people base their self-esteem (Crocker & Wolfe, 2001). Whether or not insecure individuals manifest defensive behavior in a domain, such as physical attractiveness or achievement, depends on whether their worth is contingent on that domain (Park, Crocker, & Vohs, 2006). Contingencies of self-worth are closely related to self-validation goals (Park et al., 2006) and relate to attachment security (Park et al., 2004). Contingencies of self-worth have also been implicated in entity views: People with entity views engage in defensive strategies in a domain, but primarily when their worth is contingent on that domain (Niiya, Crocker, & Bartmess, 2004). It appears that contingencies of self-worth play a role in determining the domains in which people with insecure views, as well as those with entity views, exhibit defensive coping.

Proposed Areas for Research Integration

Antecedents. Further research is needed to examine how self-validation and learning goals develop, and how the childhood antecedents identified by each theory contribute to their development. Attachment theorists have identified caregivers’ sensitive responsiveness as a key factor in the development of secure-insecure views (Ainsworth et al., 1978), while achievement goal theorists have identified person versus process feedback (e.g., praising intelligence vs. praising effort) as fostering entity versus incremental views (Dweck, 1980; Dweck & London, 1995; Crocker & Park, 2004; Dweck, 1999; Kamins & Dweck, 1998). Each of these antecedents has been hypothesized to contribute to contingent self-worth (Burchans & Dweck, 1995; Crocker & Park, 2004; Dweck, 1999; Kamins & Dweck, 1998). One possibility is that caregiver responsiveness has a greater influence at earlier than later ages, but type of feedback plays an increasing role as children develop (Dweck & London, 2004). The combination of an early history of nonresponsive caregiving and later person-oriented feedback may render individuals particularly prone to self-validation goals.

Additive and interactive influences of views. Research is needed to better understand how the two types of views (secure-insecure and incremental-entity) contribute to goals and outcomes under stress. To the extent that insecure and entity views are independent, together they should predict self-validation goals and defensive outcomes better than each view separately. A first step would be to use survey measures to assess whether the views predict the goals and outcomes, and whether there is an interaction between the two types of views.

There are at least three reasons to expect interactions involving views. First, entity views interact with contingencies of self-worth. Entity views of academic achievement predict negative outcomes only for people whose self-worth is conditional on success in that domain (Niiya et al., 2004). Because people with conditional self-worth are more likely to be insecure (Park et al., 2004), this finding suggests an entity by insecurity interaction. Second, security-insecurity has been found to interact with incremental-entity views in research on partner forgiveness in romantic relationships (Finkel, Burnette, & Scissors, 2007). Although that research focuses on views of relationships as opposed to views of the self, it paves the way for more research on the combined influence of the two types of views. Third, prior research on attachment has repeatedly indicated interactions between security and risk factors in predicting outcomes (Gilissen, Bakermans-Kranenburg, van Ijzen-
needed to test whether anxious attachment is predicted by an interaction between entity views and low confidence in ability.

**Interventions to Promote Constructive Strategies**

Perhaps the most effective design for directly testing the predictive power of an integrated model is to manipulate incremental and secure views and to examine how changes in those views influence the relationship between stressors and outcomes. That design would allow for a test of the influence of both views and their interaction when exposed to different types of stressors, as well as the mediating influence of learning goals. Such research studies can further test the integrated model and provide implications for practice. For the interventions, we focus again on the research of Mikulincer in attachment theory and Dweck in goal theory.

Mikulincer and Dweck have each developed ways to promote views that lead to learning goals and constructive strategies: Mikulincer has designed manipulations to promote secure views; Dweck has designed manipulations to promote incremental views. Both investigators have examined the effects of brief experimental manipulations, and recently have begun studying the effects of multisession interventions (Blackwell et al., 2007; Mikulincer & Shaver, 2007b).

Mikulincer’s manipulations convey simply but powerfully the idea that a compassionate person will be there to provide support in times of distress. More specifically, the key messages in Mikulincer’s manipulations are that someone (an attachment figure): will be there when needed; wants to help because he or she loves you; accepts you; and will respond in a way that you want. These messages are consistent with decades of research on the antecedents of secure attachment, which repeatedly identify caregivers’ sensitivity (accurately perceiving and interpreting an infant’s signals) and responsiveness (selecting and implementing an effective response) as critical in fostering secure children who are curious and eager to learn about their world (Bakermans-Kranenburg, van IJzendoorn, & Juffer, 2003; Bell & Ainsworth, 1972; de Wolff & van IJzendoorn, 1997; van den Boom, 1994).

The key techniques Mikulincer and colleagues apply are (a) visualization (mentally picturing a supportive person), (b) reflection (recalling a time when someone provided comfort), (c) subliminal priming (unconsciously being exposed to security images or words), and (d) conscious viewing (reading a passage or watching a film or image about secure attachment; Gillath et al., 2006; Mikulincer & Shaver, 2001; Mikulincer, Shaver, Gillath, & Nitzberg, 2005). For example, participants in a study are shown a video of a father saying to his son, “Even when there is an ocean between us, I will always be there for you” (Taubman-Ben-Ari & Mikulincer, 2007, p. 127). According to the authors, this message conveys a “prototypical expectation of security provision in time of need” (p. 127). All of these experimental manipulations are intended to activate mental representations of secure attachment (Mikulincer & Shaver, 2007a).

Dweck’s interventions convey the belief that one can change one’s ability through effort and practice (Dweck & Molden, 2005). One of Dweck’s (1975) earliest interventions was with students struggling in math. The intervention helped children learn to attribute failure on math problems to lack of effort, rather than lack of ability. The students in the treatment group were given a series of multiple successes and an occasional failure. When students failed, they were told that they needed to try harder next time. Students trained to attribute failure to insufficient effort increased their persistence in doing math problems, whereas students in the control group, who only experienced successes, did not.

Recently, Dweck and colleagues designed a multisession program for inducing incremental views (Blackwell et al., 2007). Those views were induced through lessons emphasizing that the brain is constantly growing (forming new connections) and by having middle-school students think of activities they knew well, remembering how “they had been inept at the beginning but had learned, through error and practice, to excel” (p. 263). Students in the experimental group improved their school performance in math, as evidenced by higher grades and teacher ratings of effort.

The key messages employed by Dweck for inducing incremental views are: you can improve your ability; the way to improve your ability is through practice and effort; practice and effort lead to learning and changes in one’s brain; failure reflects a need to practice more and try new strategies, it does not reflect a fixed lack of ability; and mistakes can be seen as learning opportunities. The methods Dweck uses for conveying these messages include: (a) presenting an incremental view through readings or video; (b) engaging participants in guided discussions and related activities reinforcing the views; (c) asking participants to recall a time when they learned from their mistakes and improved through practice; (d) arranging for people to encounter a small failure (after a series of successes) and telling them that the failure is a sign to put in more effort; and (e) praising people’s process rather than their inherent abilities (e.g., praising the hard work put into creating a painting rather a person’s artistic talent; Blackwell et al., 2007; Dweck, 1975, 1999; Dweck & Molden, 2005; Mueller & Dweck, 1998).

**Combining the Interventions**

Despite their differing focus on secure and incremental views, we suggest that Mikulincer’s and Dweck’s interventions lend themselves to integration because of the similarity in their aims. Below we summarize these similarities and propose ways in which the interventions could be combined to more effectively foster learning goals that in turn would lead to more constructive strategies for dealing with stressful situations.

The major similarity between Mikulincer’s and Dweck’s interventions is that they serve as an antidote to self-validation goals and lead to learning goals. Mikulincer’s interventions deactivate self-validation goals by showing that someone cares and is available to help. Feeling cared for and having connections with others lessens people’s concerns about self-worth (Mikulincer & Shaver, 2007a). Dweck’s interventions deactivate self-validation goals through the belief that people can change their ability. People who believe they can continuously improve themselves are less concerned about their inherent worth than are those with entity views, especially after failure raises doubts about their ability level (Dweck, 1999). In inducing a shift from self-validation to learning goals, the interventions lead to increases in the constructive responses reviewed earlier in this article.

The interventions seek to induce changes in people’s internalized beliefs. Whereas interventions with young children are maintained by caregivers’ behavior—for example, by parents’ effort-
oriented praise (Kamins & Dweck, 1999) or parents’ sensitive responsiveness (e.g., Ainsworth et al., 1978; Berlin, 2005)—the interventions by Mikulincer and Dweck described above focus on older children and adults, and can be practiced and maintained by the individuals themselves.

Although both authors are optimistic about coping, neither presents coping as a painless process. Dweck emphasizes that confidence and learning goals do not come from a “diet of easy successes” (Dweck, 1999, p. 3). Similarly, Mikulincer does not imply that others will always be there to prevent misfortune. Thus, the interventions do not reassure people that they will not experience adversity, but rather that when they do, they can call upon either actual support of others or internalized representations of support (Mikulincer & Shaver, 2004, 2007a), and they will be able to improve and learn from the experience (Dweck, 1999).

Mikulincer and Dweck have each described potential applications in the other’s primary domain. Mikulincer has suggested that secure views can help in achievement situations (e.g., thinking supportive thoughts during a test, Mikulincer & Shaver, 2007a), and Dweck has found that incremental views can help with relationship issues (e.g., conflict in a romantic relationship, Kammrath & Dweck, 2006). We see the interventions not only as applicable across domains, but also as complementary and mutually reinforcing. Below we suggest combining the interventions to foster learning goals in stressful situations.

Mikulincer’s interventions for inducing secure views could be integrated with Dweck’s incremental view interventions to help a person who is struggling or feels threatened in an ability area. People who encounter difficulties can be helped to recall supportive people, images, and thoughts, to increase empathy about their current limitations. Because secure views make people feel there will be support and comfort if they fail, people with those views are more likely to admit to the need for improvement and risk seeking it. They can develop a meta-awareness that, no matter what their current level of ability, they can be accepted as they are, and that acceptance serves as a foundation for efforts to improve themselves.

Just as we see Mikulincer’s work as having potential for furthering incremental views (helping people believe their abilities can be improved), we also see Dweck’s work as having potential for furthering secure views (helping people believe they will be supported in times of need). People could be influenced (through videos, pamphlets, or other methods used in Dweck’s studies) to believe they can increase their sense of security and improve their ability to deal with stressful situations through practice. This extends work by Mikulincer and Shaver (2001, 2007a, 2007b) prompting participants to think of supportive images to foster security. Importantly, Mikulincer and Shaver (2004) state that whether a person accesses secure or insecure representation of self depends on “the number of times (the representation) has been applied in the past, and the density of its connections with other cognitive representations” (p. 169). Gillath, Selcuk, and Shaver (2008) report on recent studies indicating that repeatedly priming mental representations of security can have lasting positive effects. Because people are more likely to exert effort and practice if they believe their ability can be improved (Dweck, 1999), we suggest that inducing incremental views of security will make people more willing and likely to practice interventions designed to boost their sense of security.

Another way to apply incremental interventions to foster secure views would be to induce incremental views of relationships. Priming people to believe that they can improve their relationships with attachment figures could be more likely to foster secure views than are mere reminders of the existence of attachment figures.

Both Mikulincer and Dweck have relied on interventions asking participants to recall prior experiences of getting through a difficult time. To foster secure views, Mikulincer and Shaver (2007a) asked participants to recall a distressing situation in which they received sensitive and responsive support from others. To foster incremental views, Dweck and other investigators asked participants to think of a time when they thought they could not learn something, but were able to improve through effort and practice (Blackwell et al., 2007; Heslin, Latham, & Vandewalle, 2005). To foster learning goals in stressful situations, it may be especially effective to combine these two types of interventions, asking people to recall receiving support that helped them to improve a relationship or an ability.

An old adage suggests that rather than giving people fish, it is more beneficial to teach people how to fish. Mikulincer and Dweck’s interventions suggest that an essential aspect of teaching people how to fish is fostering a willingness to learn ways to solve problems they encounter while fishing. Such willingness requires optimism, but not just optimism about self’s level of ability, which may be insufficient when setbacks occur. Rather, the secure and incremental interventions foster optimism that one can acquire the abilities one needs through support and improvement.

Conclusion

To cope effectively with a stressful situation, people must believe that: (a) they will receive support—care, compassion, and protection—in dealing with the situation (secure views), and (b) through effort and practice they can improve their ability to deal effectively with similar situations in the future (incremental views). Evidence reviewed here indicates that secure and incremental views lead to learning goals which in turn lead to constructive strategies for dealing with stress, and that the opposite views lead to self-validation goals and to defensive strategies for dealing with stress. Commonalities between attachment and goal orientation theory, as well as differences between them, set the stage for designing interventions that borrow from both traditions. The task of integrating the theories has already begun (e.g., Elliot & Reis, 2003; Finkel et al., 2007). Hopefully, the present review will encourage further theoretical cross-fertilization and mutual learning.

References


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