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Reflections on Security Dynamics: Core Constructs, Psychological Mechanisms,
Relational Contexts, and the Need for an Integrative Theory

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A common concern in academic life is that one is beating one's brains out trying to understand something important, yet no one will ever listen or care. What a pleasure, then, to have some of the best and brightest minds in our field look carefully at our ideas and research findings and offer provocative insights, criticisms, and suggestions. Poring through the commentaries on our target article, which we hope readers of this journal will also do, one encounters alternative constructs, additional issues, connections between our research and the commentators' work, and a host of issues and suggestions for further consideration, research, and applications. In the limited space available, we hope to respond thoughtfully, appreciatively, and yet critically to the commentaries in ways that spur clarifications and additional studies.

A few important issues appear in more than one commentary, often clad in different theoretical languages. We will organize our reactions around those core issues rather than tackle each commentary in isolation. The key issues and questions are as follows: What are the core ingredients of attachment security? What psychological mechanisms account for the positive effects of security priming? What is the relevance of social relationships and processes? What is the best way to conceptualize the intersection or interaction of security-related dispositions and various kinds of social/relational contexts? What is the place of attachment theory within, or vis-à-vis, other theoretical frameworks, such as interdependence theory, self-determination theory, psychoanalytic theory, and – more broadly – positive psychology?

Core Ingredients of Attachment Security

In line with attachment theory, we discussed security in terms of vulnerability, pain, and need, on one hand, and a parent's or relationship partner's availability, sensitivity, and responsiveness, on the other. Several of the commentaries raise the possibility that additional or alternative factors are involved: symbiotic merging with attachment figures (Baldwin, this issue, following Silverman, Lachmann, & Milich, 1982), being unconditionally accepted by one's parent or partner (also Baldwin, this issue, following Horney, 1937; Rogers, 1961; and Sullivan, 1953), having one's autonomy supported (Ryan, Brown, & Creswell, this issue), re-experiencing a warm and reassuring social connection (Baldwin, this issue, and Saribay & Andersen, this

issue), and feeling safe and invulnerable (Schaller, this issue). Several of the authors also ask whether mental representations related to security and aroused by security priming are abstract and highly schematic or concrete and relationship-specific (Holmes & Murray, this issue; Mallinckrodt, this issue; Saribay & Andersen, this issue; and Winterheld & Simpson, this issue).

These are just some of the cases in this particular journal issue, and in psychology more broadly, where core issues are approached from different conceptual angles, using different conceptual constructs and different theoretical languages. All of us are probably experienced in using several of these different languages, at least when teaching if not also when conducting research, and the languages all tend to sound reasonable when considered alone. Difficulties arise, however, when we attempt to consider all of them in relation to particular real-world phenomena or experimental results. Perhaps the best we can do here is to be as specific as possible about what we think the various theories mean and tend to emphasize.

Although Bowlby (1982) and Ainsworth (Ainsworth, Blehar, Waters, & Wall, 1978) would presumably have been favorable toward parents providing a sense of safety, security (in the sense in which this term is used by Horney, 1937, Sullivan, 1953, and borrowed in the present journal issue by Baldwin and by Saribay & Andersen), and warmth, their conception of security was double-barreled. It emphasized two functions of a good relationship with parents and other attachment figures: providing a safe haven and a secure base. The safe haven function of an attachment figure resembles what other theorists have discussed in terms of safety and security, and the benefits of these states are generally contrasted with the negative effects of injury, fear, and stress. But the secure base function of an attachment figure goes beyond this, because it allows a person to do other things besides simply being safe. In fact, having a secure base allows a person to undertake potentially risky, dangerous, frustrating activities such as exploration, learning new skills, and moving into new social situations.

Considering the secure base function of an attachment figure immediately makes clear that a parent's or a relationship partner's passive "acceptance," or approval, or tolerance of merger is not sufficient to capture Bowlby and Ainsworth's insights. In fact, a good attachment

figure, especially when occupying the parental role, needs also to provide what Kohut (1977) called “mirroring” (reflecting, admiring, and applauding courageous efforts and achievements), what Winnicott (1965) called “structuring” of a child’s experiences, what Gottman and Declaire (1998) called “good emotion coaching” (accurately perceiving a child’s concerns and emotions, naming them and helping the child understand them, and providing help with emotion regulation and effective behavior), and what Ryan and Deci (2000) called autonomy support. In this context, the notion of “merger” seems especially inapt, because merger per se is not a good basis for autonomy.

Recent research using the Adult Attachment Interview (AAI; George, Kaplan, & Main, 1985; Hesse, 1999) has caused researchers to expand Bowlby and Ainsworth’s ideas. The AAI involves an interviewer asking questions of an adolescent or adult about his or her childhood experiences with attachment figures. The interview transcripts are coded primarily in terms of an interviewee’s ability and willingness to recall and articulate a wide range of emotional experiences with childhood attachment figures. A person’s “coherence of discourse” during the interview turns out to be an excellent predictor of the person’s own child’s attachment security (see van IJzendoorn, 1995, for a meta-analysis), and the mediating process seems to be the adult’s ability to accurately observe and respond to the child’s fears, interests, and motives. Since much of this aspect of good parenting involves understanding the child’s state of mind and helping the child make sense of feelings, Fonagy, Steele, Steele, Moran, and Higgitt, (1991) called it “mentalization” (see Allen & Fonagy, 2006, for a recent review of mentalization studies and clinical applications). Thus, what a maximally effective attachment figure, especially a parent, provides for a child – which we would characterize as part of “security enhancement” – is quite complex and much more extensive than mere acceptance, approval, merger, or autonomy support.

Having said this, we hasten to admit that our experimental security-inductions do not in any way capture or connect directly with any of these more complex aspects of security. In some cases we merely used the names of security-providing attachment figures (e.g., Mikulincer,

Shaver, Gillath, & Nitzberg, 2005) or guided imagery instructions for recalling and visualizing these figures and their supportive behaviors (e.g., Mikulincer & Shaver, 2001). We assumed that simply activating neural (or memory) networks associated with these people would be sufficient to create measurable good effects of momentarily enhanced “felt security,” probably based partly on the cognitive processes discussed in this journal issue by Saribay and Andersen. Further research is needed, however, to deconstruct and disentangle the various components of the process. It should be possible to create more specific primes, emphasizing particular well-defined aspects of a good attachment figure (acceptance, structuring, mirroring, coaching, mentalizing, etc.) and see how well each one works on its own.

The clues provided by research using the AAI also hint at the limits of Schaller’s (this issue) suggestion that increased security may be equivalent to a sense of “invulnerability.” If the security-enhancing parent helps a child articulate problems as well as hopes and identify opportunities, what should result – and in fact what is seen in the AAI – is an increased ability to notice, understand, and act effectively in the face of concerns, worries, and – in short – vulnerabilities. The secure person is not a bulletproof superhuman; he or she does not deny life’s precariousness or human finitude and limitations. Such a person can deal more effectively with difficulties and frustrations because attachment figures have helped identify, articulate, and deal with these tribulations. Also, such a person has a continuing sense that other people are available to provide help, support, and encouragement when actual, correctly perceived conditions are threatening or painful. We agree with Saribay and Andersen’s (this issue) statement that “Security priming appears to make individuals more open to learning about their weaknesses, [because] they rely less on defensive mechanisms to establish or maintain their sense of self-worth.” This process should result in the accurate acknowledgement of threats and vulnerabilities, not a bulletproof defense against them.

Because many experiences with attachment figures involve both vulnerability and support, both pain and effective coping with stressors, it seems likely that priming a person with mental representations of attachment figures and attachment-related experiences will activate a

mental “complex” containing both representations of vulnerabilities and representations of protection and safety. As Baldwin explains here and in some of his previous papers (e.g., Baldwin & Main, 2001; Baldwin & Meunier, 1999), there may be a kind of conditioned connection in the minds of secure individuals between dangers, threats, and vulnerabilities, on the one hand, and feelings of and routes to protection and security. We have good evidence for these units in experiments in which we subliminally primed people with threatening words (e.g., death, failure, and separation) and found that study participants reacted faster to the names of their security-providing attachment figures (Mikulincer, Gillath, & Shaver, 2002). (In other words, the perception of vulnerability elicited representations of protective attachment figures.)

Recently, Beckes and Simpson (2007) provided direct evidence for the binding of representations of fear and security. In the first part of their experiment, they implicitly conditioned participants by pairing unconscious frightening or neutral stimuli (a scary snake vs. a common kitchen utensil) with one of two pictures of warmly smiling people (people with “Duchenne” or authentic smiles). In the second part of the experiment, participants performed a lexical decision task in which they saw security-related words, insecurity-related words, positive and negative non-attachment-related words, and nonwords. They were primed before each trial with one of the previously conditioned faces, which were equally “warm” (and counterbalanced across conditions). The results indicated that security-related words were recognized faster following priming with the face that had been previously associated with the snake, but this did not happen in the presence of an equally warm and accepting face that had previously been associated with a neutral stimulus. Thus, the issue is probably not warmth or acceptance per se but warmth and acceptance in the context of threat. We believe it is extremely important to keep the role of threat and vulnerability in mind, because it may help to explain why attachment security is related to compassion and altruism (see below).

Schaller (this issue) mentions the possibility that seeking proximity to attachment figures might not be adaptive under certain conditions, such as ones in which a disease is easily spread by social and physical contact and could be avoided if a person remained isolated from

pathogen-infested relationship partners. We agree that this is a possibility, and we would add that there is also evidence that people sometimes prefer closeness to others rather than quick escape from fires and natural disasters, such as earthquakes, tsunamis, and floods (e.g., Mawson, 2005). The fact that the attachment system nevertheless evolved in humans and nonhuman primates suggests its enormous importance to human welfare in other kinds of situations. In other words, the existence of certain cases in which proximity is dangerous, when viewed in relation to all of the other evidence that people usually seek proximity and safety in relationships, suggests that proximity seeking is generally beneficial and, as Bowlby (1982) reasoned, has evolved for that reason.

Another salient issue in the commentaries concerns the concreteness or abstractness of the attachment-related mental representations and rules that get activated by our security-priming procedures. Holmes and Murray (this issue) interpreted our findings as implying “the normative availability of an elemental abstract representation, a general script for felt security that induces feelings of safety, reducing the sense of social risk and thus the barriers to social connection (e.g., ‘If I depend on a close other to respond to my needs, he or she can be counted on to care for me.’).” In contrast, Saribay and Andersen (this issue) argue and present evidence for person-specific mental representations that account for specific forms of “transference” of expectations and feelings about a new person who reminds one of a previous attachment figure. This suggests that we would obtain varying experimental results depending on the specific attachment-figure prime used to increase (or decrease) a person’s sense of attachment security.

This is a complex matter. Attachment theory, which is based partly on observational studies of nonhuman primates, assumes that infants are born with a capacity to latch onto a familiar caregiver as an attachment figure and to use a variety of innate behavioral routines to do so (crying, grasping, clinging, following a person with one’s eyes, smiling when treated sensitively, looking away and breaking eye contact when one is hurt or overstimulated). This could be viewed as an innate set of if-then “rules” related to seeking proximity and safety.

But attachment research on human infants suggests that as soon as these rules are instantiated in the form of one or a few particular attachment figures, they are modified by experience, thereby forming the rudiments of what Bowlby called internal working models of self and others. They then become person-specific representations of the kind Saribay and Andersen (this issue) discuss. However, as Collins and Read (1994) have explained, as a person accumulates thousands of experiences with multiple attachment figures (such as mother and father, grandmother and grandfather, nursery school teachers, close friends, and romantic partners) the person-specific rules and representations are likely to form abstract schemas and scripts, thereby becoming quite general. Even after this happens, however, a person's memory presumably continues to contain the kinds of specific representations and expectations that Saribay and Andersen study in their research on transference.

In our priming studies, we have used both concrete and abstract stimuli to activate memory circuits related to security and insecurity. In some studies (e.g., Mikulincer et al., 2005), we have used the names of individual participants' specific attachment figures, but without limiting the pool of such figures to any particular role category (mother, lover, best friend, etc.). In other studies (e.g., Mikulincer, Gillath, et al., 2001) we used fairly general stimuli, such as words related to security (e.g., love, hug) or pictures of a loving relationship (e.g., a drawing by Picasso of a loving mother and her infant, a couple holding hands while sitting together on a park bench). Even when specific figures are used as primes, there is no guarantee that abstract rules and representations are not also primed; and even when abstract primes are used, there is no guarantee that a person's semantic network does not move from that prime to idiographic memories of a particular attachment figure who instantiates those abstract qualities. This presents a sizeable challenge to researchers – to find a way (perhaps using specific priming or brain-imaging techniques) to delineate differences in the effects of abstract and concrete security primes.

Psychological Mechanisms Involved in Security Priming

The commentaries contain several ideas about how security priming leads to the positive outcomes we have documented. For example, Saribay and Andersen suggest that person-specific primes activate mental representations of one particular person, which include or trigger related feelings and expectations that can be transferred to other people, as long as those people's actual or presumed qualities allow the transference (i.e., if there is no salient contradictory information to render the transference awkward or impossible). Baldwin suggests that security priming may influence early stages of information processing, such as attention and perception, which in turn reduce a person's sensitivity to rejection cues and increase his or her responsiveness to positive aspects of other people and social situations. Winterheld and Simpson suggest that security priming strengthens a person's self-regulatory capacities, making the person more "aware of why [he or she acts in a certain way] and learn how to suppress or transform ... potentially destructive interaction patterns." Mallinckrodt as well as Winterheld and Simpson mention changes in a primed person's relational behavior that may induce positive changes in the person's partner's behavior, creating positive feedback that gradually improves both sides of the relationship. Holmes and Murray imagine a "psychological switch" by which security-related mental representations move a person from self-protective motivation to more relationship-promoting motivation.

We find all of these suggestions congenial and have organized them to form a heuristic model to guide further research (see Figure 1). In the first step of the model, sample security primes are listed: attachment figures' names, security-related pictures, security-related words, and guided imagery instructions. There are probably other such primes, but these are the ones we have actually used in our research, with positive results. In the second step of the model, we propose that the immediate effect of the security primes is to activate security-related mental representations, which may be either abstract (a la Holmes and Murray) or person-specific (a la Saribay and Andersen), and either semantic (decontextualized) or episodic. In the third step, these security-related mental representations create a spreading of activation through related networks of memories, feelings, self-representations, self-regulatory strategies, and emotion-

regulation strategies (as demonstrated by Mikulincer & Shaver, 2004). The widely spread activation in these networks may create a calm, warm, positive, and secure state of mind, which then contributes to a wide variety of outcomes, sketched in the fourth step of the model: activation of other behavioral systems, such as exploration or caregiving, transference of positive attributes and affects to new people and groups, changes in relational behavior (e.g., due to the activation of positive interaction strategies) and consequent partner reactions, changes in sensitivity and attention to positive attributes of people, groups, and situations, and a corresponding lowering of self-protective defenses and more generous, approach-oriented behavior toward other people. In our studies, we have (we believe) measured the results of this chain of reactions in the form of compassion, social tolerance, altruistic behavior, creativity, relationship functioning, and mental health.

Although we have diagrammed the cascade of events flowing from the left to the right side of Figure 1, which we did because this is the causal sequence we initiated experimentally in our studies and whose effects we then measured on the output side of the process, we agree with some of the commentators that parts of the sequence could also move in the other direction. In particular, Baldwin's method of having people practice "inhibiting attention to rejecting feedback" may be a good way to activate security-related mental representations (or inhibiting insecurity-related representations), which might then trigger the beneficial spread of activation we attempted to diagram in Figure 1. Similarly, using Andersen and colleagues' transference paradigm, it might be possible to endow new relationship partners with the positive attributes of past security-inducing attachment figures, thereby creating new ways to activate the security cascade diagrammed in Figure 1. As a final example, Holmes and Murray, as well as Winterheld and Simpson, mention that if we could alter a person's relational behavior in ways that then altered his or her relationship partner's behavior in return, the new behavior of the partner might initiate the security cascade, which could, in turn, have further beneficial effects on the partner and the relationship. (We will return to this issue of relational context in a subsequent section.)

We designed Figure 1 with the effects of short-term security priming in mind, because that is the kind of priming we have actually explored in our experiments. But it would obviously be desirable to find ways to make these effects last longer, thereby contributing to larger and longer-term beneficial changes in relationships, personality, and mental health. We did not include “working models” in Figure 1, because we agree with Winterheld and Simpson that our short-term priming procedures are unlikely, by themselves, to alter longstanding scripts and schemas. Presumably, the short-term alterations we have studied are due to momentary changes in what gets mentally activated, how strongly various schemas and memories get activated, which momentary emotions get activated, and so on. One way to move from short-term changes to longer-term ones would be to use repeated priming, either alone or in conjunction with other cognitive interventions, for example positivity-oriented attentional training (e.g., Dandeneu & Baldwin, 2004), deliberate induction of positive transference (e.g., Andersen & Chen, 2002), “mindfulness” training (e.g., Brown, Ryan, & Creswell, in press), or “mentalization” training (e.g., Allen & Fonagy, 2006). Although these kinds of cognitive interventions are promising and well worth trying, as already demonstrated by numerous studies, we believe that, in order to obtain maximal lasting change, they should be integrated into broader efforts focused on actual relationships, either naturally occurring or therapeutic. This is the subject of the next section.

Relational Contexts: “Where the Rubber Meets the Road”

Several of the commentators (especially Winterheld & Simpson; Holmes & Murray; and Mallinckrodt) point out, correctly, that our security priming studies involved the minds of individual study participants, not their relationships. Winterheld and Simpson say, for example:

At its base, attachment theory is a relational theory. Individuals are embedded within relationships in which they affect and are affected by their partners, many of whom also serve as attachment figures. Nearly all of the excellent experimental research conducted thus far has examined events and processes occurring *within the heads* of individuals rather than between partners in relationships.

Actually, attachment theory is a theory of both the individual mind (created developmentally in a crucible of relationships) and social relationships (Shaver & Mikulincer, 2007). The theory stands on two legs, so to speak, but researchers typically move back and forth between one leg and the other, either ignoring or slighting the leg that is not in the spotlight at the moment. It is well to remember that Bowlby was a psychoanalyst, and the theory – Freud’s – upon which he built attachment theory emerged from Freud’s contemplation of the contents of individual clients’ minds (albeit clients who were interacting socially with Freud, projecting their working models onto him, reacting to his apparent approval or disapproval, and so on). Freud assumed that the minds with which he was interacting had developed in the context of close (and problematic) relationships with family members, and Bowlby went even further in this direction by examining those relationships more directly. In the process, he rejected his mentor Melanie Klein’s almost exclusive emphasis on intrapsychic processes, focusing instead on children’s actual relationships with attachment figures. Even so, his conceptualization of the attachment behavioral system, emotions, defenses, and internal working models was heavily intrapsychic as well as social-relational.

We agree with the relationship-oriented commentaries on our target article that sustainability of the beneficial effects of security priming will depend on a person’s relationship partners. If a partner fails to react positively to a person’s fledgling attempts to operate from a more secure base, the base itself is likely to evaporate or crumble. Our studies have focused on individual minds mainly because we were dealing mainly with intrapsychic issues (emotions, defenses). We have written, however, about the real-world context of relationships in which every mind develops and the ways in which security operates, survives, or suffers in different kinds of relational contexts (Shaver & Mikulincer, 2007).

We agree with the commentators that the soothing and growth-enhancing effects of security-enhancement should be even stronger, more pervasive, and more resistant to change if it occurs within relational contexts in which an actual partner’s supportive and comforting behaviors are clear cut, personally significant, and repeated over time and situations. Such

behavior on the part of a relationship partner, therapist, or leader may counteract insecure people's dispositional tendencies to doubt the availability, sensitivity, and responsiveness of their social interaction partners, therefore setting in motion a broaden-and-build cycle of attachment security that gradually produces stable and widespread changes in the beneficiaries' working models of self and others. In other words, a relationship partner who acts as a reliable provider of safety and security can help an insecure person to function more securely, in both the short and long term.

Several naturalistic studies support this idea. For example, Lavi (2007) recently conducted a prospective longitudinal study of 100 young couples who had been dating for no more than 3-4 months. She followed them up 4 and 8 months later. One member of each couple was randomly designated as the "participant" and the other as the "attachment figure" for the purposes of measurement. Both couple members completed a series of self-report scales, performed some computerized tasks, and were videotaped while engaging in a series of dyadic interactions. From the "participants," Lavi (2007) thrice collected self-reports of relationship satisfaction, global attachment anxiety and avoidance, and attachment insecurities within the relationship (at the beginning of the study, four months later, and eight months later). Regarding the other couple member (the "attachment figure"), at the beginning of the study Lavi (2007) measured accuracy in decoding the partner's emotional facial expressions, accuracy in decoding negative and positive emotions that the partner displayed in a non-verbal communication task, and supportive behaviors during a videotaped interaction in which participants disclosed a personal problem to the "attachment figure." (We place this term in quotation marks, because the figures were probably "attachment figures in the making" [Hazan & Zeifman, 1994] rather than fully fledged attachment figures.)

There were long-term positive effects of partner sensitivity and supportiveness in Lavi's study. Partners who were more accurate in decoding their partner's facial expressions and nonverbal expressions of negative emotions and were coded by judges as more supportive during the dyadic interaction task induced a decline in within-relationship attachment anxiety and

avoidance across the 8-month period. In contrast, participants showed no significant decrease in within-relationship attachment insecurities if their partner scored relatively low on behavioral measures of sensitivity and supportiveness at the beginning of the study. Interestingly, these long-term positive changes in within-relationship attachment organization were not explained by variations in baseline relationship satisfaction and were independent of participants' global attachment orientations at the beginning of the study. That is, a partner's (i.e., attachment figure's) sensitivity and supportiveness, as suggested in Winterheld and Simpson's (this issue) commentary, predicted prospective decreases in within-relationship attachment insecurities in both chronically secure and chronically insecure participants. We view these results as a real-world, relationship-contextual example of the beneficial effects of repeated "security priming."

These kinds of effects are likely to occur in any social setting where one person's security and welfare depend heavily on another person who is viewed as "stronger and wiser." In recent years we have deliberately extended the core ideas of attachment theory to broader social contexts, such as intergroup relations and leader-follower relations (Shaver & Mikulincer, in press). We mention this here to show that, far from ignoring actual social contexts, we are considering ones that go beyond the dyadic romantic domain in which adult attachment theory initially arose (Hazan & Shaver, 1987). For example, Davidovitz, Mikulincer, Shaver, Ijzak, and Popper (under review) studied hundreds of Israeli military recruits and their direct officers at the beginning of a 4-month period of intensive combat training and asked them to report on their attachment styles. At the same time, soldiers completed self-report scales measuring their attachment styles and their baseline mental health. After 2 months, the soldiers again reported on their mental health and provided appraisals of their officer as a security provider (i.e., his availability in times of need and his willingness and ability to accept and care for his soldiers rather than rejecting or criticizing them). Two months later (4 months after combat training began) the soldiers once again evaluated their mental health.

We found that the more avoidant an officer was (by his own report), the less his soldiers viewed him as sensitive and available, and the more they felt rejected and criticized by him.

More important, an officer's avoidant attachment style and his lack of availability and sensitivity produced undesirable changes in his soldiers' mental health during combat training. Moreover, soldiers' attachment orientations moderated the effects of their officers' avoidant attachment style on changes in their mental health. Officers' avoidance caused a significant deterioration in soldiers' mental health over the initial 2 months of combat training mainly among insecurely attached soldiers. More secure soldiers were able to maintain a relatively stable and high level of mental health despite being under the command of an avoidant officer. But after 4 months of combat training, an officer's avoidance had negative effects on soldiers' mental health regardless of the soldiers' attachment orientations. In other words, as time passed and the problematic relationship continued, the negative effects of the officer's avoidant style on soldiers' mental health overrode the initial buffering effects of soldiers' attachment security. These findings demonstrate the crucial importance of actual, real-world relational support for continued security and well-being.

If we were to try to bring about large-scale changes in "felt security" and associated working models of self and relationship partners, we would want to prime people on both sides of a relationship, take steps to deepen the effects of priming by having people elaborate the implications of security inductions, in an effort to elaborate and alter their working models. We would also instruct people about the mental, verbal, and behavioral styles of secure people and have them role play a secure stance in social interactions. We would also help them openly explore and share memories of "attachment injuries" (Johnson, 2003) and positive, loving experiences, because deeply established security is marked by non-defensive mindfulness and coherent articulation of feelings. Of course, these are some of the techniques already used by cognitive behavioral and marital therapists as well as leadership development consultants.

The Joint or Interactive Effects of Attachment Dispositions and Security Primes

Several of the commentators raised questions about how security priming does or does not interact with attachment styles, viewed as fairly stable dispositions. For example, Holmes and Murray (this issue) noted that the observed lack of an interaction between attachment style

and security priming implies “that priming a temporary state of felt security seems to completely override chronic attachment styles.” Moreover, they claimed that we have “aligned [ourselves] with the psychodynamic, object relations view that chronic personality styles play a sovereign role in shaping relationships.” Actually, in most of our priming studies, we have obtained both main effects of attachment style and main effects of security priming (e.g., Mikulincer & Shaver, 2001; Mikulincer et al., 2005; Mikulincer, Shaver, & Horesh, 2006). Thus, there was no actual or implied “override.” In all of our writings we have taken a combined contextual and dispositional view of attachment-related processes (e.g., Mikulincer & Shaver, 2003, 2007; Shaver & Mikulincer, 2002, 2007).

Peterson and Park (this issue) claimed that the lack of a style-by-prime interaction is “theoretically troubling, because what is being primed if there is no working model of an attachment figure? If one’s mother was distant and abusive, then why should reminders of her produce positive outcomes?” In our studies, we either used general primes (e.g., words, pictures) or person-specific attachment figures *whom the participants specifically designated as supportive*. We have never used “mother” as a prime unless a participant independently selected mother as an especially supportive attachment figure. In studies using primes taken to represent specifically insecure relationships (e.g., Rowe & Carnelley, 2003), the primes had negative rather than positive effects, as we would expect.

Beyond the commentaries, however, we recognize the importance of the distinction between interactive and combined main effects. If one thinks logically and abstractly about the person-situation issue, it is clear that situations can sometimes influence dispositionally different individuals in equally strong ways. For example, if we tested a group of people on various athletic tasks, we would undoubtedly find individual differences in performance. If we then enrolled all of these people in a daily fitness program, they might all get better on several or all of the tasks, but the rank order of their performances might remain roughly the same. Similarly, if we instructed a group of students in a new technique for quickly solving certain kinds of math problems (say, multiplying by 10 by simply adding a zero to the multiplicand and moving the

decimal point one digit to the right), they might all get better at this task, but their individual differences in ability might still produce the same rank order of performance on a general math test. Therefore, the fact that we often get additive main effects in our priming studies is not necessarily “theoretically troubling” or damaging to a psychodynamic view of the mind.

Nevertheless, there are cases in which interactions *are* obtained. For example, Mallinckrodt (this issue) reported a new finding indicating that although both more and less attachment-anxious people became more tolerant following security priming (in line with our previous findings; Mikulincer & Shaver, 2001), dispositionally attachment-anxious people were in a more negative mood following the prime. Mikulincer and Sheffi (2000) obtained a similar finding in a study in which a positive-mood prime led more anxious people to constrict, rather than expand, their cognitive categories and become less, rather than more, creative. Secure participants reacted in the opposite way, and avoidant participants were unaffected by the prime. Mikulincer, Gillath, and Shaver (2002) used negative (threatening) subliminal primes (the words “failure” and “separation”) in a lexical decision or Stroop task in which the stimuli were the names of attachment figures and non-attachment figures. We found that dispositional avoidant attachment interacted with the “separation” prime, such that avoidant people took longer to recognize the names of their attachment figures following subliminal presentation of the word “separation.” Findings in the opposite direction were obtained for less avoidant participants in that study. In studies conducted with actual relationship partners, the occurrence of interactions between attachment style and situational forces is even more common. The typical patterns of results are (a) one in which attachment-anxious individuals are more reactive to their partner’s supportive and unsupportive behaviors and (b) one in which avoidant individuals are more resistant or less affected by a partner’s sensitivity and supportiveness (e.g., Rholes, Simpson, Campbell, & Grich, 2001; Rom & Mikulincer, 2003; Simpson, Rholes, Campbell, & Wilson, 2003).

Theoretically, there are many possible patterns of interaction (in addition to the cases where one obtains additive main effects without interactions), and these should all be explored

empirically. The examples we have mentioned here are ones in which avoidance seems to inhibit or block the effects of positive interventions or positive partner behaviors, or ones in which anxious individuals are especially reactive to their partner's positive and negative behaviors, although they usually do not react so positively that they become equal to more secure individuals. It seems possible that either repeated security priming or especially skillful (e.g., clinical) security inductions in a relational context could eventually overcome the inhibitory strategies of avoidant individuals, as Johnson (2003) has shown in the context of couples therapy. It also seems possible that, with repeated priming, secure individuals might reach an asymptote beyond which they cannot become more tolerant, more compassionate, more altruistic, and so on. In this case, repeated priming might cause anxious individuals to continue to become more secure over time, gradually reaching the level typical of more secure individuals. These are issues for further empirical study, not ones that can be determined by theoretical arguments and speculation alone.

How Integrative Is Attachment Theory?

The title of this section is taken from the commentary by Ryan et al. (this issue), but it concerns issues that were also raised by Peterson and Park, Saribay and Andersen, and Holmes and Murray. As we would expect, most of the commentators prefer to hang onto their own theoretical frameworks rather than jump ship and embrace ours. Here, we want to explain why we believe there are prospects for integration, although we are not attempting, per se, to convert anyone to our particular current views. Our views evolve, and most of the issues will need to be settled by new research.

In a review chapter (Shaver & Mikulincer, 2007) and a book (Mikulincer & Shaver, 2007), we have explained what attachment theory has in common with other theoretical frameworks, especially psychoanalytic theory, interdependence theory, and humanistic and positive psychology. (We view today's positive psychology as the stepchild of the earlier humanistic psychology of Rogers [1961] and Maslow [1971].) We will not reproduce here the detailed analyses we provided elsewhere, but we will restate our major conclusions, which are

compatible with the hope that a modified attachment theory can either provide a sufficiently large tent to include other theoretical approaches, even ones that oppose each other, or can at least point to what is needed in a future integrative theory.

Attachment theory acknowledges and integrates different, even seemingly contradictory views of human nature, maintaining dialectical tension between four sets of opposing theoretical forces. One is the tension between the constraining and structuring influences of childhood experiences, emphasized by psychoanalytic theorists, and forces for change inherent in current contextual conditions and present-day experiences, emphasized by social and humanistic psychologists. The second dialectic concerns, on the one hand, the intrapsychic nature of the attachment system, working models, and attachment strategies – a legacy from psychoanalytic theory – and the relational, interdependent nature of attachment-related experiences and behaviors, emphasized by interdependence theorists (e.g., Thibault & Kelley, 1959; Murray, Holmes, & Collins, 2006). The third source of conceptual tension is the difference between the goal-oriented, self-regulatory function of the attachment system, familiar to social cognition researchers (e.g., Carver & Scheier, 1998), and its defensive and distress-regulatory function emphasized by psychoanalytic thinkers. The fourth and final tension stems from emphasizing fears, conflicts, and avoidance motives, as is common in psychodynamic approaches, versus virtues, strengths, positive feelings, approach motives, and the capacity for personal growth and self-actualization, which are trademarks of positive psychology (e.g., Aspinwall & Staudinger, 2003; Seligman, 2002).

Several of the commentators (e.g., Ryan et al.; Saribay & Andersen) take us to task for making it seem that attachment security is the be all and end all. But this is not our position. Attachment theory makes security the developmental foundation for optimal functioning of other behavioral systems, such as exploration, caregiving, affiliation, and sex. It does not portray attachment security as a good substitute for curiosity, skill development, altruistic caregiving, playful friendship, or orgasmic sex. The theory also does not make the security-providing aspects of a parent or other relationship partner the only rewarding or important aspects of relationships.

It does, however, like Erikson's (1993/1950) well-known developmental theory, make security (or "basic trust") an important foundation for the development of other capacities, talents, and interests. This primary positioning of security and trust is also notable in other approaches to psychology. For example, all forms of psychotherapy depend on a security-providing, trustworthy therapist, who forms a good working alliance or therapeutic alliance with a client or patient. Psychoanalytic therapy, which in its initial form required a client to talk freely about what passed through his or her mind ("free association"), clearly depended on the client's ability to trust and remain open to the analyst. Buddhist meditation practice (e.g., Wallace, 2007) – which is the foundation of "mindfulness," a concept that has become important in contemporary psychotherapy (e.g., Kabat-Zinn, 2005) – begins with calming the body and relaxing the breath in the presence of an experienced and trusted teacher. This is viewed as a foundation for nondefensively observing whatever arises in the mind, which we view as another form of free association.

If we think about what a human infant needs in its initial phase of life, we are likely to notice that safety and security are primary to healthy psychological development. No one imagines that good sex, saintly virtues, complex play, or friendship can emerge first and then make room for security later on. It is also difficult to imagine that an infant could be frightened and abused while also fully developing "positive" qualities and skills at the same time. Perhaps less speculative but worth considering are all of the children in today's world who are hungry, have lost parents to AIDS, or hear bombs landing next door while they are trying to play, explore, socialize, or sleep. The idea that they will later be good candidates for lectures on virtue, happiness, and democracy strikes us as highly implausible. This is why we consider safety and security to be primary, but it does not mean that safety and security are everything. There are many other ingredients in and prerequisites for healthy development, and most of them come under the purview of behavioral systems other than attachment. So, "Is felt security a basis for positive relational experience?" as Ryan et al. (this issue) ask in the title of one section of their

commentary. *Yes*, as far as we can tell it is. Does this mean that other behavioral systems and positive experiences are unimportant? *No*.

Moreover, even if security is key to the development of other aspects of optimal human functioning, this does not mean there is only one way to attain it. As we explained in the target article, although there are probably few ways for a young infant to achieve security, there are numerous ways for adults to do so. For example, it is possible that Buddhist mindfulness creates states of mind that include calmness, coherence, and prosocial feelings (Brown et al., in press; Wallace, 2007). It is also possible, as we mentioned in one of our empirical papers (Gillath et al., 2005), that practicing compassion and altruism can feed back on a person's working models and allow him or her to understand better that love and kindness are possible and rewarding. It also seems possible that successful, rewarding exploration and skill acquisition can make a person more competent and confident, thus increasing felt security. Attaining deep intimacy with a sexual partner may also increase one's sense of security and wellbeing, which then has beneficial effects on operation of other behavioral systems. Moreover, in all domains of activity, direct tuition from expert teachers can increase a person's competence, value to others, and resulting feelings of security. We do not believe that behavioral systems come equipped with all of the skills needed for their appropriate functioning in particular social environments. This is what makes them different from reflexes (Bowlby, 1982). Hence, ethical training can make altruistic caregiving more effective, sexual education can improve a person's (and his or her partners') sexual experiences, and an academic or athletic education can make exploration more effective. But this kind of domain-specific training is unlikely to achieve optimal results if a person is anxious or defensive.

These comments provide part of an answer to Peterson and Park's (this issue) objection that attachment security is not "the route" to a psychologically good life. We did not claim that it is "the" route; the route depends on many other motivational systems, not to mention an outside world that makes a good life possible. But beyond this reply, we should mention that Peterson and Park reported interesting data from a huge internet survey showing that a *single-item*

measure of attachment style explained “only” 21% of the variance in the “character strength” love, 18% of the variance in happiness and life satisfaction, 9% of the variance in hope, and 8% of the variance in zest. Presumably a more reliable measure of attachment style, administered with a better controlled procedure, would yield even stronger results. Thus, Peterson and Park’s data strike us as encouraging rather than disconfirming of the notion that attachment security is important – not the whole story by any means, but nevertheless important.

Peterson and Park raise two other interesting but more specific issues. The first concerns our finding that security priming increases compassion and altruism. What explains this association? As we have stated at great length elsewhere (Gillath et al., 2005; Mikulincer et al., 2005; Mikulincer & Shaver, 2007, Ch. 11), it is not that we think security directly instigates compassion, but rather that it reduces insecure obstacles to compassion – a virtuous state that we view as a product of the caregiving behavioral system – just as it reduces obstacles to exploration (Ainsworth et al., 1978). In the case of compassion, however, there may be another, more speculative reason for its being influenced by security priming.

As explained earlier in the present article, priming images of attachment security calls up memories and feelings related to hundreds or thousands of previous experiences in which vulnerability, pain, or disappointment was paired, by a security-enhancing attachment figure, with feelings of relief, comfort, and security. This implicit pairing, when it arises in the mind of an adult, may make it easier for him or her simultaneously to feel compassion for a suffering or vulnerable other and to organize an effective altruistic response. Part of maturity and good character, we believe, is acknowledging the self’s and others’ vulnerability to impermanence, threats, aging, injury, illness, and eventual death. This was, after all, the Buddha’s major insight, his first “noble truth”: *Dukkha* – suffering and impermanence – is unavoidable. Retaining one’s psychological balance in the face of this truth, especially when one sees evidence of it in a particular suffering individual, is part of what makes effective compassion possible. If security were merely a positive state, it would not necessarily make one more sympathetic to others’ suffering.

The second specific objection raised by Peterson and Park (this issue) concerns our suggestion that fostering security might contribute to the emergence of a more tolerant humanity and a more peaceful world:

After all, no one would want to argue that security primes should make people into temporary vegetarians or environmentalists. So why should it make them more universally tolerant and loving, unless they were already predisposed to be that way? Once again, we do not think that security directly induces pacifism (or vegetarianism or environmentalism). Rather, security reduces defensiveness and distorted perception, thereby making compassionate caregiving, which we construe as related to peaceful, constructive behavior, more possible and more likely. We actually showed in our studies of outgroup tolerance (Mikulincer & Shaver, 2001) that security primes, even subliminal ones, caused people to be more tolerant, even toward potential enemies. So that part of our argument is not simply speculative; it is supported by evidence.

But the outgroup members in our studies were not carrying guns; they were apparently not coming to kidnap or kill the study participants' or their family members or to destroy their villages and cities. Security makes it more possible to treat others with compassion and kindness, but it does not rule out aggression designed to deter actual threats and dangers. In fact, we believe that a secure person, like a samurai warrior, might be more effective in defending his or her life or the lives of members of his or her community. (As we showed empirically in the Davidovitz et al. [under review] paper discussed earlier, secure Israeli officers and soldiers actually performed better in military exercises than their less secure counterparts.) Aggression is more natural than love under some circumstances, and a real human being has a capacity for both love and aggression (sometimes for both at once). Bowlby (1982), even when writing about largely defenseless infants, devoted a great deal of attention to their functional expressions of anger.

In other words, security does not lead to peace by itself. But it may eliminate or reduce unnecessarily defensive or distorted forms of social perception and unnecessary, destructive

forms of aggression. It will not, and we think should not, rule out aggression when it is the only available response to unreasonable attacks. Even the Dalai Lama, the world's master advocate of compassion, said yes when asked if he would kill someone who was, in the moment, attempting to kill him (personal communication, October 2004). Yet he has repeatedly refused to support violent rebellions of his own Tibetan people against the Chinese who occupied their country and drove the Dalai Lama into exile in India. A secure person attempts to make reasonable assessments of actual conditions, seeking peace and positive developments where possible, and taking effective action when aggression is required. This is one of the ways in which psychodynamic (and, for that matter, Buddhist) theories are realistic by comparison with any Pollyannaish forms of positive psychology.

Ryan et al. (this issue) ask the final question we wish to address: "Do we need attachment theory to explain the positive effects of autonomy support? In short, whereas autonomy support plays a positive role across varied relationships, it is not clear that we need attachment mechanisms to explain that." There are several answers to this question. The first is that, as we have shown empirically, attachment security is associated with many desirable outcomes aside from "autonomy." It is associated with better-functioning relationships, great compassion and altruism, a more satisfying sex life, more accurate social perception, and – unlike autonomy per se – with the ability to depend on others when situations call for assistance and comfort (Mikulincer & Shaver, 2007). The second answer is that security, as conceptualized in attachment theory, becomes an internal resource, in line with psychoanalytic object relations theories, by virtue of the internalization of supportive relationship experiences (Mikulincer & Shaver, 2004). In this way, attachment theory explains why secure adults do not need to run to their actual mothers for autonomy support every time they encounter a threat or challenge. The third answer is that without understanding the dynamics of the attachment system we cannot explain why some people react to lack of autonomy support with increased anxiety and dependence whereas others react with increased "compulsive self-reliance" (Bowlby, 1982). It would be useful to pursue some of these issues empirically, to find out, for example, whether

autonomy support does or does not have all of the same correlates as attachment security. We suspect it will not.

Beyond Attachment Theory

In conclusion, we have done the best we can to articulate our understanding of and response to the challenging points made by the commentators. But we do not want to give the impression that we believe everything is already settled and that attachment theory, as we have understood and extended it, is the complete and final story, a finished theoretical formulation. The diversity of the commentaries and the many points on which we and the commentators seem either to disagree or to understand in different terms, with different emphases, illustrate what we believe is a general and increasingly clear problem in personality/social psychology. The field is now around 100 years old, yet to date there seems to be no end to new terms, mini-theories, methods, and issues. To us this seems different from the situation in, for example, biology, where Darwin's verbal theory of evolution became increasingly well specified and elaborated as a consequence of genetics research, molecular research on DNA, mathematical models of population genetics, transplantation of genes using viral vectors, and so on. Even though there are numerous disagreements in biology as it moves forward, certain issues do get settled, the field agrees on them, and it moves on to new problems.

In our field everything remains at the same verbal level (security, autonomy, empathy, compassion, persons, situations), and what seem to be the central phenomena and processes keep undergoing name changes without there necessarily being consensus about the meanings of the terms or the conceptual need for them. Now that social neuroscience is being added to the mix, the flood of verbal constructs is being mapped onto particular regions of the brain, but even a cursory study of the emerging literature reveals that one investigator's empathy is not the same as another, which, not surprisingly, leads to different brain regions. Maybe the data will eventually constrain the alternative interpretations, and maybe the flood of terminology is due simply being in the early stages of the development of our field, but that case gets more difficult to make as the decades roll by.

Our hope is that through dialogs such as the one contained in this journal issue, the major issues can be agreed upon and a common terminology can evolve. We and the commentators have clearly made empirical progress in testing various specific hypotheses, often clothed in different terms, but there is not yet sufficient agreement, convergence, and integration to allow the findings to tell a single story. For example, the concept of transference has been greatly clarified and empirically supported by Andersen and her colleagues, but this is a concept that emerged from psychoanalytic theory and therapy and now resides also in social-cognitive psychology. Can it be placed back into a more general theory? The term “security” has led to interesting and, we believe, illuminating studies, by us and other attachment researchers, but to Ryan and his colleagues it does not seem to be preferable to “autonomy support.” Various issues that we conceptualize as being closely linked to security have been studied by “positive psychologists,” but there they appear under the names of specific “virtues” and “strengths” (e.g., gratitude, forgiveness), which seem not to get integrated into a larger theoretical framework, except for all being characterized as “positive.” We are nervous about the term “positive psychology” because it seems designed to ignore or supplant an implied “negative psychology,” and we view positive and negative mental and social processes as inherently interrelated. We doubt that there can be a mature, deep, and integrative positive psychology that ignores the fundamental human condition, which is riddled with *duhkha*, frustration, conflict, change, aging, pain, and is shadowed, always, by mortality.

Having said this, we want to emphasize that we do not think Bowlby and Ainsworth had all the answers, or even asked all the right questions. In the same way that Bowlby substantially revised and repositioned Freudian psychoanalytic theory, based partly on advances in other scientific fields, we now need to revise attachment theory or integrate what is valid in it with other theoretical contributions to form a more comprehensive framework. We should probably call it something other than “attachment” theory, which was based on a choice to use a metaphor that would refocus psychoanalytic theory on relational issues rather than imagined instincts or drives. Whatever happens in the way of theory development, we remain confident that a concept

like security, embedded in a network of other intrapsychic and social-relational concepts, will remain. Enough valuable research on child development, close relationships, and emotion regulation has already been derived from attachment theory to show that it is on the right track. But more needs to be said and revealed concerning the other behavioral systems, such as exploration, caregiving, and sex, and other motivational or behavioral systems, such as dominance and aggression, have yet to be integrated into whatever emerges from the current version of attachment theory.

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Figure Legend

Figure 1. The theoretical cascade of processes initiated by security priming.

