

THE EFFECTS OF ATTACHMENT STYLE AND CONTEXTUAL ACTIVATION
OF ATTACHMENT SECURITY AND ATTACHMENT INSECURITY
ON PARTNER EMPATHY AND DISTRESS RESPONSES
TO EPISODES OF ROMANTIC PARTNER DISTRESS

By

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To my wife, Joanna Grace, the most encouraging person I know.
You are a safe haven for countless women to whom you minister;
a secure base from which I have been blessed to explore and grow.

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By

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The purpose of this study was to investigate the separate and interactive effects of attachment style and the priming of secure, avoidant, and anxious attachment mental representations on participants' empathy- and distress-based emotions, cognitions, and motivations in response to romantic partner distress. Study design was informed by earlier studies investigating the effects of attachment security priming on altruistic responses to a stranger's plight. Published instruments were adapted or modified to assess attachment style and to measure empathy and distress responses to partner distress. The partner-in-distress stimulus was achieved by participants imagining a recurrence of an earlier-experienced episode of spousal distress accompanied by bids for partner support. Pen and paper responses were used to assess participants' attachment style, empathy and distress responses, and vividness of engagement with the target stimulus.

Participants were 132 married couples (264 individuals) recruited from ten churches in north central Florida. Couples were assigned to one of four groups: attachment security, avoidance, or anxiety priming conditions, or control. Group

assignment was random, with stratification for length-of-current-marriage. Responses to partner distress were found to be significantly correlated with both attachment avoidance and attachment anxiety. Gender differences were found for the level-of-engagement measure. With the exception of one distress measure subscale, no group differences were found relative to attachment priming. Participants provided end-of-protocol assessments of self- and other- distress frequency and spouse-comforting competence. These responses were correlated with participants' study data and cross-correlated with spouses' study data. Numerous gender differences were observed.

Included in the data analyses were instrument-development validation findings. Full-sample distress-item responses were correlated with the two insecure-attachment measures. Reported results included ranking of the 25 distress items as to their avoidance/anxiety discriminating properties. Clinical implications were discussed, including psycho-educational and skills-building approaches suggested by findings of gender differences in preferred emotion-regulation strategies. Design improvements for future research were discussed, including the hypothesis that attachment-priming stimuli utilized in earlier studies' investigation of responses to stranger distress are likely too weak and perhaps too general to equally influence the more history-laden complexities of partner-in-distress responses.

CHAPTER 1 INTRODUCTION

Overview

The roles and rules that define marriage relationships are both diverse and multifaceted. Common to most relationships, however, is the expectation that resources will be shared and exchanged between the couple for the benefit of both parties to the marital contract. Some of the resources commonly shared and exchanged within a marriage are more tangible, such as property, money, and the division of labor. Others are less tangible, such as the mutual meeting of sexual needs and the real or perceived social status that the relationship may confer. Among the less tangible resources shared and exchanged between couples is the giving and receiving of comfort and security during times of distress. Although not easily quantified, the capacity to share and exchange such resources has been identified by some researchers (e.g., Gottman, 1994; Mikulincer and Shaver, 2007) as among the attributes most pivotal to marital satisfaction and stability.

The impulse to derive comfort and security from another when distressed begins with the child-to-parent relationship. Attachment theory, as a way of viewing the nature of the bond between parent and infant, was first formulated by John Bowlby in the mid-twentieth century (1969/1982, 1973, 1980) and was empirically tested by Mary Ainsworth (Ainsworth, Blehar, Waters, & Wall, 1978) and the many whom she mentored over the ensuing three decades. Mary Main, one of Ainsworth's understudies, was a significant contributor to the understanding of attachment-relevant cognitive and emotional schema, through which earlier attachment experiences with parents influence both later parenting approaches and romantic attachments. Examining these causal

links, Main and her colleagues offered a refined articulation of attachment theory through development of an instrument for measuring attachment state-of-mind. This instrument, The Adult Attachment Interview, facilitates examination of internal working models of attachment, through analyses of narrative discourse the interviewee provides about family-of-origin experiences (Hesse, 1999; Mikulincer & Shaver, 2007).

Going beyond earlier theorists (e.g., Freud) who emphasized the primacy of biological needs in shaping the child-to-parent bond, Bowlby's work with children and teens convinced him that there were more complex factors at play. Through extensive readings and interactions with naturalists, Bowlby became convinced that the felt need for security was primary in overriding a child's exploratory behavioral system in favor of seeking the safety of a stronger other during times of danger. Through his work with orphaned and parenting-deprived children in the aftermath of World War II, Bowlby became persuaded that the need for affect regulation, despite the absence of physical danger, was clearly a precipitating factor in a child's efforts to be close to the parent during times of distress (1969/1982, 1973, 1980).

Bowlby theorized that a child develops an attachment behavioral system that works in harmony with the child's exploratory behavioral system. Without the exploratory system, the child's survival skills are diminished by the failure to develop competence. Without the complementary attachment system, however, the child's emerging survival competence is depleted by the failure to seek out others' resources for protection when environmental dangers exceed individual competence (1969/1982). As Ainsworth et al. (1978) and others empirically tested Bowlby's theoretical constructs, increased attention began to be given to an examination of the child's goal of affect

regulation when seeking comfort and security during distress (e.g., Kobak et al., 1993). Of particular interest was the apparent formation of emotion regulation strategies when behaviors directed at obtaining adult comfort were blocked or unpredictably rewarded (Cassidy, 1994; Kobak, 1999).

In the foundational investigations of this phenomenon, Ainsworth and her colleagues devised an experimental setting (dubbed the Strange Situation) intended to induce mild to moderate anxiety in one-year-olds by introducing a stranger into the room with mother and child, and by briefly and alternately removing the mother and both the mother and the stranger from the child's presence. While a majority of the infants evidenced mild levels of distress and smooth re-acclimation to their mothers' comfort when reunited, a significant minority did not. Of those not happily restored to emotional equilibrium, two opposing strategies for achieving affect regulation were observed: Some of the infants seemed to exaggerate their attachment needs in an apparent effort to coerce responses of comfort from their mothers, while others seemed to suppress their need for soothing as a means of distracting themselves from feelings of distress. In a search for links between parenting style and infant attachment behaviors, Ainsworth and her colleagues correlated these differing infant behavior patterns with their earlier extensive observations of first-year infant/parent interactions (1978).

Since the time of Bowlby's formal articulation of attachment theory (1969/1982), and Ainsworth and colleagues' identification of links between parenting styles and infant attachment behaviors (1978), others have examined attachment patterns in later childhood (e.g., Thompson, 1999), during adolescence (e.g., Allen & Land, 1999), and throughout adulthood (e.g., Hazan and Shaver, 1987; Mikulincer & Shaver, 2007).

Bringing a sense of coherence to the burgeoning study of attachment-related phenomena was Mary Main's articulation of how internal working models of attachment contribute to attachment style stability across the life span and among differing relationships. Main's extensive investigations of these underlying processes led her to conclude that internal working models of attachment possess both cognitive and affective components, they guide attachment-relevant behaviors, they exist outside of consciousness, and they have a propensity for stability (1999). Such conclusions suggest that efforts to influence maladaptive and change-resistant patterns of attachment-style continuity are unlikely to be successful unless those efforts target the underlying mechanisms by which such stability is maintained, both over time and across multiple relationships.

Memory research provides such a window into the formation, refinement, and maintenance of internal working models of attachment. Social scientists investigating memory function propose that the brain utilizes two distinct types of memory stores. These have been labeled episodic (or autobiographical) memory and semantic (or procedural) memory. Episodic memory is that store of what one knows on the basis of personal experiences. This type of memory is defined by one's ability to visualize oneself in the midst of an event remembered. Semantic memory is that summary compilation of all that one has learned from any source. Information learned by a variety of means (not personally lived) is categorized in semantic memory, along with summary and interpretational data (or decision rules) derived from personal experiences (episodic memory) (Wheeler, 2000; Tulving, 2001).

Attachment theorists propose that semantic memory decision rules are the building blocks of one's internal working models of attachment. Such decision rules do not dictate attachment behavior, but rather they serve as lenses through which one views attachment-relevant situations. And one's lenses bias strategies for implementation of attachment-relevant behaviors. In other words, what one has interpreted about the self and others in earlier attachment-relevant events (attempts and outcomes by self and/or other) becomes a guide for current and future behaviors (Tulving, 2001). The problem posed by working models constructed under suboptimal earlier attachment experiences, however, is that the validity of mental representations formulated from generalizations about self and others may be clouded by the limited knowledge and perspective of the one experiencing those attachment events. Yet the conclusions from these earlier attachment events help to shape a mental model of attachment in ways that guide current and future attachment-relevant strategies (Thompson, 1999).

This perspective on how internal working models of attachment are formulated and subsequently refined presupposes that earlier attachment experiences with parents and other significant caregivers serve to shape later attitudes toward attachment-related needs, expression of those needs, and strategies for ensuring that those needs are met. Viewed from the vantage of interacting episodic and semantic memory stores, emotion-punctuated cognitions are encoded in episodic memory relative to attempts and outcomes of previous attempts to derive security and comfort from a caregiver during times of distress. Interpretational analyses of those events (how to meet needs and/or how to avert threats) are encoded in semantic memory. And subsequent attachment-

relevant contexts serve to heighten or restrict access to and retrieval of the episodic-memory-linked semantic-memory-decision-rules that one perceives (whether consciously or unconsciously) as most analogous to the situation at hand (Bowlby, 1973; Main, 1999; Mikulincer & Shaver, 2007).

In harmony with this understanding of how internal working models of attachment are formulated, one's predominant strategy for approaching attachment-relevant events is shaped by the preponderance and/or magnitude of differing-quality attachment experiences encoded in memory. It is also shaped by one's interpretations about self and other that are generalized from those experiences, accompanied by default strategies for regulating emotions linked to those events in memory. The patterns of cognition, emotion, and behavior arising out of one's internal working models of attachment are referred to as one's (global or default) attachment style. Attachment theorists (e.g., Bowlby, 1969/1982, 1973, 1980) distinguish three primary attachment styles: (a) Secure attachment; (b) Avoidant (or anxious-avoidant or defended or dismissive) attachment; and (c) Anxious (or ambivalent or anxious-ambivalent or preoccupied or resistant) attachment.

Securely-attached individuals operate from an internal working model with a generally favorable concept of both self and others involving attachment-related needs. That is, they see themselves as generally worthy of receiving comfort and security when expressing the need, and see others as generally possessing the good will necessary to provide a helpful response to the expression of attachment-relevant needs. Avoidantly-attached individuals see others as generally unreliable in the meeting of attachment-related needs, or responding in ways that feel too intrusive. While seeing themselves

(or attempting to frame themselves to themselves) in a generally favorable light, they tend to suppress attachment-related emotions, choosing to distract themselves from reflecting on attachment-related needs rather than relying on others when distressed. By contrast, anxiously-attached individuals tend to see themselves as less-than-able in attachment-relevant contexts, and feel a limited ability to self-soothe. They see others as generally unpredictable or unreliable sources of comfort during times of distress, yet they perceive others as essential to the meeting of their own needs for affect regulation. Exaggerating emotions of distress in order not to be overlooked by the target of their bids for comfort, they nevertheless exhibit an approach-avoidance conflict because the responses they need cannot be trusted to follow from unavailable or dismissive caregivers (Bowlby, 1969/1982, 1973, 1980).

Bowlby's initial focus on personal safety as driving attachment needs was eventually expanded upon both by him and by those who built upon his work. Presently, attachment theorists think in terms of a much broader range of emotional needs compelling one to seek out an attachment figure when feeling distressed. Two helpful ways for considering this breadth of needs come through the lenses of Maslow's Hierarchy of Needs (Belsky, 1999) and Erickson's Life Stages Model (Belsky, 1999; Fonagy, 1999). Maslow's hierarchy would suggest that as fewer and fewer energy resources are necessary to achieve basic survival and safety needs, more and more energies are diverted toward the intangibles of affirming one's worth and significance. It might be assumed, then, that given the environmental/cultural availability of resources (and one's competence in obtaining those resources when needed), matters occupying

loftier levels of Maslow's hierarchy become increasingly important mediators of personal distress and the resultant need for security and comfort from an attachment figure.

Erickson's life stages model suggests that there are specific life tasks that one is compelled to master at each stage of individual development. Reasonable mastery of these stages is a necessary prerequisite to the establishment of healthy attachment relationships in early adulthood (Intimacy vs. Isolation). Looking at childhood attachment experiences with Erickson in mind illustrates the breadth of the various sources of distress that a child might be experiencing and the criteria by which the child might assess outcomes to attempts to derive security and comfort from another. For example, an avoidantly-attached child might suppress the need for security and comfort during distress because of an angry or impatient response by a parent. But such a child might suppress such a need as well if the parent tended to respond in ways that he associated with diminishing his emerging autonomy or competence. In other words, the anticipation of an overdone response that interfered with how the child wanted to view his emerging autonomy might be regarded as every bit as unsafe (and therefore every bit as undesirable) as a directly hurtful response. Such an internal working model of attachment might prompt the child to suppress attachment-related emotions and alter attachment-related behaviors. Although evolving with age, need hierarchies and competing life-stage goals remain relevant throughout the life span (Belsky, 1999), and are clearly at play in couples' relationships (Mikulincer & Shaver, 2007).

Over the past two-plus decades, attachment theorists have begun to explore romantic relationships through the lens of attachment relationships (e.g., Hazan & Shaver, 1987, 1990; Feeney, 1999; Shaver & Mikulincer, 2006; Mikulincer & Shaver,

2007). Romantic relationships meet the four criteria that Bowlby (1969/1982, 1973, 1980) set forth to differentiate attachment relationships from other types of relationships: (1) proximity maintenance (who do you like to spend time with or to be near?); (2) safe haven (who do you turn to during times of heightened distress?); (3) separation distress (who do you hate to be away from or miss the most during separations?); and (4) secure base (who can you always count on when you need them?). Romantic relationships differ from parent-to-child attachment relationships in the reciprocal nature of the attachment bond.

In conceptualizing couple romantic relationships as attachment relationships, it becomes evident that internal working models of attachment formed during childhood influence how one elicits the meeting of attachment needs from one's partner, how one responds to such requests, and how the goals of affect regulation throughout the process shape both approaches to and outcomes from one's partner (Hazan & Shaver, 1987; Hazan & Zeifman, 1999). Ideally, these processes interact in such a way that the target of another's bid for empathy is neither overwhelmed by the emotions of the distressed partner nor feels compelled to be dismissive of the partner's request for help in achieving affect regulation (Mikulincer & Shaver, 2007). Requests for empathy from a romantic partner are more likely to be adversely affected, however, when one or more partner operates from an insecure internal working model of attachment. To respond with empathy, avoidant partners must resist their own self-protective strategies of emotionally distancing from a distressed partner as a means of regulating their own discordant emotions. By contrast, anxiously-attached partners may find themselves engulfed in their own feelings of distress, leaving limited energies available for providing

the comfort elicited by their partners (Mikulincer et al., 2001; Mikulincer & Shaver, 2007; Shaver & Mikulincer, 2007) A better understanding of how couples' attachment dynamics are influenced by earlier attachment mental representations can help to inform counselors' efforts with couples to create relationship-specific attachment contexts less likely to be hampered by earlier insecure attachment experiences

Statement of the Problem

Among the strategies employed by marriage counselors are those intended to enhance empathy exchange during times of partner distress. The likelihood of receiving empathy from one's relationship partner when distressed is a significant correlate of relationship satisfaction and stability (e.g., Feeney, 1994; Davila & Fincham, 1998; Davila et al., 1999; Marchand, 2004; Ben Ari & Lavee, 2005; Birnbaum, 2007). Couple communication that reflects this type of mutuality is considered by some researchers to be the variable most predictive of relationship viability (e.g., Gottman, 1994).

The propensity for providing supportive responses to others is affected by one's lifetime of attachment-relevant experiences and how those experiences have been interpreted (Bowlby, 1980; Mikulincer & Shaver, 2007). Because internal working models of attachment are long-in-the-making, counseling approaches geared toward mediating the effects of insecure attachment styles through the reprocessing of earlier attachment experiences vary in their effectiveness and tend not to be brief. This problem argues for the implementation of briefer therapy approaches designed to minimize the negative effects of insecure working models of attachment on couple interactions.

Promising models for brief couples' therapy, such as Emotionally Focused Marital Therapy (Johnson, 1996, Johnson & Whiffen, 2003) utilize attachment-informed

research to formulate strategies for helping couples create affirming communication contexts. Recent studies have probed even deeper into the internal emotional processes accompanying confrontation with another's plight, by investigating how the priming of secure attachment representations affects those emotional processes (Mikulincer et al., 2001; Bartz & Lydon, 2004; Mikulincer et al., 2005). Yet the design of these studies limits the generalizability of findings to couples and their relationship contexts.

Purpose of the Study

Recently, researchers of adult attachment have discovered that the priming of secure attachment memory representations helps to increase one's empathy-related emotions, cognitions, and motivations toward relieving others' distress (Mikulincer et al., 2001; Bartz & Lydon, 2004; Mikulincer et al., 2005). The findings of these studies suggest that the bringing to conscious awareness of embedded secure-attachment memory representations may help to mediate the effects of more global insecure attachment orientations in responses to others' distress. Among the limitation of these studies for couples' research were these: (1) None of the studies sampled from populations of couples. Populations sampled in each study were university students or other young adults. And (2) None of the study designs made romantic-partner communication-exchanges their focus. Each study used the plight of a stranger as the stimulus that elicited empathy and distress responses from participants. The proposed study represents an attempt to build upon the methodologies of these earlier studies, while using a sample of adult couples in monogamous relationships and the plight of one's own romantic partner as the empathy- and distress-eliciting stimulus. The purpose of the proposed study then is to investigate how the separate and interactive

effects of one's dispositional attachment style, along with the priming of secure and insecure attachment representations in memory, effect one's empathy- and distress-related emotions, cognitions, and motivations toward one's distressed partner.

Theoretical Rationale for the Study

The theoretical rationale for the current study builds upon the foundation of attachment theory in general as developed by John Bowlby (1969/1982; 1973; 1980) and investigated by Mary Ainsworth and her colleagues (Ainsworth, Blehar, Waters, & Wall, 1978). It further builds upon the rationale first forwarded by Hazan and Shaver (1987) that adult romantic relationships can be conceptualized as attachment relationships, albeit with reciprocal bonds, rather than the unilateral care-giving bonds of parent-to-child relationships. Even more specifically, the theoretical basis for this study builds upon the extensive work of Mary Main (1999), examining how internal working models of attachment shape approach and avoidance behaviors in attachment-related contexts. Within and extending the framework of literature investigating attachment working models, the theoretical rationale for the current study is supported by an examination of cognitive and affective processes in attachment, as well as interpersonal and intrapersonal regulation in couples' attachment. It builds upon investigations that illuminate how the interplay of episodic and semantic memory processes shape attachment-relevant behaviors, and how attachment security affects prosocial (altruistic) motivations. And finally, the theoretical rationale for the current study rests upon findings suggesting that the heightening of a sense of felt attachment security increases the likelihood of one's responding empathically to a distressed stranger. The purpose of the current study is to test the applicability of these latter findings to contexts of romantic partner distress accompanied by bids for support.

Significance of the Study

This study may prove valuable for researchers of adult attachment, marriage and family therapists, their client couples, and others who may subsequently benefit from any future presentation of study findings through various media or seminar formats. Researchers of adult attachment may benefit from any advancement this study may bring to the knowledge base of attachment theory, emotion regulation theory, or couples communication theory. These themes have already been explored in a myriad of ways and in various combinations, yet adult attachment literature reveals a paucity of studies where the interface of these areas of inquiry has been explored with couples populations, and where the design of such studies facilitate the investigation of couple-relationship-focused interactions.

Marriage and family therapists may benefit from this study by expanding their theoretical understanding of the interaction of client-memory-embedded attachment representations and how the accessibility of these networked-images serves to cue or to disarm the need for self-protective emotion-regulating responses in the face of partner distress. Enhanced insight into the interweaving of these cognitive and affective processes and the interpersonal and intrapersonal processes they motivate may serve to inform counseling strategies that help couples improve their mutual provision of support during times of distress.

Client couples may benefit from this study by becoming the recipients of counseling approaches that teach them how to co-construct here-and-now contexts in distress-evoking interactions in such a way that embedded insecure working models of attachment are less likely to interfere with the exchange of empathy. Adult-attachment-theory-informed counseling approaches currently benefit from theoretical findings

informing the creation of secure contexts for couples' communication. It is hoped that the findings of the current study might add to that theory base by further informing approaches for teaching couples emotion-regulation strategies that are less likely to interfere with the giving and receiving of empathy.

Finally, this study may benefit couples who do not formally seek professional counseling, through their participation in couples' seminars where these findings are integrated into presentations of couple-communication-enhancement themes. Or it may benefit them through their encountering of any future print or electronic media conveyance of couples' communication teachings informed by the proposed study's findings. Couples volunteering to participate in this study were invited to attend one of the free one-day communications seminars presented by the principal investigator. These seminars were developed to provide participants with couples-attachment-theme-based lectures and experiences, informed by the design of this study and presented in a user-friendly format.

Research Questions and Hypotheses

The following research questions and hypotheses will be examined and tested in the proposed study:

A: Does the priming of attachment security or insecurity differentially affect the experience of empathy and distress in response to one's distressed marriage partner?

H1: The independent variables of experimental or control condition will have no effect on the dependent variable measures of empathy and distress responses to partner distress. Alternative hypotheses are:

a: Attachment-security priming condition will result in higher empathy-positive scores (empathy score minus distress score) than will attachment-avoidance priming condition, attachment-anxiety priming condition, or control condition

b: Attachment-avoidance priming condition will result in lower empathy scores than will attachment-anxiety priming condition

c: Attachment-anxiety priming condition will result in higher distress scores than will attachment-avoidance priming condition

B: Does gender differentially affect the experience of empathy and distress in response to one's distressed marriage partner?

H2: The independent variable of gender will have no effect on the dependent variable measures of empathy and distress responses to partner distress.

Alternative hypotheses are:

a: Females will exhibit higher empathy scores than will males in response to marriage partner distress

b: Males will exhibit greater use of distancing strategies than will females in response to marriage partner distress

C: How does attachment style interact with contextual attachment security or insecurity priming to affect the experience of empathy and personal distress in response to one's distressed marriage partner?

H3: The intervening variable of attachment style will have no effect on the dependent variable measures of empathy and distress responses to partner distress. Alternative hypotheses are:

a: Higher attachment-avoidance scores will predict lower empathy-positive scores (empathy score minus distress score) for all three experimental conditions and control condition in response to marriage partner distress

b: Higher attachment-anxiety scores will predict lower empathy-positive scores (empathy score minus distress score) for all three experimental conditions and control condition in response to marriage partner distress

c: Higher attachment-avoidance scores will predict greater use of distancing strategies in response to marriage partner distress when controlling for experimental condition and gender

D: Does attachment avoidance promote suppression of partner-in-distress memory vividness as an emotion regulation coping strategy?

H4: Attachment avoidance will have no effect on the vividness of partner-in-distress memories. Alternative hypotheses are:

a: Higher attachment-avoidance scores will predict lower partner-in-distress memory vividness ratings when controlling for experimental condition and gender

b: Attachment-avoidance priming condition will result in lower partner-in-distress memory vividness ratings when controlling for attachment style and gender

c: Males will exhibit lower partner-in-distress memory vividness ratings when controlling for experimental condition and attachment style

Limitations of the Study

The design of the current study permits the extension of earlier-referenced studies' findings to couples' populations and couple-specific relationship dynamics.

Nevertheless, several factors limit generalization of this study's findings both to broader couples' populations and to the natural milieus of couples' interactions. Among those factors limiting generalizability to broader couples' populations are the following: (a) participants were self-selected by volunteering in response to recruitment efforts; (b) participants were recruited from populations identifying themselves with organized Christian churches; (c) participants were recruited from a mid-sized urban population in the southeast region of the United States; (d) participants were married, and therefore ostensibly identified themselves as heterosexual couples; and (e) the racial composition of the sample was disproportionately Caucasian.

Included in those factors limiting generalizability to couples' natural interactional milieus are the following: (a) data was gathered through pen and paper measurement instruments, rather than through direct observations of behavior; (b) participant self-report responses created potential for measurement bias; and (c) dependent variable measurements assessed present responses to imagined recurrence of past episodes

rather than present responses to here-and-now (outside-of-memory) experiences. Because of these limitations, care must be given when generalizing the findings of this study to various populations and interactional milieus.

Definition of Key Concepts

Altruistic (or pro-social) emotional state: An experiential condition in which one is freed to respond supportively to a distressed other because energies are not consumed in personal-distress-related emotion regulation.

Anxious (or ambivalent or anxious-ambivalent or preoccupied or resistant) attachment: Refers to an attachment style characterized by a view of the self as inadequate to self-comfort, and a view of others as unreliable sources of needed support. Affect-regulation strategies include exaggeration of attachment-related emotions to coerce supportive responses from unavailable others. Over-identification with others' distress precipitates emotional flooding—diminishing ability to respond empathically.

Attachment behavioral system: A complex array of goal-directed behaviors designed to ensure the accessibility of security-restoring responses from caring others when needed. See further discussion under exploratory system.

Attachment bond: Denotes that aspect of the relationship between two people characterized by one person's using of the other as a source of comfort and security. In the case of a healthy parent/child relationship, the child is said to have an attachment bond with the parent, while the parent is said to have a care-giving bond with the child. In the case of healthy romantic relationships, the attachment bond is reciprocal.

Attachment categories: Classifications defined by one's generalized concepts of self as needing and worthy of supportive responses from others when distressed, and

others as reliable sources of such support. These beliefs shape strategies for securing needed support and/or for the regulation of emotions in response to its perceived unavailability.

Attachment context: Refers to a here-and-now setting between two people who share an attachment relationship. Accessibility of secure and/or insecure attachment memory representations interact with attachment context to bias the interpretation of that context—thus shaping the manner of expressing and responding to attachment needs.

Attachment figure: Someone regarded by another as a likely or necessary source (in the case of a parent or caregiver) or a chosen source (in the case of a romantic partner) of access to comfort and security during times of distress.

Attachment insecurity: Refers to attachment avoidance, attachment anxiety, or a combination of the two.

Attachment-insecurity-divergent items: Personal-distress-sampling items in the Pity Experience Inventories—Short Form—Revised that effectively distinguish between attachment-avoidance- and attachment-anxiety-motivated responses to a distressed other.

Attachment-insecurity-homogenous items: Personal-distress-sampling items in the Pity Experience Inventories—Short Form—Revised that effectively distinguish between attachment-security- and attachment-insecurity-motivated responses to a distressed other, but do not effectively distinguish between the two different manifestations of attachment insecurity.

Attachment priming (or contextual activation of attachment representations): The process of facilitating the accessibility in memory of a specific category of attachment-relevant events. Clinically, this represents efforts to help couples access past attachment memories where expressed attachment needs were affirmatively met —thus enhancing the expectation of similar outcomes in the present.

Attachment relationship: One in which both members of the relational dyad utilize the other as sources of comfort and security.

Attachment-relevant (or attachment-related) behaviors, experiences, situations, or events: Those in which the obtaining of comfort and security from a close other is central to what motivates the behavior, defines the experience, or characterizes the situation or event.

Attachment strategy: A conscious or unconscious behavioral schematic whose goal is enhancement of the likelihood that one's attachment-related needs will be met. Attachment strategies are shaped by interpretation of outcomes of past attempts at getting attachment-related needs met, and are subject to interpretational bias.

Attachment style (or attachment state of mind): Refers to one's predominant default strategy for the meeting of attachment-related needs. Attachment style is usually expressed as one of three categories (secure, avoidant, or anxious) with a fourth category (disorganized) representing a combining of avoidant and anxious features.

Avoidant (or anxious-avoidant or defended or dismissive) attachment: Refers to an attachment style characterized by maintenance of a view of the self as independent and competent, and a view of others as unreliable or unsafe sources of needed support.

Affect-regulation strategies include suppression of attachment-related emotions to dissuade the self from seeking support from unreliable or unsafe others. When encountering bids for support from a distressed other, efforts to emotionally self-regulate consume available energies—diminishing ability to respond empathically.

Compassionate caring factor: Denotes the Pity Experience Inventories' classification of those emotions, cognitions, and motivations that reflect the active, compassionate, prosocial aspects of pity. In this aspect of pity, personal distress does not rise to the level of interfering with the giving of empathy.

Disorganized attachment: Refers to an attachment style characterized by a combination of high attachment anxiety and high attachment avoidance, resulting in confusing and disjointed strategies in attachment contexts. This category of attachment is thought to reflect the experience of childhood care-giver trauma.

Distress (or personal distress): Refers to that portion of one's experience when exposed to a distressed other that consumes energy and focus on the task of emotion self-regulation—diminishing energy available to the giving of empathy to the distressed other.

Distress-related emotions, cognitions, and motivations: Refers to one of two categories of feelings, thoughts, and wishes one has when exposed to a distressed other. This category of experiences may result in the implementation of distancing strategies to limit personal distress and/or helping strategies motivated in part by efforts to lower one's own distress. See also empathy-related emotions, cognitions, and motivations.

Ease-of-escape: Refers to the magnitude of any obstacles (whether physical or internally-prohibiting) blocking the removal of oneself from the scene of another's suffering. If escape is easy, supportive responses are assumed to be altruistically-motivated. If escape is difficult, it is less certain whether supportive responses are motivated by empathy or by the goal of negative-state relief.

Egoistic emotional state: An experiential condition in which one is hindered from responding supportively to a distressed other because energies are preoccupied with emotion-regulation functions in the face of heightened personal distress.

Emotion-regulation (or affect-regulation) strategy: A conscious or unconscious behavioral schematic whose goal is the minimizing of unwanted emotions. Avoidant attachment refers in part to a style of affect regulation that involves suppression of attachment-related needs and distancing from the source of distress. Anxious attachment refers in part to a style of affect regulation that involves exaggeration of attachment-related needs to enhance the likelihood of attaining emotion-modulation assistance from others.

Empathy: Refers to that aspect of one's experience when exposed to a distressed other that focuses one's energies on active, compassionate, and prosocial responses toward the alleviation of the other's distress.

Empathy-related emotions, cognitions, and motivations: Refers to one of two categories of feelings, thoughts, and wishes one has when exposed to a distressed other. This category of experiences leads to active, compassionate, and prosocial responses toward the alleviation of the other's distress. See also distress-related emotions, cognitions, and motivations.

Episodic (or autobiographical) memory: Refers to a memory system comprised of information obtained through lived experience. Evidence of whether something that is known is part of episodic memory is the ability to visualize oneself as present during the experiential acquisition of that knowledge. See also semantic memory.

Exploratory behavioral system: Refers to a complex set of goal-directed behaviors designed to develop competencies through interaction with one's environment. The exploratory system interacts with the attachment behavioral system to maintain a state of homeostasis between the two. When the availability of comfort and security is ensured, the exploratory system is reactivated as one feels empowered to pursue growth-enhancing activities. When one's security feels threatened, the attachment system is reactivated and energies are reoriented toward the attachment figure. See also secure base.

False superiority factor: Denotes the Pity Experience Inventories' classification of those emotions, cognitions, and motivations that reflect defensive strategies for cognitively and behaviorally distancing from the threat that others' suffering poses to oneself.

Index of predominant emotional, cognitive, and motivational response: Refers to a score assigned to participant responses to the Pity Experience Inventories—Short Form—Revised, by subtracting the mean distress-item response from the mean empathy-item response [shortened to PEI PER].

Index of predominant emotional response: Refers to a score assigned to participant responses to Batson's Empathy and Distress Indices—Adapted Version, by

subtracting the mean distress-item response from the mean empathy-item response [shortened to BEDI PER].

Internal working models [IWM's] of attachment (or attachment working models or attachment memory representations): Mental representations with both cognitive and affective components, likely formed out of generalized event representations of attachment-relevant experiences. IWM's operate at both the unconscious and the conscious levels. IWM's are shaped by (the sometimes-biased) interpretations of past attempts to gain or retain proximity to caregivers (and later romantic partners), and the outcomes of those attempts. IWM's provide rules for the direction and organization of attention and memory—permitting or limiting access to certain forms of knowledge about the self, the attachment figure, and the relationship between the two.

Negative-state relief: Refers to the giving of supportive responses to a distressed other motivated by the need to relieve one's own distress precipitated by observing the other's suffering. Those arguing against the existence of altruism postulate that all seemingly-empathic responses to a distressed other are actually responses motivated by the desire for negative-state relief. Attachment theorists would argue that enhanced accessibility of secure attachment memory representations during responses to a distressed other limits personal distress—facilitating (altruistic) empathic responses.

Partner-in-distress episode: A remembered event (or the imagined and visualized recurrence of such an event) where one's spouse encountered distress-inducing circumstances and wanted supportive responses from her or his marriage partner.

Passive identification factor: Denotes the Pity Experience Inventories' classification of those emotions, cognitions, and motivations that reflect the passive,

helpless, painful, and succumbing aspects of pity. In this aspect of pity, identification with the sufferer occurs, but the need for self-protection from personal distress interferes with giving of empathy.

Proximity-maintenance: Refers to one of four defining characteristics of an attachment relationship—energies directed toward maintaining closeness to the other. See also safe haven, secure base, and separation anxiety.

Safe haven: Refers to one of four defining characteristics of an attachment relationship—use of another as a fortress of refuge during times of heightened insecurity or distress. See also proximity-maintenance, secure base, and separation anxiety.

Secure attachment: Refers to an attachment style characterized by a generally positive view of both self and others, resulting in direct expressions of attachment needs and reliable responses to attachment needs expressed by others.

Secure base: Refers to one of four defining characteristics of an attachment relationship—use of another as a safety net as needed as a means of bolstering confidence for growth-enhancing exploratory behaviors. See also proximity-maintenance, safe haven, and separation anxiety.

Self-soothing: Refers to the capacity to give comfort to oneself in the context of distressing circumstances. This capacity is thought to be aided by the accessibility of memories of comfort received from earlier attachment figures during times of distress.

Semantic associative memory network: Denotes an internalized information storage and processing system comprised of one's accumulated base of knowledge, including personally-acquired knowledge (obtained through lived experience) and

impersonal knowledge (obtained from external sources). Information may be filed in multiple locations proximal to other information exhibiting cognitive and/or affective similarities. Means of organization may facilitate interpretational biases and other entropic feedback into the assessment of present attachment-relevant events.

Semantic (or procedural) memory: Refers to a memory system comprised of all that we know or think we know. This memory system incorporates information obtained from non-experiential sources as well as information distilled from lived experience. See also semantic associative memory network, semantic memory decision rules, and episodic memory.

Semantic memory decision rules: Internalized guidelines that shape behavior in the context of attachment-relevant events. Often operating outside of consciousness, these self-commands represent the distillation of past attachment-related events, including generalizations regarding the self and others.

Separation distress: Refers to one of four defining characteristics of an attachment relationship—a heightened sense of loss or anxiety in the unwanted or prolonged absence of another. See also proximity-maintenance, safe haven, and secure base.

Organization of the Study

This research study is presented in five chapters. Chapter 1 provides an introduction and an overview of study-related theoretical constructs such as parent-to-child attachment, romantic attachment, the interplay of memory systems, and the role of emotion regulation strategies in shaping internal working models of attachment. Chapter 2 provides a review of the related literature, including outcome studies that serve as the theoretical foundation for the current study. Chapter 3 presents the

methodology for the study. Chapter 4 presents the results of the study. And Chapter 5 provides a discussion and summary of the results, implications of the findings, limitations of the study, and suggestions for future research and practice.

CHAPTER 2 LITERATURE REVIEW

In their conceptualization of romantic relationships as attachment relationships, Hazan and Shaver (1987) paved the way for a plethora of studies examining the relevance of attachment-relationship-defining criteria to couples' relationships. Among the dynamics Bowlby identified as indicative of attachment relationships was the use of another as a secure base of support and as a security-restoring safe haven during times of distress (1969/1982; 1973; 1980). Marriage and family therapists seeking to help couples enhance secure-base and safe-haven communication patterns must contend with resistant-to-change attachment states-of-mind formed in earlier attachment contexts, and often reinforced in later romantic relationships, including the current relationship (Hesse, 1999). Hope for progress in the face of such impediments argues for accurate understanding of partner intra-psychic processes inhibiting change (Collins, Guichard, Ford, & Feeney, 2004), as well as couple interpersonal dynamics frustrating efforts to sustain new communication patterns (Mikulincer & Shaver, 2007). This study builds upon a substantial body of research relevant to these clinical concerns and represents an attempt to extend the findings of several studies built upon some of that same foundation (Mikulincer et al., 2001; Bartz & Lydon, 2004; Mikulincer et al., 2005).

The review of the literature serving as a theoretical basis for the current study has been organized into six sections: The first section contains an examination of research framing romantic relationships as attachment relationships. The focus of the second section is attachment style continuity and change. Of particular interest in this section is the investigation of the stability of earlier-formed internalized attachment schema across developmental stages and attachment-figures. The purpose of the third section is to

provide an analysis of research suggesting the role that attachment internal working models plays in attachment style continuity and change. The fourth section includes an examination of memory research, specifically as it relates to the reciprocal influences of attachment working models and memory systems interplay. Of interest in the fifth section are research findings suggesting a link between attachment security and prosocial motivation. Of particular interest are findings suggesting the relationship between felt attachment security and the likelihood of behaving altruistically toward another who is in distress. And the sixth section contains a review of the limited body of research investigating secure-base and safe-haven behaviors in couples' relationships. This chapter then concludes with a summary of the literature review.

Romantic Relationships as Attachment

In a landmark study exploring romantic relationships through the lens of attachment constructs, more than 1200 respondents completed a 95-item survey published in the July 26, 1985 edition of the Rocky Mountain News (Hazan & Shaver, 1987). The bulk of the questionnaire was divided into three parts: The first part assessed participants' most important romantic relationship, whether current (61%) or past (39%); the second part explored participants' romantic relationship histories; and the third part, their relationships with each parent and their parents' relationships with each other. The authors' five hypotheses were formulated to examine correspondence between the one-way child-to-parent attachment bond and the reciprocal experiences linking romantic partners. Each of the authors' hypotheses was confirmed, providing strong preliminary evidence that processes at play in romantic attachment are parallel to those heavily investigated over the previous decade relative to the infant-parent bond.

The participants in Hazan and Shaver's (1987) groundbreaking study were asked to self-identify with one of three attachment-style prototype descriptors (secure, avoidant, or anxious) that best described how they tend to feel in romantic relationships. These descriptors were designed to parallel infant classifications used in existing attachment studies (Ainsworth et al., 1978). Correspondence between distribution of participants' self-classifications and distribution of infant attachment type in the cumulative attachment literature was roughly equivalent (confirming the authors' first hypothesis): Secure attachment (56% adults vs. 62% infants); avoidant attachment (25% adults vs. 23% infants); and anxious attachment (19% adults vs. 15% infants). Utilizing respondents' self-identified romantic attachment types as the independent variable, the authors found consistent links in the direction hypothesized between participants' attachment classifications and the child-parent and parent-parent descriptors of their family-of-origin attachment histories (confirming the authors' fourth hypothesis). A one-way ANOVA of these response items with attachment style as the independent variable yielded 51 (of 86) Fs that were significant at $p < .05$. Of these, 37 were significant at $p < .01$, and 15 were significant at $p < .001$.

Hazan and Shaver (1987) tested additional hypotheses relating to participants' outlooks on romantic relationships (hypothesis 2), their working models of self and others (hypothesis 3), and their vulnerability to loneliness (hypothesis 5). In each area of inquiry, the authors found significant correspondence between child-parent attachment category characteristics and cognitive, affective, motivational, and behavioral self-reports of study participants. In summary, in addition to noting similarity of attachment style distribution between adult romantic attachment and infant-parent

attachment, the authors observed significant correspondence between participants' romantic attachment classifications and earlier-identified parenting precursors to infant attachment categories, as well as evidence of cognitive and affective working models consistent with the differing attachment orientations. The authors' findings were largely replicated in a second study utilizing 108 undergraduate students.

In the two decades subsequent to the Hazan and Shaver (1987) study, researchers have used the lens of attachment style to investigate a broad array of phenomena relevant to couples' relationships. In several studies exploring mate-selection preferences, imagined or potential partners demonstrating secure attachment styles were preferred over those who evidenced attachment insecurity. Such findings were consistent whether preferences were selected from among attachment prototype descriptions (e.g., Latty-Mann & Davis, 1996), from attachment characteristics reflected in a series of questions (e.g., Klohnen & Luo, 2003); or from secure-, avoidant-, or anxious-attachment manifestations reflected in behavioral vignettes (e.g., Chappell & Davis, 1998). In observational measures of couples' conflict-resolution discussions, attachment security was consistently associated with problem-solving attributes such as partner support and validation (e.g., Kobak & Hazan, 1991), and respect and negotiation (e.g., Wampler, Shi, Nelson, & Kimball, 2003). Conversely, attachment insecurity was consistently linked with greater defensiveness (e.g., Babcock, Jacobson, Gottman, & Yerington, 2000), and more conflict-escalation behaviors (e.g., Alexandrov, Cowan, & Cowan, 2005; Campbell, Simpson, Boldry, & Kashy, 2005).

In their major update of adult attachment research, Mikulincer and Shaver (2007) summarized the findings of 23 studies examining the link between attachment

orientation and intimacy. There were seven different attachment measures used among the studies, with three of the studies utilizing more than one measure. Ten different measures of intimacy were utilized, and five of the studies assessed attachment dimensions (avoidance or anxiety) rather than categorical attachment styles or types (secure, avoidant, anxious). Studies varied in design, with five examining only a security vs. insecurity dichotomy, and the remaining eighteen comparing security, avoidance, and anxiety as correlates of intimacy. In all but six of the studies, intimacy was positively linked to attachment security and negatively linked to attachment avoidance and attachment anxiety (or to attachment insecurity in general, depending on study design). In five of the remaining six studies, results were mixed: (a) $p < .05$ for security and avoidance, but not for anxiety (three studies); (b) $p < .05$ for security and anxiety, but not for avoidance (one study); and (c) $p < .05$ for avoidance, but not for security or anxiety (one study). In only one of the studies was no significant relationship found between intimacy and attachment style. These findings provide evidence of a significant link between attachment security and the experience of intimacy in couple relationships.

Mikulincer and Shaver (2007) found similar support for the connection between attachment security and relationship satisfaction in their review of 97 studies examining this link among romantic couples. In 28 of the 41 studies using a dating-couple sample, securely-attached participants reported significantly greater relationship satisfaction than their avoidantly-attached or anxiously-attached cohorts. In the remaining 13 studies, findings were mixed, with the hypothesized security/satisfaction link affirmed in all but two studies and either the avoidance/ or anxiety/satisfaction links (but not both)

affirmed in the others. For the 57 studies utilizing a married-couple sample, findings were less definitive for the studies that utilized categorical measures of attachment style (33 studies) than for the studies that used attachment dimension measures (24 studies). Among studies utilizing a categorical measure, the full range of attachment-style/marital satisfaction links were confirmed a little less than half the time (15 studies). No significant differences were found for one gender or one or more attachment categories in eleven of the studies, or for any category of attachment style in the remaining seven studies. In contrast, among the 24 studies using the more precise attachment dimension measures (such as those adapted for use in the current study), three-fourths revealed significant negative relationships between marital satisfaction and both insecure attachment dimensions (avoidance and anxiety). In the remaining six studies, the negative anxiety/satisfaction link was confirmed, but the inverse relationship between attachment avoidance and marital satisfaction was not significant at the $p < .05$ level, suggesting that attachment avoidance may serve more effectively than does attachment anxiety to inoculate oneself from feelings of marital dissatisfaction. Taken as a whole, and with particular emphasis on marital satisfaction studies using more precise attachment-dimension measures, the link between secure attachment orientation and marital satisfaction appears rather well-established.

In summary, cumulative evidence strongly suggests that romantic relationships may be rightly viewed as attachment relationships, in which partners reciprocally use one another as a source of emotion regulation in ways similar to a child's utilization of the parent to self-regulate during times of heightened distress. Some of these evidences are more direct, such as correspondence between earlier parent-to-child

relationship dynamics and later romantic attachment states-of-mind. Others must be extrapolated from findings linking attachment style with critical components of romantic partner function, such as conflict management and intimacy. Still other evidences, such as the role of attachment style as a mediator of relationship satisfaction and marital longevity (e.g., Mikulincer & Shaver, 2007), serve to punctuate the argument that attachment processes are a pivotal component of romantic love.

Attachment Style Continuity and Change

Social scientists who investigate the influence of early attachment patterns in subsequent developmental stages report a significant level of attachment style stability over time (e.g., Thompson, 1999; Waters, Merrick, Treboux, Crowell, & Albersheim, 2000; Main, Hesse, & Kaplan, 2005). Negative life events may become global vehicles of discontinuity, moving securely-attached children to more insecure attachment orientations. Such life events may include parental death, divorce, or prolonged physical or mental illness. They may also include life-threatening illness of the child or physical or sexual abuse by a parent (Waters et al., 2000). Less extreme changes in the family system impacting parental availability and/or sensitivity may incrementally shift the developing child's attachment orientation toward greater or lesser security. More or less optimum synchronicity between parenting style and the child's temperament (Vaughn & Bost, 1999; Stevenson-Hinde, 2005), and/or the child's navigation of subsequent developmental stages (Fonagy, 1999), may influence earlier formed attachment patterns toward or away from attachment security. Given the host of environmental factors favoring discontinuity, attachment researchers have nevertheless consistently found a significant link between narrative recollections of secure child-parent experiences and securely-attached romantic relationships in later life (Hazan &

Shaver, 1987; Feeney & Noller, 1990; Fraley & Shaver, 1999; Shaver, Belsky, & Brennan, 2000).

Attachment researchers differ in how they conceptualize attachment style continuity and change processes. Those who adhere to the revisionist view (e.g., Kagan, 1996) argue for greater malleability of attachment working models. In this view, mental models formulated in earlier attachment experiences are revised as subsequent attachment-relevant events disconfirm their adaptability. Those who espouse the prototype view of attachment continuity and change (e.g., van IJzendoorn, 1995) contend that early attachment schema are less malleable and serve as a filter for interpreting subsequent attachment-relevant interactions, consequently influencing those interactions in ways that tend to reinforce those mental models. Both the revisionist and the prototype perspectives suggest that attachment working models continually update as a function of both time and (multiple and differing) attachment relationships. Where they differ, however, is that revisionist proponents argue for relative parity among earlier and subsequent attachment experiences, while adherents of the prototype perspective allege the primacy of early attachment experiences (Mikulincer & Shaver, 2007).

Fraley (2002), one of the developers of the Experiences in Close Relationships Inventory adapted for use in this study (Fraley, Waller, & Brennan, 2000), devised a mathematical model for testing these two competing hypotheses proposed to account for attachment continuity and change. Fraley began by performing a meta-analysis of the 27 childhood attachment longitudinal studies appearing in the literature through 1999 (total N = 1,415). Each of these studies represented Strange Situation

assessments of infants at one year of age, correlated with subsequent attachment category or dimension assessments at a later point in life. Intervals of assessment ranged from one month to eighteen years; mean test-retest correlation was .37. Fraley divided these studies into five groupings (ages 13-months; and 2-, 4-, 6-, and 19-years), calculating for each age milestone the average retest correspondence with the original Strange Situation attachment assessment.

Subsequent to these analyses, Fraley (2002) utilized software-assisted mathematical modeling to construct formulas through which he could account for the working-model-plasticity variations suggested by the respective revisionist- and prototype-informed constructs of attachment stability and change. For the formula representing the revisionist position, Fraley created a first-order autoregressive equation using security as the independent variable, time (gap between initial and later assessments of attachment style) as a weighted function of security, and level of working model plasticity (quantified using theory tenets) as an additional source of variance. The formula representing Fraley's prototype-position differed only in that it was not autoregressive, reflecting that view's attribution of lesser plasticity to attachment-working-models, arising from its position that one's level of attachment security recursively contributes to subsequent attachment interactions. As with the formula representing the revisionist position, plasticity estimates in the prototype-position formula were quantified using theoretical tenets of the prototype view. In summary, Fraley's two formulas reflected the respective views' shared presupposition that initial attachment security is differentially distributed among individuals and that working models of attachment are revised and updated in a person's subsequent

attachment-relevant experiences. But they also reflected the divergent presuppositions of the revisionist and prototype positions about the weight given to early attachment experiences in resisting subsequent working model revisions.

Using these two formulas, Fraley (2002) mapped separate regression curves modeling anticipated patterns of change in attachment orientation between ages one and nineteen. Curves generated under the revisionist model regressed to levels approaching zero over the various time gaps of test-retest modeling. By contrast, curves generated under the prototype model roughly approximated the data of the longitudinal studies. Fraley and Brumbaugh (2004) later extended this examination of the prototype model in a meta-analysis of 34 adult attachment longitudinal studies. Test-retest correlations in the adult studies averaged .54. An overview of longitudinal studies published subsequent to this meta-analysis (Mikulincer & Shaver, 2007) revealed similar test-retest correspondence ($r = .56$ average for 13 studies). As Fraley had done with the earlier meta-analyzed childhood longitudinal studies, Fraley and Brumbaugh (2004) used the adult study data to graph attachment stability coefficients at various adult age mileposts (ranging from ages 18 to 52 years). They then created a scatter-plot of the (grouped-studies') data on the stability curves predicted by the mathematical model representing the prototype position. As with the childhood longitudinal studies, these stability curves provided a reasonably good fit with the data.

Among the implications suggested by Fraley and Brumbaugh (2004), when comparing the adult study findings with the earlier childhood study findings, were these: (a) Strange Situation attachment style assessment at one year of age is predictive at a level of $r \approx .39$ of attachment style assessments at any subsequent point in time

throughout the life span; (b) Attachment style assessments by age 30 are predictive at a level of $r \approx .50$ of subsequent assessments of attachment; and (c) That this greater resistance to change over time is in harmony with the prototype hypothesis, which holds that earlier attachment experiences shape later experiences in ways that tend to reinforce increasingly entrenched mental models of attachment. In their major update of the adult attachment literature, Mikulincer and Shaver (2007) shared their leanings toward the prototype position, suggesting that accommodation of later attachment experiences to earlier mental models is analogous to learning a foreign language or taking up golf after years of playing baseball. In the former analogy, the learner is likely to retain the accent of the native language, and in the latter, vigilance is required to avoid unconscious regression to longstanding swing patterns. The cumulative evidence indeed seems to suggest that mental models of attachment formed fairly early in adulthood are not beyond influence, yet show a marked tendency to resist modification and/or a tendency to default toward earlier internalized patterns.

Internal Working Models of Attachment

Marriage and family therapists encountering couples with maladaptive attachment-relevant interactional problems are more likely to fashion effective interventions if they understand the processes underlying attachment style stability and change. John Bowlby (1969/1982) proposed that attachment style continuity was sustained by mental memory representations of previous attempts to obtain security from a stronger other, and the outcomes of those events. Mary Ainsworth devised a means of operationalizing Bowlby's theoretical construct of internal working models, in her correlation of first-year infant/parent interactional data with one-year-old infant behaviors in the Strange Situation experimental vignette (Ainsworth, Blehar, Waters, & Wall, 1978). Mary Main

utilized Bowlby's theoretical tenets and Ainsworth's (and subsequent others') infant studies to articulate a set of twelve propositions defining the formation, modification, and transmission of internal working models of attachment as vehicles of attachment state-of-mind stability and change. The following is a summary of those propositions:

- Internal working models of attachment are mental representations that include both cognitive and affective components, and are integral components of behavioral systems.
- Internal working models are most likely formed from generalized representations of attachment-relevant events.
- Once formed, internal working models of attachment have an existence outside of consciousness and a propensity for stability.
- Internal working models of self and other are formed out of interpreted outcomes of attempts to seek or maintain proximity to caregivers.
- Infants whose attempts to gain proximity to caregivers are consistently accepted will develop different internal working models of attachment relationships than will those whose attempts are consistently blocked or unpredictably accepted. Where the latter outcomes predominate, infant patterns of attention, behavior, and emotional expression in attachment-relevant contexts will be reorganized, restricted, and redirected.
- Individual differences in infant Strange Situation behaviors may be interpreted as reflecting individual differences in internal working models of attachment relative to the parent.
- Changes in a child's internal working model of attachment do not require the caregiver's presence, because the event representations from which they are formed include interpretation of outcomes of the child's efforts to secure proximity to the unavailable caregiver.
- Internal working models provide rule systems that serve to direct behavior in attachment-relevant experiences and to influence felt appraisal of those experiences.
- Internal working models of attachment relationships also provide rules for the direction of attention and the organization of memory. These rules, many operating outside of consciousness, serve to permit or to limit access to certain forms of knowledge about the self, the attachment figure, and the relationship between the two, and will be reflected in the organization of thought and language associated with attachment-relevant experiences and themes.

- In childhood, it is possible that internal working models can be altered only in response to changes in concrete attachment experiences.
- After the onset of the developmental stage of formal operations (about age 12), alteration of earlier-formed internal working models of attachment may not be dependent on changes in concrete experiences. This potential relates to an individual's emerging capacity to step outside a relationship system and to reflect about its rules and function.
- Although showing a strong propensity for stability, internal working models of attachment are best conceived not as templates, but as structured processes that serve to permit or limit access to information. [Main, Kaplan, and Cassidy, 1985]

In the quarter-century since the presentation of these twelve propositions, attachment researchers have examined in considerable detail each of the tentative conclusions proposed by Main and her colleagues. Of particular interest in the current study are the propositions that hint at enlightening a clinical conundrum frequently encountered by couples' counselors: How to uncover, bring to client consciousness, and find therapeutic leverage to influence, embedded attachment-experience-relevant rule systems currently obstructing couples' mutual exchange of empathy and support during times of distress. The balance of this section contains a brief overview of a series of studies whose findings suggest how attachment-relevant internal working models permit or limit access to certain forms of knowledge about the self, the attachment figure, and the relationship between the two, contributing to the stability of those models. The subsequent section will then be devoted to discussion of memory research suggesting how mental representations of attachment-relevant experiences are organized in memory, how felt appraisals of those experiences influence behavioral processes in current relationship experiences, and whether and how these processes may be accessible to clinical influence.

A crucial body of evidence for moving from Bowlby's (1969/1982) theoretical constructs to Main, Kaplan, and Cassidy's (1985) propositions concerning the vehicles of inter- and intra-generational transmission of attachment state-of-mind, emerged with the development of the Adult Attachment Interview (AAI). The AAI is a semi-structured interview composed of 20 main questions and follow-up prompts, designed to assess individuals' attachment-relevant experiences with their families of origin. AAI items include inquiries into the following areas of experience and perception: (a) degree of closeness with each parent or parent substitute; (b) how episodes of upset were handled; (c) feelings of rejection or threat that may have been encountered; (d) how one responded to times of parental illness or separation; (e) any experiences of loss of a family member or other traumatic attachment-relevant events; (f) perceptions of why parents behaved toward them as they did; and (g) the perceived effects of these experiences on respondents' developmental trajectories and adult personalities (Main, 2010). Developed by George, Kaplan, and Main in 1984, with an accompanying system for scoring and classification developed by Main and Goldwyn, the AAI has been refined multiple times over the ensuing years, yet has never been formally published for general use. The time required to score the AAI makes it impractical for most clinical applications: Time to create a verbatim transcript of the recorded interview and code and score the transcript is estimated at 14 hours per administration. Certification to administer the AAI requires extensive formal training, followed by validation of scoring proficiency on 30 subsequent administrations of the AAI protocol (Hesse, 1999; Mikulincer & Shaver, 2007).

Despite the impracticality of administering the AAI in normal couples-counseling settings, analysis of the findings of others' administrations of the AAI can inform clinicians' efforts to help couples step outside their own attachment contexts to gain insight prerequisite to changing maladaptive communication patterns. Recently, Bakermans-Kranenburg and van IJzendoorn (2009) summarized the findings of 206 AAI studies, totaling more than 10,500 participants, and representing both genders, various ages, a diversity of socio-economic statuses, ethnicities, and countries of origin, and both general and clinical populations. Distribution of secure, dismissing (avoidant), and preoccupied (anxious) attachment categories were similar to those found in infant Strange Situation categorizations, across gender, age, country, and culture, with the exception of moderately higher dismissive (avoidant) classifications among European interviewees. As expected, clinical populations representing externalizing disorders (such as borderline personality disorder) reflected an over-representation of preoccupied (anxious) classifications, while those representing internalizing disorders (such as antisocial personality disorder) reflected a pronounced incidence of dismissing (avoidant) classifications. The AAI findings among those diagnosed with internalizing and externalizing disorders serve to illustrate (albeit in a somewhat exaggerated form) the attachment-internal-working-model cognitive and affective processes that the Adult Attachment Interview was designed to assess. The rationale supporting such a statement relates to the high levels of concordance consistently found between infant Strange Situation classifications and their parents' AAI assessments (Van IJzendoorn, 1995; Mikulincer & Shaver, 2007), and requires an understanding of how parents' attachment state-of-mind likely influences infant attachment.

Coding of AAI transcripts relates to the interviewee's capacity to provide a coherent narrative of childhood experiences in responding to the interviewer's queries. The AAI transcripts of individuals rated securely-attached generally reflect the four maxims of cooperative, rational discourse proposed by the linguistic philosopher, Grice (1975, 1989; as cited by Hesse, 1999): (a) Quality – communication that is truthful and supported by evidence; (b) Quantity – communication that is succinct, yet complete; (c) Relation – communication that is relevant to the topic at hand; and (d) Manner – communication that is clear and orderly. Because the AAI is measuring one's state-of-mind in regard to attachment, and not articulateness or veracity per se, the concept of coherence relates to the capacity to come and go freely from attachment-related material in memory while simultaneously maintaining here-and-now presence with the interviewer and the task at hand. The three AAI classifications are described below:

- Secure/Autonomous – Transcripts suggest attachment relationships are both valued and regarded as influential; able to maintain sufficient objectivity to explore thoughts and feelings about attachment memories during the course of the interview; provide supportive evidence for positive descriptors of parents; a sense of balance, allowances for context, perhaps humor, and implicit forgiveness in negative portrayals of parents; evidence of the capacity for meta-cognitive monitoring of attachment memories and the language used to describe them.
- Dismissing (Avoidant) – Transcripts suggest attempts to limit the influence of attachment relationships in cognitions, emotions, and behaviors; implicit claims to strength, normality, and/or independence; tend to describe parents in positive to highly positive terms, yet when prompted to support such descriptions, are unable to provide concrete examples or provide contradictory examples; deny or minimize importance of attachment-related phenomena, perhaps to the degree of showing contempt for them.
- Preoccupied (Anxious) – Transcripts suggest an excessive, confused, and non-objective preoccupation with specific attachment relationships or attachment-relevant experiences in memory; discussions of these experiences evidence neither objectivity nor insight, seeming rather to intensify distress; descriptors of early relationships may alternate between vagueness and angry and conflicted enmeshment in the memories called upon to retrieve. [Hesse, 1999; citing Main & Goldwyn, 1998]

In essence then, it might be said that the AAI assesses attachment internal working models by making explicit one's implicit system of rules for permitting or impeding access to information about oneself, one's attachment figure, and the relationship between the two—rules that doubtless serve the goal of emotion regulation relative to attachment-relevant experiences and memories. Secure/autonomous individuals are able to maintain AAI interview narrative coherence because cumulative attachment-relevant experiences were generally positive and/or sufficiently processed and positively integrated into the life narrative that the interviewee can freely access memories of them while remaining fully present with the interviewer. Dismissive individuals exhibit rules limiting access to attachment-relevant content in memory, and thus are unable to weave a coherent interview narrative supportive of generalized descriptions of childhood. Preoccupied interviewees, by contrast, are unable to maintain narrative coherence because enmeshment in unresolved attachment memories they are prompted to revisit interferes with their ability to remain on task (Mikulincer & Shaver, 2007).

In conclusion, it should be stated emphatically that although parent state-of-mind in regard to attachment is rather highly predictive of child attachment orientation as much as 20 years later (Hesse, 1999), it is far from determinative. Intervening factors including life events and the contributions of subsequent attachment figures can serve to shift an attachment trajectory from security toward insecurity, and vice versa. Attachment researchers (e.g., van IJzendoorn, 1995) refer to the “transmission gap” between the level of attachment security that might be expected given one's remembered family-of-origin dynamics and subsequent assessments of attachment.

Belsky referred to the complexities influencing this phenomenon as “the broad ecology of attachment security” (1999). Individuals who have found a pathway to attachment security despite life experiences that seem unlikely to have supported such an outcome have been labeled “earned secure” in the attachment literature. Genetic differences in meta-cognitive skills may play a significant role for some in regard to the phenomenon known as “earned security” (Main, 1991; 1996; cited by Hesse, 1999). Although couples counselors obviously cannot influence heritable traits, it seems arguable in light of foregoing discussions that teaching couples with maladaptive attachment patterns to enlist existing meta-cognitive capacities in the task of reflection about their own attachment dynamics could be a factor in nudging them toward “earned security.” Toward further informing such counseling strategies, the next section pertains to the role that memory systems play in sustaining maladaptive attachment patterns.

Memory Systems Interplay in Attachment

Examination of research relating to memory storing, coding, and retrieval functions, brings an illuminating lens to the understanding of processes governing attachment internal working model stability and change. Although the contribution of memory systems interplay is implicit in any detailed analysis of attachment working models, many such discussions address these dynamics only obliquely, if at all. In my own clinical practice with couples I have found that efforts to make these often-unconscious processes explicit can provide an indispensable assist to partners’ metacognitions prerequisite to altering their own attachment patterns. It is beyond the scope of this study to provide a comprehensive review of memory research bearing upon couples’ attachment dynamics. Nevertheless, this section contains an overview of such research and a discussion of how it informs the current study’s design.

Memory researchers are generally in agreement that the brain provides two distinct yet interacting domains of memory. Episodic memory, also known as autobiographical memory, is regarded as that repository of memories that were generated in a specific learning context, while semantic or procedural memory is that memory store encompassing all that one knows from any source, including interpretive analyses of lived events encoded in episodic memory (Tulving, 2001). To illustrate the distinction between the two memory domains, when I say that I know that Santiago is the capital of Chile, my source of knowing was a grammar school geography lesson, backed up by a quick internet search to ensure that my memory had not faded and that intervening geopolitical factors had not nullified what I had earlier memorized as a fact. Therefore, this bit of knowledge is part of my semantic memory store, my general repository of knowledge obtained from any source. When I say, on the other hand, that I know that electricity is nothing to be trifled with, my knowing is attributable in part to the outcome of a childhood hide-the-object game with my siblings, where I unscrewed a light bulb from a lamp and inserted my fingers into the socket, believing that I had discovered the location of the sought-after treasure. Because this latter kind of knowing resulted from a lived experience, it is part of my episodic or autobiographical memory. Further, because this particular experience was not wasted on me, analyses of potential outcomes of naive encounters with electricity were consciously and unconsciously calculated, and decision rules about future behaviors relative to electrical current were filed in my semantic memory—punctuated by sensory and affective data associated with the physical pain and subsequent feelings of foolishness that accompanied the remembered episode.

Cognitive psychologists offer case studies of brain damaged individuals and neuroimaging data as converging evidence for the episodic/semantic memory distinction (Moulin & Chauvel, 2010). Tulving cited the case study of a man of normal intelligence and functional skill level whose specific area of brain injury left him without the ability to remember any event in which he had ever participated—no matter how recent. Yet he functioned as one who had benefited from the learning of those experiences (2001). Examining such a phenomenon through the lens of neurological and internal working model function, such a person would be thought to have intact those brain structures necessary for the momentary consolidation of an experience in semantic memory, but not those regions of the brain essential to retain recollection of experiences previously consolidated into semantic memory decision rules (Moscovitch, Winocur, Ryan, & Nadel, 2008). Neuroimaging studies reflecting brain activity associated with semantic and episodic memory retrieval functions for both normal and brain-injured subjects have both corroborated and helped refine theoretical formulations about the independent and interdependent functioning of these two memory stores (e.g., Shrager & Squire, 2008; Brand & Markowitsch, 2008).

In contrast to semantic memory stores that seem to be fairly regionalized and fully within the brain's left hemisphere, the more multi-faceted episodic memory function integrates a multiplicity of brain structures spanning both hemispheres (e.g., Shrager & Squire, 2008; Brand & Markowitsch, 2008; Fujii, 2008; Trimble & Cavanna, 2008; Smith, 2008). Episodic memories are conceived as summary recordings of events that include sensory, perceptual, conceptual, and affective data processed from working memory. Visual images tend to predominate, but auditory, olfactory, gustatory, and tactile images

are stored in episodic memory as well. Episodic memories are retained in a durable form only if they are linked to autobiographical knowledge; they are characterized by a perspective, either field or ground; and they are regarded as the mental representations from which concepts are formed (Conway, 2008).

The details of episodic memories may shift over time or be consolidated with other memories (Nadel, Hupbach, Hardt, & Gomez, 2008). Looking more closely at my childhood encounter with electricity, the record of this event in my episodic memory is rich in detail: The room where it occurred; the lamp and the end table upon which it rested; the initial startle response of my parents' (who had been reading on the couch) giving way to looks of concern; the initial startle response of my siblings giving way to expressions of amusement; the cognitive dissonance that I felt when I was abruptly disabused of the notion that I had cleverly divined the location of the hidden object; and somatic memories of the sensation of serving as ground (in the non-gestalt sense of the word) for an electrical field. Yet when I mentally travel back in time to that event, I am uncertain whether the picture of a rustic farm I see hanging over the couch where my parents were sitting is a detail actually encoded from that time, or whether I have consolidated that aspect of the memory with others of having seen that picture hang in that location for many years. Similarly, when I relive the event in my mind, I feel certain of my parents' responses to what happened, yet less so of the response of my siblings. There is some likelihood that this aspect of my memory of the event may be contaminated with subsequent memories of my siblings' enthusiastic (albeit good-natured) sharing with various audiences about my childhood missteps or events of comeuppance, whether actual or apocryphal.

Memory theorists articulate internal working model function by tracing the episodic and semantic memory processes associated with lived experiences. If a lived event is perceived as essentially irrelevant to conceptual autobiographical knowledge, it is unlikely to be retained in a durable form. If it is deemed relevant, however, a record of it is formed in episodic memory, coded with sensory and affective data related to one's (often unconscious) perceptions of its importance to one's survival or being (Conway, 2008). In the latter case, analyses of relevant information is performed (again, often at an unconscious level), and decision rules arising from these analyses are encoded in semantic memory, for the purpose of informing behaviors in future situations deemed analogous to the lived event serving as background for those decision rules (Wheeler, 2000; Brown & Craik, 2000). Encoding occurs with a level of specificity designed to heighten semantic memory accessibility of relevant decision rules, when future events with corresponding contextual features call for application of the learned information as a means of guiding adaptive responses (Anderson & Schooler, 2000; Ryan, Hoscheidt, & Nadel, 2008). Over time, mental representations sharing common or overlapping themes become linked together in episodic memory, and these are interwoven with an ever-evolving system of semantic memory decision rules, promoting certain behavioral options above others in approaches or responses to new situations deemed analogous to earlier experiences. And behavioral prescriptions (sometimes rising to the level of imperatives) emanating from this system of affect-laden decision rules are mediated (at least in part) by the goal of emotion regulation (Allen, Kaut, & Lord, 2008).

The application of this rudimentary explanation of memory systems interplay to the function of internal working models of attachment requires little leap for couples'

counselors. The processes by which such working models are formed and refined through lived experiences are essentially adaptive. In somewhat simplified terms, working models reflecting attachment security promote exploration and growth buoyed by an intuitive belief that support can be competently summoned and will be reliably provided when the need arises. Working models indicative of attachment avoidance compel suppression of attachment-related needs, as a means of emotion regulation in response to an attachment milieu perceived as harsh or interfering. And working models reflecting attachment anxiety compel an amplification of emotions surrounding bids for comfort and support, in the hopes of enlisting emotion-regulation assistance from a reluctant other. Working models are maladaptive, however, to the degree that they were formulated upon biased interpretation of lived experiences, to the extent that cognitive and affective coding heightens the accessibility of less-than-optimally applicable models for prescribing behaviors in current attachment-relevant situations, and to the limit that, as a consequence of these factors, they serve to elicit reciprocal behaviors that recursively reinforce themselves.

The same processes that benefit more securely-attached individuals by promoting stability of attachment orientation during subsequent relationships may serve to thwart their more insecurely attached peers who hope to leave behind painful patterns of relating when emerging from families of origin and/or earlier adult-relationships. Couples' counselors regularly called upon to influence such maladaptive patterns can attest to the multiplicity of obstacles conspiring against attachment working model updating. To illustrate why this is so, let us return briefly to my childhood introduction to electrical current. My present comfort level with performing a fair number of household

electrical tasks with appropriate caution is attributable in part to my capacity to interact freely with that memory over subsequent years, and thus to both challenge and refine generalizations deduced about electrical current in the context of that episode on the basis of subsequent learning experiences and competency acquisitions. Prior to such updating, initial generalizations that electrical phenomena were to be avoided at all costs were adaptive in that they abetted my opportunity for survival in the short term. Subsequent refinement of event-outcome-interpretations contributed to survival in the long term, however, by promoting a set of behavioral guidelines that did not make danger aversion and competency acquisition mutually exclusive goals. There are several factors, however, that make attachment internal working model updating less straightforward.

The first and perhaps most obvious factor when comparing attachment internal working model updating to non-attachment-competency model formation and revision is that during the formative years one does not have the luxury of avoiding attachment-relevant events until competencies catch up. The likelihood of having maintained relative attachment figure and milieu continuity, along with the belated emergence of information and perspective vital to making more adaptive prior attachment-experience generalizations about the self and others, tend to conspire against model updating efforts for those with highly insecure internal working models of attachment (see earlier discussion in this chapter about continuity and change processes). A second factor relates to issues of access. Episodic memory does not fully emerge until about the fourth year of life (Atance, 2008). This seemingly limits metacognitions about early-formed attachment working models to more removed-from-experience after-the-fact

extrapolations of the contexts in which they were formed, as opposed to the richer sensory-affective-laden reprocessing possible when the original experience is accessible in memory (Suddendorf & Corballis, 2008). Even given the theoretical accessibility of later insecure-attachment-working-model precursor events, individuals seem to differ widely in their neurological capacities for the inter-hemispheric memory store navigation prerequisite to maximal attachment working model challenge and revision (Christman & Propper, 2010), and the time-intensive nature of counseling approaches so directed makes them often prohibitive.

Yet a third factor arguing for insecure-attachment-working-model resistance to change relates to the affective data associated with one's accumulated life-span repertoire of attachment-relevant experiences, encoded at each juncture of the interwoven episodic and semantic memory store networks (Allen, Kaut, & Lord, 2008). These affective components of the system can blur objective assessments of current attachment contexts (Main et al., 1985) because one's intrinsically egoistic goal of emotion regulation provides an interpretational bias toward more familiar patterns of response, despite the apparent ineffectiveness of such emotion regulation strategies to observers with different attachment histories. Paradoxically, this latter factor serving to obstruct attachment internal working model update may suggest a fulcrum for therapeutic leverage in helping couples construct a relationship-specific attachment context more secure than what their more global attachment orientations might predict.

The potential for such a window of influence builds upon three theoretical premises: (a) that differing internal working models of attachment are constructed for differing attachment figures (e.g., Main et al., 1985); (b) that the goal of emotion

regulation selectively heightens accessibility in memory of specific affect-laden working models to inform current attachment-relevant episode behaviors (e.g., Allen, Kaut, & Lord, 2008); and (c) that more recent episodic memories may better lend themselves to the metacognitive processes likely to promote attachment working model change than might those that are more remote in time (e.g., Conway, 2008). Taken together, these premises seem to suggest the efficacy of clinical approaches that more-or-less circumvent global attachment orientations in favor of helping couples develop and strengthen partner-specific attachment working models. Such approaches utilize counseling-session reenactments of recent attachment-relevant episodes or current enactments of such contexts, with primary focus on bringing to conscious awareness self and partner emotional processes—promoting specific approaches to one’s partner when eliciting support and specific patterns of response by one’s partner to such bids.

Certain approaches to couples’ therapy seem to be predicated upon this perspective (e.g., Johnson, 1996). Using such approaches, more global insecure working models of attachment become less accessible as more familiar and sustainable patterns of emotionality surrounding partner-specific communication contexts render them less applicable—and therefore less unconsciously accessible to guide current behaviors. Global insecure attachment working models are not left untouched in such approaches, however, but rather are subject to scrutiny when they intrude upon current attachment context functioning. As such, the benefit of immediacy serves to heighten the likelihood that reflection upon such working models and their precursor events will further reduce their accessibility and that more secure attachment representations in memory, including those associated with the emerging partner-specific interactional

patterns, will become more influential. Subsequent sections in this literature review are intended to examine the effects of attachment security on altruistic motivations and behaviors, how contextual enhancement of such security may serve to offset inclinations or disinclinations to respond empathically to others' distress, and how such outcomes may apply to partner communication and support dynamics in particular.

Attachment Security and Prosocial Motivation

The debate has long raged over whether there is indeed such a thing as altruism, or whether the motivation to help is merely the pursuit of self-interest in one form or another, such as the seeking of external reward, the avoidance of punishment, or the reduction of one's own aversive emotions experienced as a result of another's suffering. A shift away from more cynical positions has occurred among some social scientists over the past two decades as a result of experimental designs intended to isolate differing helping motivation variables. Among the variables manipulated in such experiments have been those associated with what has been dubbed the "ease-of-escape" factor. Specifically, the opportunity to readily remove oneself from witnessing another's plight, or from one's own internal sanctions for choosing not to respond with assistance, have been isolated as variables for the purpose of assessing how much of helping is motivated by these more egoistic processes. Despite the convergence of multiple factors promoting help-giving behaviors, support has been found in these more recent studies for regarding altruistic empathy as an independent motivator in responding to another's distress (Batson, 2010).

In the last decade, attachment researchers have begun to investigate the relationship between attachment security and the likelihood of responding altruistically to others in need. Gillath, Shaver, Mikulincer, Nitzberg, Erez, and van IJzendoorn

(2005) examined the relationship between volunteerism and attachment security and insecurity, finding that those who were avoidant in their attachment orientation engaged in fewer volunteer activities and gave less time to those activities than did their securely- or anxiously-attached peers. In a discussion of their own earlier studies examining the link between gratitude and prosocial behavior, Mikulincer and Shaver (2010) concluded that a willingness to help others is highly correlated with feelings of gratitude for help given, but that such feelings are significantly diminished or otherwise sullied by attachment insecurity. In her review of studies examining the relationship between empathy and the propensity to help others, Fehr (2010) noted limited or mixed evidence supporting a connection between such predispositions and age, education, income, or race/ethnicity. However there was evidence of a link between empathic concern and spirituality and/or religious involvement (citing Smith, 2009; Graber & Mitcham, 2009), and women consistently evidenced greater tendencies to express empathy and provide emotional support than did men (citing Taylor, 2002; Sprecher & Fehr, 2005; Fehr & Zimmerman, 2007; Marks and Song, 2009). Interestingly, Fehr noted that differences relative to gender (citing Fehr, 2008) and spirituality/religiosity (citing Sprecher & Fehr, 2005) were not found when the target of one's empathic response was a romantic partner (2010).

Central to the design of the current study were five studies conducted by Mikulincer, Gillath, Halevy, Avihou, Avidan, and Eskoli (2001), investigating the effects of attachment-security priming on responses to stranger distress. Secure attachment memory representations were induced by a variety of methodologies in the several studies, including the use of a narrative describing help-seeking and supportive

responses of a family member, a photo of comfort-giving, and the subliminal insertion of comfort-inspiring words on participants' computer screens during protocol administration. The target stimuli of stranger distress in the various studies included the reading of a story of a peer's struggles after family tragedy, the reading of a story of a peer suffering a severe physical disability, and the more participant-specific recollection of an event of encountering another person's plight. Differing empathy and distress response inventories were alternated in collecting dependent variable responses.

Because of the nature of study design, the first two studies' stimuli for inducing response to others' distress tapped into participants' semantic associative networks. By contrast, the design of the latter studies prompted participants to retrieve emotions, cognitions, and motivations from episodic memory. Secure attachment priming was found to be significantly correlated with increased empathy and decreased distress responses to stranger distress. Aspects of these studies were duplicated and expanded upon by subsequent studies (e.g., Bartz & Lydon, 2004; Mikulincer et al., 2005), and as such, do much to inform the current study. The current study's use of married-couple participants, however, along with its investigation of romantic-partner-distress as participants' empathy and distress activating stimuli, argue for differing design criteria for assessing the more complex dynamics associated with this area of inquiry.

Secure-Base and Safe-Haven Behaviors in Couples' Relationships

According to Bowlby (1969/1982; 1973; 1980), inherent in the infant-parent attachment bond were four defining criteria: (a) proximity maintenance: the infant seeks to keep the parent within a distance that can be regulated; (b) separation distress: the infant experiences distress when that goal is impeded; (c) secure base: the infant utilizes the parent as a base of exploration to which she/he can retreat when needing to

be replenished or reassured [Note: Bowlby (1988) credits Ainsworth with introducing the concept of a secure base]; and (d) safe haven: the infant regards the parent as a reliable source of protection, including restoration of emotional equilibrium during times of alarm. Hazan and Shaver's (1987) conceptualization of romantic love as attachment spawned an examination of the applicability of these four attachment-bond defining criteria to couples' reciprocal relationships. Of primary interest to the current study are the secure-base and safe-haven components of the reciprocal bond shared by romantic couples. These two attachment bond characteristics might be viewed as subsets of intimacy (Hazan & Ziefman, 1999), with confidence in partner availability constituting the secure base, and partner effectiveness in providing validation, comfort, and support during times of heightened distress constituting the safe haven. Safe haven behaviors toward one's distressed partner may include the following: (a) signaling openness to partner's sharing of thoughts and feelings; (b) showing interest in the problem and validating partner's concerns; (c) conveying a sense of confidence in partner's ability to handle the situation; (d) affirming partner's value and giving assurances of love; (e) providing physical closeness and tenderness; (f) expressing availability to provide task assistance and resources; and (g) signaling continued availability (Collins, Ford, Guichard, Kane, & Feeney, 2010).

Many studies have examined couples' secure-base and safe-haven competencies as implied subsets of attachment security. Yet few studies have investigated the direct contribution of these attachment-bond-defining criteria to marital intimacy and satisfaction. In their major update of the state of the adult attachment literature, Mikulincer and Shaver (2007) cited five studies (Fraley & Davis, 1997; Trinke &

Bartholomew, 1997; Feeney & Hohous, 2001; Feeney, 2004; and Mayseless, 2004) supporting a link between attachment style and use of a romantic partner as a secure base and safe haven. Four of these studies (all but Feeney & Hohaus, 2004) investigated the early adulthood transitioning of secure-base and safe-haven attachment roles from parents to romantic partners and peers. Although lending credence to the proposition that romantic relationships ought to be conceptualized as attachment relationships (Hazan and Shaver, 1987), these studies are limited to young adult (and mostly unmarried) populations, and therefore leave gaps in our understanding of secure-base and safe-haven phenomena in more seasoned adult romantic relationships. The remaining study's focus of partner willingness to serve as caregiver during the other's extended illness or season of physical decline posed a different set of generalizability limitations to informing secure-base and safe-haven functions in the more egalitarian mutuality of marital relationships.

Of greater applicability to the current study, Treboux, Crowell, and Waters (2004) found a rather robust link between secure attachment and observed secure-base behaviors in a 6-year longitudinal study of 157 couples. Participants (N=314) were assessed three-months before marriage and at six-year follow-up (N=215), using the Adult Attachment Interview (AAI) and the Current Relationship Interview (CRI). Secure-base behaviors correlated with AAI coherence at $r = .48$ and with CRI coherence at $r = .41$ (both significant at $p < .01$) [Note: A detailed discussion of the concept of narrative coherence and its relationship to attachment security is provided in discussion of the AAI earlier in this chapter]. Several studies have examined couples' safe haven behaviors in communication laboratory settings (see Collins et al., 2010 for a brief

summary), but the variables of attachment security or insecurity were not central to the examination of support-seeking behaviors and partner responsiveness amidst episodes of distress. In the current study's examination of empathy and distress responses to marriage partner distress, the target episodes eliciting participants' emotions, cognitions, and motivations were intended to tap both the secure-base and the safe-haven features of an attachment bond, particularly as they relate to attachment orientation and context. Given the paucity of existing research isolating these specific areas of inquiry with couples' populations, it is hoped that this study will add to the understanding of how secure-base and safe-haven competencies contribute to romantic attachment more broadly defined.

Summary

This chapter has included the examination of six separate, yet overlapping and often interwoven areas of investigation serving as the current study's theoretical base and informing its design. It may be concluded that the bond that characterizes normal couples' relationships functions as a reciprocal attachment bond, and as such, that attachment research serves as a relevant lens for examining couples' interactional dynamics. One's earlier-formed attachment mental representations were found to exert significant influence over subsequently-formed attachment relationships, including romantic relationships, yet they maintain some level of malleability. Internal working models of attachment are thought to be the mechanisms mediating attachment continuity and change, and semantic memory decision rules formulated in the context of earlier attachment-relevant events seem likely to influence interpretation of current attachment-related experiences. There indeed seems to be a relationship between attachment security and the inclination to behave altruistically toward another in

distress, and the results of recent research suggests that the priming of secure attachment memory representations may be a supplemental factor to more generalized attachment style in enhancing the availability of more altruistic response motivations. Yet such studies have focused on response to the plight of a stranger, leaving open questions about how such factors influence the more reciprocal, durable, and history-laden empathy-eliciting and response-giving patterns of couples' relationships, where secure-base and safe-haven behaviors are an integral to relationship function. The current study is designed to help inform those questions.

CHAPTER 3 METHODOLOGY

In the two-plus decades since Hazan and Shaver's (1987) conceptualization of romantic relationships as attachment relationships, numerous studies have documented the link between partner secure attachment style and marital satisfaction (e.g., Kobak & Hazan, 1991; Davila, Bradbury, & Fincham, 1998; Marchand, 2004; Birnbaum, 2007). More recently, social scientists investigating adult attachment have discovered that the priming of secure attachment memory representations helps to increase ones empathy-related emotions, cognitions, and motivations toward relieving others' distress (Mikulincer, Gillath, Halevy, Avihou, Avidan, & Eshkoli, 2001; Bartz & Lydon, 2004; Mikulincer, Shaver, Gillath, & Nitzberg, 2005). These findings argue for development of strategies for helping couples maximize the accessibility of secure attachment memory representations during marital communications.

Existing studies exploring causal links between secure attachment memory accessibility and empathy enhancement have utilized college student samples (Mikulincer et al, 2001; Bartz & Lydon, 2004 [Study 2]; Mikulincer et al., 2005) or other young adult samples (Bartz & Lydon, 2004 [Study 1]). The purpose of this study has been to explore the generalizability of earlier findings to populations of adult couples in monogamous relationships, both by sampling directly from such populations and by incorporating couple-specific design criteria. The purpose of this chapter is to provide a description and discussion of the participants, variables, experimental design, research questions and hypotheses, instrumentation, procedures, and data analyses for this study.

Participants

The participants for this study were married couples between the ages of 20 and 59 years, recruited from churches of various denominations in and around Gainesville, Florida. The sample included 132 couples (264 individuals) who volunteered to participate in response to printed recruitment invitations in their weekly church bulletins and (where permitted) announcements at their weekly church worship services. Couples were assigned to one of four groups (three experimental conditions and one control condition) using random-stratified assignment. The goal of sample stratification was to achieve approximate group parity relative to the length-of-current-marriage variable. De facto stratification was achieved relative to the variable of gender by assignment of couples to groups as intact pairs.

Gainesville is located in Alachua County in north-central Florida. Home to the University of Florida and Shands Teaching Hospital, Gainesville is a major educational and healthcare hub for north-central Florida, and nearly half of Alachua County's more than 240,000 residents live within its city limits. Boasting UF's recent collegiate national championships in football (2006 and 2008) and basketball (2006 and 2007), Gainesville offers a variety of cultural and family-centered activities, and enjoys frequent rankings as one of the best cities in the country to live, work, and play (Gainesville Council for Economic Outreach Website, 2010).

A free book and the opportunity to attend a free seminar were offered as inducements to participate in this study. At the close of the experimental protocol, each couple was permitted to choose between two books (Clinton & Sibcy, 2006; or Smalley & Paul, 2006), selected for their articulation of couples' attachment themes in a manner likely to engage the interest of the population sampled. In addition to the free book,

participating couples were offered the opportunity for post-study attendance at a free one-day marital communications seminar presented by the principal investigator.

Variables

The purpose of this section is to describe and discuss the dependent variables, the independent variables, and the intervening variables of interest to this study.

Dependent Variables

Participants' experiences of empathy and personal distress in response to their spouses' plight were the dependent variables of interest to this study. Empathy-related emotions, cognitions, and motivations were operationalized and assessed using an adapted version of the six empathy-related items of Batson's Empathy Index (Batson, O'Quin, Fultz, Vanderplas, & Isen, 1983; Batson, Fultz, & Schoenrade, 1987; Batson, Batson, Griffit, Barrientos, Brandt, Sprengelmeyer, & Bayly, 1989) and 13 empathy-related items from a 30-item shortened version of the Pity Experience Inventories (Florian, Mikulincer & Hirschberger, 2000; Mikulincer et al., 2001) developed for the current study. Personal distress-related emotions, cognitions, and motivations were operationalized and assessed using an adapted version of the eight distress-related items of Batson's Distress Index (Batson et al., 1983; Batson et al., 1987; Batson et al., 1989) and 17 distress-related items from a 30-item shortened version of the Pity Experience Inventories (Florian, Mikulincer, & Hirschberger, 2000; Mikulincer et al., 2001) developed for the current study. Copies of these instruments can be located in appendices M and N.

Independent Variables

The independent variables of interest to this study were the manipulated experimental and control conditions and the fixed factor of gender. The three

experimental conditions were designed to make accessible internal working models of attachment (secure, avoidant, or anxious) within participants' semantic associative memory networks specific to that group's induced condition. A more detailed description of the three experimental conditions is provided later in this chapter. A more detailed discussion of internal working models of attachment and the semantic associative memory networks of which they are an integral part is provided in Chapters 1 and 2. The control condition was a neutral condition, designed to avoid any overt priming of specific attachment representations.

Gender was an independent variable of interest to the current study because of findings suggesting gender differences in the physiological experience of emotional distress. Specific to a dependent variable measure used in this study, Florian et al. (2000) reported that men scored lower than women on both the compassionate caring component (empathy) and the passive identification component (one of two distress measures) of the Pity Experience Inventories when remembering and reflecting on a past event when they felt pity for the plight of another. This finding suggests the possibility of a gender bias in the employment of coping strategies to avoid emotional arousal when confronted with a distressed other. Of interest to the current study is whether such gender differences are observed when the distressed other is one's own marriage partner.

Intervening Variables

The principle intervening variable of interest to this study was participant attachment style. This construct refers to the participant's default style of responding in the context of attachment-relevant events. Although often presented as a discrete attachment category, an individual's attachment style is more accurately represented as

a point on a continuum. Although such a point may fall within the inner and outer limits of a discrete attachment category, grouping participants by such categories alone severely restricts the identification of individual differences.

Because one's attachment style is shaped by multiple attachment relationships over time, it represents a composite of converging and competing strategies for interacting in close relationships. Consequently, an optimum method for measuring and reporting individual attachment style uses both an avoidance score and an anxiety score (Brennan, Clark, & Shaver, 1998; Fraley, Waller, & Brennan, 2000). These scores can be understood as points plotted on each of two unidirectional continua, with attachment security at the nexus and attachment avoidance or anxiety increasing with distance from the nexus. Figure 3-1 illustrates how attachment avoidance and anxiety scores reflect level of divergence from the construct of attachment security.

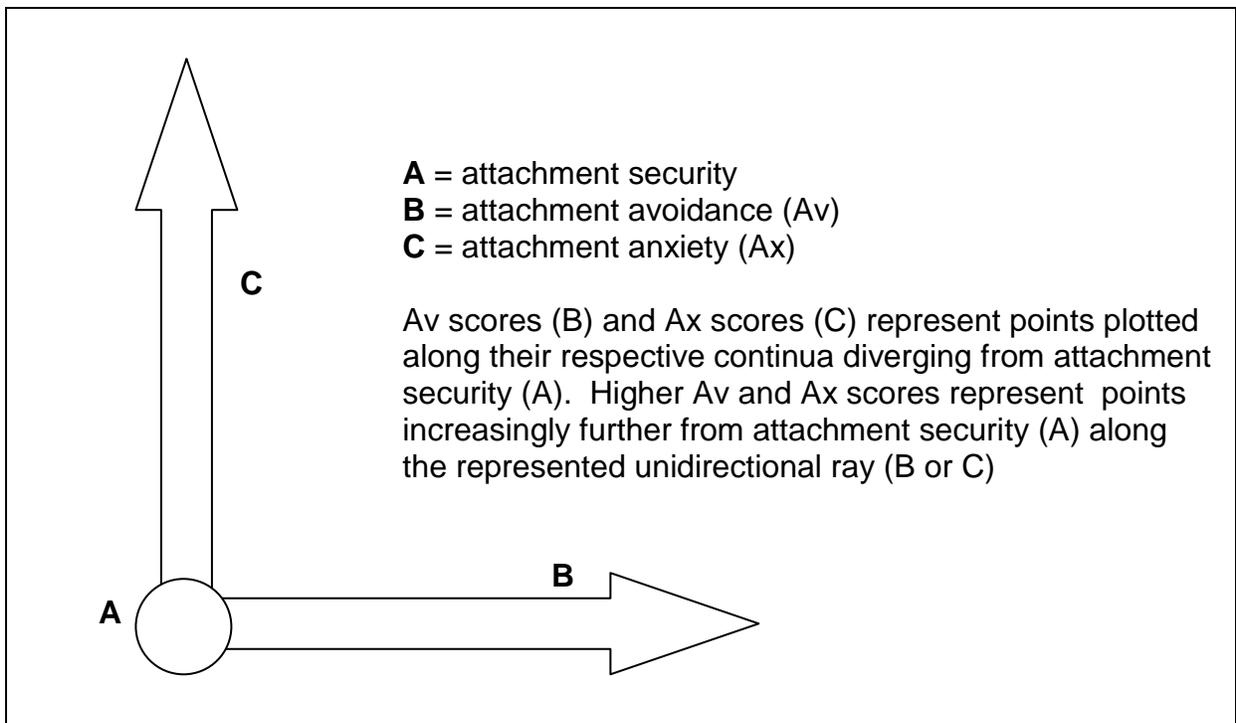


Figure 3-1. Relationship between Attachment Security, Avoidance, and Anxiety

Despite the above-described limitations of identifying individuals by discrete attachment categories, the following brief descriptions of these categories serve to inform future discussion of the intervening variable measures:

Securely-attached persons see themselves and others in a generally favorable light. Because they regard themselves as worthy of support and others as generally of sufficient good will to provide support when needed, securely-attached persons tend to be direct in their expression of attachment-related needs and generally supportive in their responses to attachment needs expressed by others (Bowlby, 1969/1982, 1973, 1980; Ainsworth, Blehar, Waters, & Wall, 1978; Mikulincer & Shaver, 2007).

Insecurely-attached persons who are avoidant in their attachment style use defensive processes to maintain a positive image of the self, but see others as generally unreliable, unsafe, or overly intrusive in their responses to attachment needs. As a result of this orientation, avoidantly-attached persons tend to suppress distressing emotions rather than to risk relying on others for support, and are more likely to withdraw from bids for empathy from others in order to regulate their own feelings of distress aroused by others' plights (Bowlby, 1969/1982, 1973, 1980; Ainsworth, et al., 1978; Mikulincer & Shaver, 2007).

In contrast, insecurely-attached persons who are anxious in their attachment style see others as more able than themselves, yet nevertheless unreliable sources of comfort and support. Lacking in their ability to self-soothe, anxiously-attached persons find themselves in the unenviable position of needing others to help them regulate their emotions, yet simultaneously perceiving others as untrustworthy to give them what they need. Anxiously-attached individuals find it difficult to achieve separateness from others

at a level necessary to optimally impart empathy, because they tend to experience emotional contagion in the face of others' distress (Bowlby, 1969/1982, 1973, 1980; Ainsworth, et al., 1978; Mikulincer & Shaver, 2007).

Because one's attachment style reflects both the predominance and the accessibility of the differing types of attachment representations stored in participants' semantic associative memory networks, exploration of the interplay between this intervening variable and participants' induced experimental condition was of interest to this study. Attachment style was operationalized and assessed by administration of the Experiences in Close Relationships Questionnaire—Revised (ECR-R) (Fraley, Waller, & Brennan, 2000), as adapted for this study. The ECR-R uses two separate 18-item scales to assess generalized tendencies toward avoidance and anxiety, providing scores that differentiate incremental differences along the continua of these two dimensions (see appendix E).

Other intervening variables emerged or became apparent during the process of study administration and data analyses. Occurrences unique to a specific administration of the experimental protocol were documented by the session administrator, and were given appropriate weight in the data inclusion decision rules discussed in Chapter 4.

Experimental Design

Figure 3-2 on the following page provides a schematic of the study's experimental design. Data collected prior to group assignment (Da) was used to verify participant eligibility and to facilitate stratification of random assignment of couples to the three experimental groups (G1 thru G3) and the control group (G4). Data collected in Task #1 (Db) related to the intervening variable of attachment style. The four-group

variations of Task #4 represented the differing experimental and control conditions (E1 thru E3 and C4). Experimental tasks common to all four groups preceded and followed the differing Task #4 conditions: partner-in-distress episode selection task (Task #3 / Ea); and partner-in-distress episode reflection and imagined-recurrence task (Task #5 / Eb). Data collected in Task #6 (De) related to the dependent variables (empathy and distress responses to imagined recurrence of partner-in-distress episode). Participants were asked also to report vividness of Task #4 prototype reflection (Dc), vividness of memory of partner-in-distress (Dd), severity of partner distress remembered (Dd), and vividness of imagined recurrence of partner distress (Dd and De). Participant responses to the relationship history survey provided the data collected in Task #7 (Df). Task #7 responses were used for secondary analyses of participant dependent variable response data.

	Group	Task #1	Task #3	Task #4	Task #5	Task #6	Task #7
Da	G1	Db	Ea	E1 / Dc	Eb / Dd	De	Df
	G2	Db	Ea	E2 / Dc	Eb / Dd	De	Df
	G3	Db	Ea	E3 / Dc	Eb / Dd	De	Df
	G4	Db	Ea	C4 / Dc	Eb / Dd	De	Df
Note: G1-G3 = Experimental Groups; G4 = Control Group; Ea-Eb = Shared Experimental Tasks; E1 thru E3 and C4 = Differing Experimental Tasks; Da-Df = Data-Gathering Activities; Task #2 served as a distracter task							

Figure 3-2. Schematic of Experimental Design

Research Questions and Hypotheses

The following research questions and hypotheses were examined and tested in the study:

A: Does the priming of attachment security or insecurity differentially affect the experience of empathy and distress in response to one's distressed marriage partner?

H1: The independent variables of experimental or control condition will have no effect on the dependent variable measures of empathy and distress responses to partner distress. Alternative hypotheses are:

a: Attachment-security priming condition will result in higher empathy-positive scores (empathy score minus distress score) than will attachment-avoidance priming condition, attachment-anxiety priming condition, or control condition

b: Attachment-avoidance priming condition will result in lower empathy scores than will attachment-anxiety priming condition

c: Attachment-anxiety priming condition will result in higher distress scores than will attachment-avoidance priming condition

B: Does gender differentially affect the experience of empathy and distress in response to one's distressed marriage partner?

H2: The independent variable of gender will have no effect on the dependent variable measures of empathy and distress responses to partner distress. Alternative hypotheses are:

a: Females will exhibit higher empathy scores than will males in response to marriage partner distress

b: Males will exhibit greater use of distancing strategies than will females in response to marriage partner distress

C: How does attachment style interact with contextual attachment security or insecurity priming to affect the experience of empathy and personal distress in response to one's distressed marriage partner?

H3: The intervening variable of attachment style will have no effect on the dependent variable measures of empathy and distress responses to partner distress. Alternative hypotheses are:

a: Higher attachment-avoidance scores will predict lower empathy-positive scores (empathy score minus distress score) for all three experimental conditions and control condition in response to marriage partner distress

b: Higher attachment-anxiety scores will predict lower empathy-positive scores (empathy score minus distress score) for all three experimental conditions and control condition in response to marriage partner distress

c: Higher attachment-avoidance scores will predict greater use of distancing strategies in response to marriage partner distress when controlling for experimental condition and gender

D: Does attachment avoidance promote suppression of partner-in-distress memory vividness as an emotion regulation coping strategy?

H4: Attachment avoidance will have no effect on the vividness of partner-in-distress memories. Alternative hypotheses are:

a: Higher attachment-avoidance scores will predict lower partner-in-distress memory vividness ratings when controlling for experimental condition and gender

b: Attachment-avoidance priming condition will result in lower partner-in-distress memory vividness ratings when controlling for attachment style and gender

c: Males will exhibit lower partner-in-distress memory vividness ratings when controlling for experimental condition and attachment style

Instrumentation

The purpose of this section is two-fold: (1) To describe and discuss the processes of development and validation for the three measurement instruments modified and/or adapted for use in the current study: Batson's Empathy and Distress Indices; the Pity Experience Inventories; and the Experiences in Close Relationships Questionnaire. And (2) To describe and discuss the rationale and processes governing modification and/or adaptation of these instruments for use in the current study.

Batson's Empathy and Distress Indices (BEDI)

Batson's Empathy and Distress Indices (Batson et al., 1983; Batson et al., 1987; Batson et al., 1989) refer to a list of six empathy-related and eight distress-related emotion-referenced adjectives intended to differentiate between altruistic and egoistic emotional states experienced when exposed to the suffering of another. Batson and his colleagues developed and refined the empathy and distress indices through a series of

studies intended to further the debate about whether and when helping behavior in response to another's suffering is altruistically rather than egoistically motivated.

Experimenters in these studies used a variety of creative designs to expose participants to a distressed other. Affect was assessed by participant self-ratings of their emotional states in responses to a series of emotion-based adjectives believed to distinguish between empathic concern and personal distress. Factor analyses of the empathy and distress scales with their individual items confirmed the essentially orthogonal nature of these two indices. Further validation of the empathy/distress distinction was provided by experimental manipulation of participant ease-of-escape (e.g., Batson, Bolen, Cross, & Neuringer-Benefiel, 1986) and participant mood (e.g., Batson, et al., 1989), challenging the position of those who suggest that empathy-attributed helping behaviors are merely behaviors directed toward the egoistic goal of negative-state relief (e.g., Cialdini, Schaller, Houlihan, Arps, Fultz, & Beaman, 1987). A discussion of how the egoistic versus altruistic helping motivation distinction informs the current study can be found in Chapter 2. In a review of six studies using and validating the emerging empathy and distress indices, Batson, et al. (1987) provided compelling evidence for the inclusion of six empathy-related adjectives (sympathetic, moved, compassionate, tender, warm, and softhearted) and eight distress-related adjectives (alarmed, grieved, upset, worried, disturbed, perturbed, distressed, and troubled) to differentiate altruistic from egoistic responses to another's suffering.

Batson et al. (1987) used Varimax-rotated principal-components factor analyses of the empathy and distress adjectives with their respective indices to validate their emerging empathy/distress measure. The results of their analyses are displayed in

Tables 3-1 and 3-2 at the end of this chapter. Findings revealed that four of the empathy adjectives loaded higher than .60 in the first two studies (moved, compassionate, warm, and softhearted) and all six loaded higher than .60 in the remaining four studies. Similarly, six of the eight distress adjectives loaded higher than .60 in each of the first two studies (all but grieved and worried in the first study; all but perturbed and troubled in the second study). In the remaining four studies, all but grieved in the third study (.55) and troubled in the fifth study (.59) reflected principal factor loadings higher than .60.

Batson et al.'s (1987) data summary of the six referenced studies supports the premise that although there is overlap in the experience of empathy and personal distress when exposed to another's suffering, the basic dimensions underlying the empathy and distress indices are largely independent. Consequently, these indices provide a useful tool for assessing egoistically- versus altruistically-motivated participant responses to the suffering of another. In a set of five studies that the current study is designed to replicate and extend, Mikulincer et al. (2001) reported Cronbach's alpha reliability coefficients of .94 (empathy index) and .88 (distress index) for their use of the six empathy-related and eight distress-related adjectives (Study 1; N=69). Mikulincer and his colleagues also reported roughly congruent effect sizes from their alternate use of Batson's Empathy and Distress Indices (Study 1) and a shortened version of Florian et al.'s (2000) Pity Experience Inventories (Study 2) to assess the effect of attachment security priming on participants' emotional responses to the suffering of another.

In the pilot study experience preparatory to the current study, the six empathy and eight distress adjectives (Batson et al., 1983; Batson et al., 1987; Batson et al., 1989)

were presented as single-word items. The presentation of these items followed a set of general instructions intended to guide participants in rating the degree to which they experienced each emotion-based adjective in the partner-in-distress episode recalled and reflected upon. While presenting the indices as single-word items was apparently adequate for the studies summarized in Tables 3-1 and 3-2 (located at the end of this chapter), pilot participant feedback highlighted a design distinction of the current study that argued for modifying item presentation. Specifically, in each of the earlier studies, participants were exposed to the present plight of a stranger. By contrast, the current study stimulus was the plight of one's own spouse. Obviously, it would be impractical (if not unethical) to attempt to precipitate within each participant and spouse episodes of distress of a magnitude sufficient to elicit meaningful partner empathy and distress responses. Therefore, the design of the current study represented an attempt to approximate such experiences by inducing participants to remember a past episode of partner distress and to imagine its recurrence.

Remembering a past episode of partner distress and imagining its recurrence poses the problem of intrusion of the memory of past feelings (what was felt when the episode actually occurred) into the memory of present feelings (what is being felt as a recurrence of the episode is presently imagined). This bleeding together of past and present emotional responses is unavoidable, because sufficient engagement in the emotional memory of a past episode seems necessary for optimum imagination of its recurrence. Yet to accurately assess the differential effects of present attachment priming variations on responses to partner distress, it was essential to steer participants' focus and reporting of emotions toward those experienced in the imagined present

recurrence rather than those felt in the original episode itself. Therefore, the empathy and distress indices (Batson et al., 1983; Batson et al., 1987; Batson, et al., 1989) were adapted for the current study by embedding the adjectives in sentences that prompted participant focus on the present emotional experience of the imagined episode recurrence.

A copy of this adapted instrument, hereinafter referred to as Batson's Empathy and Distress Indices—Adapted Version (BEDI-AV), can be located in appendix M. Items such as “I find myself feeling softhearted toward my wife or husband” and “I find myself becoming perturbed by the way my husband or wife is behaving” have been substituted for the single-word-adjective items of the original indices. Empathy and distress items are intermingled in the BEDI-AV, and 7-point Likert response options elicit from respondents the degree to which each emotion is experienced. The inventory and its instructions are readable at a seventh grade level. Scoring was accomplished by summing the Likert response levels (1-7) for items in each index, and then dividing by the number of items (6 empathy items; 8 distress items) to achieve an index average. A single index of predominant emotional response was determined by subtracting each participant's distress index score from his or her empathy index score (Batson et al., 1983; Batson et al., 1989). Conversion of participant index scores to standard scores with a mean of 50 and a standard deviation of 10 permitted a merging of participant BEDI-AV scores with the independent empathy/distress measures of the Pity Experience Inventories (Florian et al., 2000) (see next subsection).

Pity Experience Inventories (PEI)

The Pity Experience Inventories (PEI) (Florian, Mikulincer, & Hirschberger, 2000), is a 96-item self-report measure assessing the meaning that the construct of pity holds

for respondents (20 items), along with the emotions (28 items), cognitions (15 items), motivations (16 items), and behaviors (17 items) that the experience of pity elicits. The five categories of items are intermingled within the measure, as are items within each category that are intended to differentiate between the beliefs, emotions, cognitions, motivations, and behaviors that are empathy-oriented and those that are distress-oriented. Six-point Likert response options elicit from respondents the degree to which each item descriptor is experienced.

Florian et al. (2000) used a phenomenological approach to construction of the Pity Experience Inventories. One hundred and four students (median age = 24) from Israeli colleges and universities were asked to freely write about the meaning that the term pity held for them. They were then asked to recall an episode when they experienced the feeling of pity for another, and to describe their emotions, thoughts, wishes, and actual behaviors during that episode. Inter-rater agreement was used to extract words or phrases from participant responses that reflected a single unit of content. Units reflecting a similar theme were grouped into labeled categories, and those units cited by at least 10 percent of the sample were retained for final coding. The personal meaning of pity task elicited 83 different units, grouped by the authors into 17 categories. The subsequent task responses resulted in the identification of 153 differentiated emotions (23 categories), 102 differentiated thoughts (12 categories), 52 differentiated wishes (10 categories), and 86 differentiated behaviors (17 categories).

Florian et al. (2000) used the findings of the phenomenological study to create an initial version of the PEI with five separate scales tapping meanings (30 items), emotions (51 items), thoughts (22 items), wishes (28 items), and behaviors (32 items)

related to the experience of pity. Construction of these five scales was performed by selecting the two or three items from each of the above categories that were most frequently cited in the phenomenological study. This initial version of the PEI was then administered to a new pool of 200 Israeli college and university students (median age = 23). Data analyses of participant responses included principal components factor analyses with Varimax rotation for each item with its respective inventory. Items loading lower than .40 with a factor or higher than .40 with more than one factor were eliminated. These exclusions resulted in a final version of the five PEI inventories containing 20 meanings-related items, 28 emotions-related items, 15 thoughts-related items, 16 wishes-related items, and 17 behaviors-related items.

Florian et al. (2000) then administered this version of the PEI to 672 students (median age = 24) from Israeli colleges and universities. Factor analyses with Varimax rotation were performed for each of the items with each of the five scales (personal meaning of pity, and emotions, thoughts, wishes, and behaviors in the experience of pity). Analysis of the pity meaning scale yielded five main factors explaining 55% of the variance. These factors were labeled the cynical superiority position (19%), the benevolent position (16%), the equalitarian legalistic position (8%), the religious position (6%) and the moral commitment position (6%) toward the meaning of pity.

Analysis of the PEI emotions inventory yielded five main factors explaining 55% of the variance. Sorrow-related feelings accounted for almost half of this variance (26%), with the remainder accounted for by feelings of emotional discomfort (12%), vulnerability feelings (7%), sympathy-related feelings (5%), and superiority feelings (5%). Three factors accounted for 57% of the PEI thoughts inventory variance, labeled

by Florian et al. (2000) as action-oriented thoughts (34%), misfortune contemplation (14%) and self-focused thoughts (9%). Three factors accounted for 65% of the PEI wishes inventory variance, summarized as care-oriented wishes (38%), unrealistic wishes (19%), and distancing wishes (8%). And five factors accounted for 63% of the PEI behaviors inventory variance, identified by the authors as support-seeking behaviors (30%), praying (11%), consoling behaviors (9%), preventive behaviors (7%), and distancing behaviors (8%) (Note: mismatch between factor sum and total variance is the result of rounding).

Looking for a superordinate structure governing the experience of pity, Florian et al. (2000) computed factor scores for each of the PEI scales by averaging items loading above .40 with a given factor, and then performing high-order factor analyses with Varimax rotation on the 16 (above-named) factors associated with the experience of pity. These analyses revealed three high-order factors accounting for 58% of the total variance. Thirty-four percent of the variance was explained by sympathy-related feelings, action-oriented thoughts, care-oriented wishes, support-seeking behaviors, consoling behaviors, and preventive behaviors. This factor comprised the active, prosocial, and compassionate components of pity. Florian and his colleagues labeled these components of the pity experience the compassionate caring factor.

Seventeen percent of the variance was comprised of sorrow-related emotions, misfortune contemplation, unrealistic wishes, and praying. These components reflect the passive, helpless, painful, and succumbing aspects of the pity experience. These components indicate emotional identification with the suffering of others, but they tend to impede active caring behaviors because of the overwhelming nature of the sorrow

and helplessness felt in the face of others' suffering. This set of constructs was labeled the passive identification experience of pity. A third high-order factor labeled false superiority accounted for seven percent of the variance. This factor comprised the emotional discomfort, vulnerability feelings, superiority feelings, self-focused thoughts, and distancing wishes and behaviors of the pity experience. This high-order factor reflects the defensive strategies by which people cognitively and behaviorally distance themselves from the threat that others' suffering arouses within themselves.

Using Pearson correlations, Florian and his colleagues discovered no significant association between age and the three high-order factors of compassionate caring, passive identification, and false superiority. However, t-tests revealed significant differences in the variables of gender and religiosity. Women scored higher than did men in both the compassionate caring and the passive identification experience of pity, as did those who identified themselves as religious in comparison with those who did not. No significant association was found between gender and religiosity.

Florian et al. (2000) examined the construct validity of the PEI scales in three additional studies correlating participant PEI responses with other measures of psychological constructs thought to overlap the three high-order PEI factors. Pearson correlation of participant responses to the PEI and the Schwartz Value Survey (Schwartz, 1992), suggest the following: (a) That the compassionate caring factor may involve values of universalism and benevolence. (b) That the false superiority experience of pity may reflect values of power, achievement, and enhancing one's self-worth. And (c) That the passive identification factor may represent a struggle between the self-transcending value of identification with others' suffering and self-protective

needs for security and conservatism. Comparing PEI responses with participant responses to three measures of sense of control (Joe, 1974 [Personal Control scale and Attribution of Causality scale]; Pearlin & Schooler, 1978 [Sense of Mastery scale]), Florian and his colleagues found that the lower an individual's sense of personal control, the greater the likelihood of experiencing pity in false superiority terms. No significant correlations were found between the sense of control and the compassionate caring and passive identification factors of the experience of pity.

In their third construct validation study, Florian et al. (2000) compared participant PEI responses with their responses to a 15-item attachment style measure (Mikulincer, Florian., & Tolmacz, 1990) and a 32-item measure of care-giving attitudes and behaviors (Kunce & Shaver, 1994). Pearson correlations revealed a significant positive relationship between the compassionate caring pattern of pity and secure attachment ($r = .30, p < .01$), while the false superiority experience of pity was positively associated with insecure attachment (avoidant: $r = .36, p < .01$; anxious ($r = .52, p < .01$)). The compassionate caring factor was positively associated with giving care as a means of being close with others ($r = .31, p < .01$), while the passive identification pattern of experiencing pity was associated with compulsive care-giving ($r = .34, p < .01$). This latter finding seems to reinforce earlier-referenced interpretations that those experiencing pity in this way may be motivated to help others as a means of relieving their own distress (see Chapter 2 for a further discussion of this theme). Finally, the false superiority pattern of pity was inversely related to the sensitivity factor of care-giving ($r = -.30, p < .01$).

Florian et al. (2000) assessed the internal reliability of the Pity Experience Inventories in their three construct validation studies by computing each participant's three high-order factor scores and averaging the items corresponding to each factor. Cronbach alpha coefficients for the three factors ranged from .78 to .85 in the first study (N=62), from .76 to .78 in the second study (N=100), and from .70 to .80 in the third study (N=77).

Mikulincer et al. (2001) reported Cronbach alpha coefficients of .89 for the empathy-related items and .88 for the distress-related items in their use of a 24-item shortened version of the PEI to measure the effects of attachment-security priming on responses to a distressed other (N=60). Mikulincer and his colleagues attributed development of the version used in their study (hereinafter referred to as PEI-Short Form or PEI-SF) to Hirschberger, a co-developer of the original PEI (Florian, Mikulincer, and Hirschberger, 2000), for use in his unpublished doctoral dissertation. Hirschberger's PEI-SF contained 14 empathy-sampling items and 10 distress-sampling items (Mikulincer et al., 2001).

A reconstruction of the full PEI feelings, thoughts, and wishes inventories from which Hirschberger drew his 24 PEI-SF items can be located in Tables 3-3 thru 3-6 at the end of this chapter. For each inventory item-stem sub-grouping, a designation of the percentage of inventory variance that is explained by that sub-grouping is provided. And for each item within each inventory sub-grouping, a designation of that item's factor loading against its sub-grouping construct is noted. Mikulincer et al. (2001) reported that Hirschberger drew his 14 empathy-related items from the PEI's compassionate caring factor and his 10 distress-related items from the PEI's passive identification

factor. There is a discrepancy, however, regarding the source of the distress-related items, in that both the item categories designated and the item examples cited (Mikulincer et al., 2001) reveal that Hirschberger's item selection strayed into the false superiority factor of the PEI. Compounding the mystery created by this discrepancy is the unavailability of a copy of the PEI-SF. Written in Hebrew for studies conducted among Israeli college and university students (Mikulincer et al., 2001), the PEI-SF was never been translated into English (personal correspondence with G. Hirschberger, 2007).

A new short version of the PEI (hereinafter referred to as the PEI-Short Form-Revised or PEI-SF-R) was developed for use in the current study. The 30-item PEI-SF-R differs from Hirschberger's 24-item PEI-SF (Mikulincer, et al., 2001) not only in the number of items, but also in item selection criteria and item presentation. Item presentation changes emerged from the same rationale articulated in the earlier discussion of adapting Batson's empathy and distress indices to the current study. An example of presentation differences for an item common to the two instruments is the PEI-SF item of "I wanted to comfort this person" compared with the PEI-SF-R item of "I find myself wanting to give comfort to my wife or husband." The rationale for using different item selection criteria in developing the PEI-SF-R requires a more extensive discussion.

Four considerations shaped the PEI-SF-R item-selection rationale: (a) Only 59 of the 96 total PEI items were relevant for use in the development of the PEI-SF-R. (b) Use of one's spouse as the distressed other in the current study, contrasted with the use of a stranger as the distressed other in Mikulincer et al.'s (2001) studies, reveals

certain PEI items as appropriate for use in both instruments (PEI-SF and PEI-SF-R), while revealing certain others items as appropriate for use only in one instrument or the other. (c) Developing a test with good psychometric properties requires attending to such matters as number and type of items selected, strength of relationship between each item and its parent factor, and item face validity to respondents. And (d) The attachment-security-and-insecurity-priming design of the current study, contrasted with the attachment-security-only-priming design of Mikulincer et al.'s (2001) studies, resulted in certain of the PEI items being of interest to the PEI-SF-R that were of lesser interest to the PEI-SF. A schematic depicting the rationale and process of PEI-SF-R development can be found in Figure 3-3 at the end of this chapter.

The first consideration in understanding the PEI-SF-R item-selection rationale requires a recollection of earlier descriptions of how the original PEI was constructed. The 96-item PEI consists of five scales, composed of 20 meanings-related items, 28 feelings-related items, 15 thoughts-related items, 16 wishes-related items, and 17 behaviors-related items. Because participant beliefs about the meaning of pity are not of interest in the current study, and because the current study design affords no opportunity to observe participant behaviors, only the 59 feelings-, thoughts-, and wishes-related items were relevant for item selection. These 59 items represent the same initial sampling pool from which Hirschberger's PEI-SF was drawn (Mikulincer et al., 2001).

The second consideration in understanding the PEI-SF-R item-selection rationale relates to the use of an intimate other (current study) in contrast to the use of a stranger (studies for which the PEI-SF was developed and used) as the person whose plight

serves to elicit participant empathy and distress responses. In the studies using the PEI-SF, participants were responding to the plight of a stranger, where issues related to severe disability contributed to the distress witnessed. Items such as “I thought about the possibility of ending up in a similar situation” provide a good fit for measuring responses to a stranger’s plight, but seem less appropriate when the plight of the other has less escapable implications for oneself (such as when the distressed other is one’s spouse). Conversely, current study items such as “I find myself wanting to hug or caress” (the other) fit the current study design where the distressed other is one’s marriage partner, but they seem less appropriate if the distressed other is a stranger. Other items such as “I wanted to comfort this person” (PEI-SF) fit well in the current study when the wording is modified to “I find myself thinking about how to comfort my husband/wife in the situation” (see earlier discussion of adapting item wording for the current study design).

A panel of experts was assembled to assist in the determination of which of the PEI feelings-, thoughts-, and wishes-related items were appropriate for assessing responses to marriage partner distress. The expert panel was composed of three licensed mental health professionals experienced in couples’ counseling. Independent ratings provided by the three members of this panel helped to inform the process by which 45 of the 59 PEI feelings-, thoughts-, and wishes-related items were determined to reflect face validity sufficient for their inclusion in the PEI-SF-R. The final version of the PEI-SF-R reduced the number of included items to 30, by incorporating additional selection criteria subsequently discussed.

The third consideration in understanding the PEI-SF-R item-selection rationale relates to the need to be attentive to established principles of test construction (e.g., Sax, 1989). In keeping with these principles, the number of items selected for each factor was proportionate to the percentage that factor contributed to the combined scales' variance. Given the number of items determined for each factor using this criterion, items were selected from among those available (13 of the 15 relevant compassionate caring items; 10 of the 16 relevant passive identification items; and 7 of the 14 relevant false superiority items) that exhibited a combination of high face validity and high factor loadings.

The fourth consideration in understanding the PEI-SF-R item-selection rationale relates to the need to differentiate participant distress responses reflecting attachment avoidance from responses reflecting attachment anxiety. This distinction was of less importance to Mikulincer et al. (2001), when comparing the effects of attachment-security priming to the effects of positive-affect priming and control condition than it was to the current study comparisons of the affects of secure-, avoidant-, and anxious-attachment priming with control. In the current study, it was desirable to explore which distress responses signaled the employment of avoidant attachment strategies for coping with the plight of one's spouse and which ones signaled the employment of anxious attachment strategies—a distinction that could have been made only weakly at best by using the PEI-SF. Therefore, an additional item-selection priority of the PEI-SF-R was the inclusion of multiple items that correlate highly with one of the two insecure attachment constructs (attachment avoidance or attachment anxiety) but do not correlate highly with the opposing construct. To understand this latter objective of

instrument development, it is important first to remember that both attachment avoidance and attachment anxiety are descriptive constructs reflecting an anxious state-of-mind (see definitions in Chapter 1).

These states-of-mind differ, however, in the strategies they motivate for ameliorating the distress experienced. Whereas avoidantly-attached persons tend to use suppression to regulate their emotions of anxiety, anxiously-attached persons tend to experience enmeshment alternated with protective distancing in response to distress (see description of attachment categories earlier in this chapter). This distinction creates a psychometric problem in the development of an instrument designed both to differentiate attachment security from attachment insecurity and to differentiate the two manifestations of attachment insecurity (avoidance and anxiety) from one another.

This psychometric problem can be illustrated by imagining one individual with an upper quartile attachment-avoidance score and a lower-quartile attachment-anxiety score, compared to a second individual with an upper-quartile attachment anxiety score and a lower-quartile attachment-avoidance score. Because these two individuals can be characterized as having equivalent levels of attachment insecurity, they are likely to rate PEI items similarly that assess attachment-insecurity characteristics common to both attachment avoidance and attachment anxiety. However, because of these individuals' respective bents toward opposing types or styles of attachment insecurity, they tend to implement differing strategies for responding to (self- and other-) distress, and thus are likely to respond divergently to PEI items that distinguish attachment avoidance from attachment anxiety. The first individual (high avoidance, low anxiety) would likely designate higher-numbered Likert responses to PEI items useful for

assessing attachment insecurity in general, as well as to those items intended to distinguish attachment avoidance from attachment anxiety. By contrast, however, such an individual would likely select lower-numbered Likert responses to items designed to differentiate attachment anxiety from attachment avoidance. Consequently, if this individual's distress scores were calculated by averaging responses to all PEI distress items, the resultant score would be diluted by low ratings designated on anxiety-specific items—resulting in an under-reporting of the individual's actual levels of distress. Similarly, low scores of the second individual (high anxiety, low avoidance) on avoidance-specific PEI items would serve to dilute that person's overall distress score, statistically masking the level of distress actually experienced.

The original PEI authors provided no data suggesting the degree to which distress-related items were attachment-insecurity-homogeneous or attachment-insecurity-divergent. Item face validity in concert with theoretical distinctions between the two attachment-insecurity constructs provided some hints. Yet the distinctions are complex because both avoidant- and anxious-attachment are characterized by heightened attachment anxiety, but they diverge in the strategies they promote to mediate that anxiety. An examination of such distinctions, then, would require post-study data analyses. Specifically, a determination of each PEI distress item's level of usefulness for differentiating attachment avoidance or anxiety from attachment insecurity in general could be calculated in the following manner: (a) Correlate participants' PEI distress item responses with their ECR-R avoidance and anxiety scores. (b) Calculate the absolute value of the difference between the avoidance and anxiety correlation coefficients for each of the 17 PEI items. (c) Rank-order the resultant

(absolute-value-difference) correlation coefficients from highest to lowest. And (d) Label each item avoidance-differentiating or anxiety-differentiating, based on whether that item correlates more strongly (whether directly or inversely) with avoidance or anxiety.

The means to distinguish attachment-insecurity-homogenous items from attachment-insecurity-divergent items could provide a useful adjunct for examining any differences found between the groups' dependent measure scores. Even in the absence of such group differences, exploring this distinction would still prove beneficial to the informing of future research making use of the PEI-SF-R to assess attachment-related emotions, cognitions, and motivations. To increase the likelihood that attachment-insecurity-divergent items were available for such exploration, it seemed best to sample more generously from the false superiority factor of the distress index than did the PEI-SF author. Florian et al.'s (2000) descriptions of the false superiority factor sub-groupings made this assumption seem plausible. In addition, certain of the items on their face (particularly the multiple distancing items) argued for this course of action. This was born out in the pilot study, where the mean of each distancing item was significantly below the overall mean distress score—suggesting that these items may be less attachment-insecurity-homogenous than other of the distress-related items. And finally, the false superiority factor's higher reported correlation with attachment anxiety ($r = .52$; $p < .01$) than with attachment avoidance ($r = .36$; $p < .01$) suggested that this factor must differentially assess these two attachment-insecurity constructs (Florian, et al., 2000).

Following each of the considerations earlier discussed, the 30 items selected for the PEI-SF-R included 13 empathy-related items from the compassionate caring factor,

10 distress-related items from the passive identification factor, and 7 distress-related items from the false superiority factor. The discrepant sizes of the three indices represented an attempt to strike a balance between high factor loaded items appropriate for measuring responses to one's marital partner in distress, and the selection of more items from sub-groupings accounting for a greater proportion of an inventory's variance.

A copy of the PEI-SF-R can be located in appendix N. The reader may compare the PEI-SF-R with Tables 3-3 thru 3-6 at the end of this chapter, to identify each item's parent factor and factor sub-grouping, as well as its factor loading coefficient. Following the lead of the PEI-SF author (Mikulincer et al., 2001), item construction included embedding the core concept of the item selected within a phrase appropriate to the treatment context (see discussions earlier in this section). Items sampling empathy and distress are intermingled in the measure, and Likert response options elicit from participants the degree to which each emotional, cognitive, or motivational descriptor is experienced. A 7-point Likert response option replaces the original PEI's 6-category response option to facilitate merging scores with the earlier-described measure of empathy and distress (see previous subsection). The inventory and its instructions are readable at a seventh grade level.

Scoring for each of the indices was accomplished by summing the Likert response levels (1-7) for all items in an index and then dividing by the number of items in that index. As with the BEDI-AV (see previous subsection), a single index of predominant emotional response was determined by subtracting each participant's distress index score from his or her empathy index score. Conversion of participant index scores to

standard scores with a mean of 50 and a standard deviation of 10 permitted a merging of participant PEI-SF-R scores with their BEDI-AV scores (see previous subsection).

Experiences in Close Relationships Questionnaire-Revised (ECR-R)

The Experiences in Close Relationships Questionnaire—Revised (ECR-R) (Fraley, Waller, & Brennan, 2000) is a 36-item self-report measure of romantic attachment developed by revising the Experiences in Close Relationships Questionnaire (ECR) (Brennan, Clark, & Shaver, 1998). The ECR-R uses two separate 18-item scales to assess attachment avoidance and anxiety, and 7-point Likert response options to elicit from respondents the degree to which each of the attachment-facet-sampling items describes them. The inventory and its instructions are readable at a seventh grade level. Scoring is accomplished by summing the Likert response levels (1-7) for the 22 direct-keyed items and (7-1) for the 14 reverse-keyed items, and then averaging the scores for each scale.

In revising the ECR-R, Fraley et al. (2000) used the principles of item response theory (IRT) to analyze the pool of attachment-facet-assessment items from which the original ECR items were drawn. Their goal was to ensure that questionnaire items they selected optimally discriminated among individuals with contiguous trait levels across full trait-range continua. Based on their IRT analyses of the original item pool, Fraley and his colleagues replaced 44% (16 of 36) of the original ECR items. Because development of the ECR-R (Fraley et al., 2000) was built upon the research foundation of the original ECR (Brennan et al., 1998), we will begin with an examination of the development of the original ECR.

In developing the original Experiences in Close Relationships Questionnaire (ECR), Brennan et al. (1998) conducted a thorough search of the attachment literature,

including examination of the 14 self-report inventories of attachment available at the time of their study. From that review, Brennan and her colleagues created a pool of 482 items designed to assess 60 identified attachment-related constructs. Elimination of redundancy reduced the number of items to 323, distributed among the 60 attachment-construct subscales. Some item wording was revised to emphasize romantic relationships over attachment relationships in general.

Brennan, et al. (1998) administered five attachment self-classification measures (Hazan & Shaver, 1987, 1990; Bartholomew & Horowitz, 1991; Sperling, Berman, & Fagen, 1992; Latty-Mann & Davis, 1996) to 1,086 undergraduates (median age = 18) at the University of Texas at Austin. These measures were designed to elicit a composite attachment style dimensional score, falling within the various attachment categories of secure, avoidant, and anxious [with a fourth category, fearful, added by Bartholomew & Horowitz, 1991]). The purpose of this step of the ECR development was to establish a participant-attachment-style baseline to which later attachment-facet sampling item responses could be compared. After individual comparison baselines were established, participants responded to the 323 attachment facet items by rating the degree to which each statement described them, using a 7-point Likert scale.

Factor analyses of the 60 attachment construct subscales produced two largely independent higher-order factors corresponding to the avoidance and anxiety dimensions central to all attachment research. Those measures that include an additional classification of attachment insecurity (often labeled disorganized or fearful) are describing an attachment style that combines both avoidant and anxious features. Correlations among the 60 subscales (on a 60 x 60 matrix) were highly patterned: 62%

were either $>.50$ or $<.20$, suggesting multiple independent factors with significant overlap. The correlation between the two higher-order factors (avoidance and anxiety) was very low ($r = .12$), suggesting that the dimensions underlying avoidance and anxiety are essentially orthogonal. Together, the two higher-order factors accounted for 62.8% of the variance in the 60 subscales.

Brennan, et al. (1998) determined factor loadings of the 60 attachment construct subscales with the two higher-order factors. Subscales correlating most highly with the first factor (avoidance) were avoidance of intimacy ($r = .91$), discomfort with closeness ($r = .90$), and self-reliance ($r = .88$). Subscales correlating most highly with the second factor (anxiety) were preoccupation ($r = .86$), jealousy/fear of abandonment ($r = .85$), and fear of rejection ($r = .83$). Brennan and her colleagues then constructed two 18-item scales (from the complete pool of 323 items), using the 18 items with the highest absolute-value correlations with each of the two higher order factors of avoidance and anxiety. Like their parent factors, the two scales were virtually uncorrelated ($r = .11$), and each was highly correlated with its parent factor ($r = .95$ in both cases).

Fraley, Waller, & Brennan (2000) examined Brennan, et al.'s (1998) Experiences in Close Relationships Questionnaire (ECR), along with three of the 14 attachment measures used by Brennan and her colleagues in the development of the ECR (Collins & Read, 1990 [Adult Attachment Scale]; Griffin & Bartholomew, 1994 [Relationship Styles Questionnaire]; and Simpson, 1990 [unnamed attachment questionnaire]). Fraley and his colleagues evaluated these four adult attachment measures through the lens of item response theory.

Item response theory (IRT) refers to a diverse family of models designed to reflect the relationship between a participant's item response and the latent trait that the item response options are intended to measure. An important objective of IRT is the creation of models that depict the relationship between the underlying trait an item is designed to measure and the probability of item endorsement. Two important parameters guide the creation of IRT-informed models for the measurement of psychological constructs: One relates to an item's usefulness in discriminating among persons possessing similar yet incrementally-different levels of the trait being measured. And the other relates to an item's tendency to reasonably retain its discriminatory properties across a broad range of the trait continuum (Fraley et al., 2000). Using these two IRT-based criteria, Fraley and his colleagues evaluated the four selected attachment measures. Finding the ECR (Brennan et al., 1998) to be clearly superior to the other three, they concentrated their efforts on improving this instrument.

Fraley et al. (2000) used a clustering algorithm to regroup the 323 original ECR items into 30 clusters, replacing the original instrument's 60 subscales. Cluster scores were computed by averaging item loadings. The authors established discriminant validity of their new item groupings through Varimax-rotated principal component factor analyses. The 18 avoidance scale items and the 18 anxiety scale items selected for the new ECR-R were those items loading most highly on the one factor while loading below .25 on the opposing factor. This resulted in a replacement of 11 of the original ECR avoidance scale items and five of the original ECR anxiety scale items. The ECR-R improves on the psychometric properties of the original ECR, while enhancing the instrument's face validity for couples' research by the use of wording that places a

greater emphasis on romantic relationships. Internal consistency of the measure is high, with Cronbach's alpha coefficients approaching .90 commonly reported for each scale (e.g., Sibley & Liu, 2004).

Table 3-7 located at the end of this chapter displays norms established for the ECR-R using a sample of more than 22,000 people. Overall mean score for attachment avoidance was 2.93, with the mean for women (2.95) slightly higher than the mean for men (2.88). The overall mean for attachment anxiety was 3.64, with women (3.64) and men (3.64) scoring equally. Married respondents were slightly lower in attachment avoidance (2.87 versus 2.94 for singles) and attachment anxiety (3.64 compared with 3.71 for singles). Women were more highly represented in the sample (78% to 22%) than were men, as were singles (85%) compared to those married (15%). Normative data showed attachment avoidance progressively increasing with age throughout adulthood (from 2.90 at age 20 building to 3.18 at age 60), with a reverse trend for attachment anxiety (3.67 at age 20 declining to 3.23 at age 60). Yet the average age reported (24) indicates an underrepresentation of older adults in the normative sample data (Fraley, R. C., 2010).

The ECR-R usually appears as separate listings of the 18 attachment-avoidance items and the 18 attachment-anxiety items (e.g., Mikulincer & Shaver, 2007). Fraley recommended joining and randomizing the avoidance and anxiety items for each study's use of the ECR-R. He also suggested modifying the wording of items to reflect the breadth or specificity of close relationships targeted by the particular research (2010). Following these recommendations, both item-chronology changes and item-wording changes were made to adapt the ECR-R for use in the current study. The two

18-item scales were joined and randomized, similar items remaining in close proximity were subsequently moved, and first-page two-line items were exchanged with similar second-page one-line items so that half of the items could be presented on each page (while accommodating first page instructions).

No wording changes were necessary for the four items that sampled generalized attachment tendencies. The 22 original ECR-R items specifying the singular forms “my partner” (17 items), “my romantic partner” (2 items), “a romantic partner” (2 items), and “a partner” (1 item), were changed to specify “my husband or wife” alternated with “my wife or husband”. The 10 original ECR-R items specifying the plural forms “romantic partners” (9 items) and “partners” (1 item) were changed to more general experience-sampling items. For example, the original ECR-R item “I don’t feel comfortable opening up to romantic partners” was replaced with “My experience has been to feel uncomfortable opening up to romantic partners”. All other wording changes made were those minimally necessary to retain the sense of an item after the earlier-specified changes had been made. A copy of the ECR-R—Adapted Version (ECR-R-AV) used for this study can be located in appendix E.

Like the (non-randomized and romantic-partner-generalized) ECR-R developed by Fraley et al. (2000), the ECR-R-AV developed for the current study uses two separate 18-item scales to assess attachment avoidance and anxiety, and 7-point Likert response options to elicit from respondents the degree to which each of the attachment facet sampling items describes them. The inventory and its instructions are readable at a seventh grade level. Scoring is accomplished by summing the Likert response levels

(1-7) for the 22 direct-keyed items and (7-1) for the 14 reverse-keyed items, and then averaging the scores for each scale.

Procedures

Permission to conduct this study was obtained from the University of Florida Institutional Review Board (UFIRB). The UFIRB approval form can be found in appendix A. The purpose of this section is to describe and discuss the various procedures followed to conduct this study: (1) recruiting prospective participants; (2) obtaining informed consent; (3) assigning confidential identifiers; (4) assignment to experimental and control groups; (5) scheduling participation; and (6) experimental protocol and data gathering.

Recruiting Participants

Participant recruitment began with a letter to the senior pastors of selected churches, requesting the opportunity to present the study to their respective congregants (appendix B). Subsequent to the letter of request, the principal investigator met face-to-face with each pastor (or designated associate) to answer questions and relieve any apprehensions. When access to their congregants was granted, a recruiting visit was scheduled and associated details were coordinated. One weekend recruiting effort was conducted for each of the ten participating churches. Six of the ten churches offered multiple primary worship services, ranging from two to five services each. The opportunity to participate in the study was presented at 17 of the 21 distinct gatherings of congregants. Four of the gatherings were excluded because most congregants attending these more traditional services exceeded the upper age limit for study participation.

In seven of the ten churches, the principle investigator was permitted to announce the opportunity from the pulpit. In two of the churches, a pastor's announcement called attention to the opportunity, and in one church no auditory announcement was made. Printed announcement of the opportunity to participate was provided in each church's weekly bulletin. The prototype for the printed announcement can be found in appendix C. The first section of the announcement was used for each of the churches. The second section contains the basic text of the principal investigator's pulpit announcement and was included in the written announcement at those churches where the principal investigator's verbal announcement was not permitted. Couples interested in study participation were directed in both verbal and printed announcements to meet the principal investigator after the worship service at a designated location (e.g., church foyer).

Obtaining Informed Consent

Couples contemplating study participation gathered at the designated location subsequent to each worship service recruited. Questions were asked and answered. Those choosing to participate read and completed the informed consent document (appendix D). A few whose spouses were not in attendance that day completed the document with the understanding that both spouses would need to have read and signed the consent form prior to participation. Couples were offered blank copies of the consent form for their own records. The consent form included a section below the signature lines for couples to designate their ages, the date their marriage began, and their e-mail and telephone contact information. Reporting of age was necessary to verify study age-parameter participation eligibility. Date of marriage was necessary to inform group assignment (see next subsection). Contact information was necessary to

facilitate later scheduling of experimental protocol session and subsequent reward seminar participation.

Assigning Confidential Identifiers

Couples completing the informed consent document were assigned identification numbers both to protect their identities and to facilitate tracking functions. These numbers were assigned by the principal investigator upon retreat to a private setting after the securing of informed consent. A master list matching participant names to assigned identifiers was compiled, and the list was maintained in a secure location by the principal investigator. The assigned identifier was the exclusive participant identification used by those accessing study data.

The assigned alpha-numeric identifier was in the form of ##-##-H-## or ##-##-W-##. The first pair of digits (01 thru 10) designated the church from which the couple was recruited. The second pair of digits (01 and above) represented the number assigned to each couple participating from that church. This number was determined by arranging each church's participant couple roster alphabetically, and then assigning "01" to the first couple, "02" to the second couple, and so forth. The "H" or "W" designated husband or wife. And the final pair of digits (00 and above) represented the length of current marriage. This number represented the (rounded) whole number of years that the couple had been married to each other on the date of testing protocol participation.

Assignment to Experimental and Control Groups

Random group assignment was stratified by years of marriage by arranging each church's participant-couple identifiers on the basis of the final two digits, beginning with the smallest and ending with the largest, and then distributing participant-couples (as a paired unit) alternately to each of the four groups. For example, the most recently

married couple on the first church recruitment roster was assigned to the first group, and the next most recently married couple was assigned to the second group, and so forth. The newest-married couple on the second church recruitment roster was assigned to the next group in rotation after the assignment of the longest-married couple on the first church recruitment roster. This pattern of alternating group assignment was maintained for each of the first eight recruited-church rosters.

The rosters of the ninth and tenth churches were used for rebalancing of the groups, with the goals of equivalency in number of couples and parity in mean and median length of marriage. The initial rebalancing effort involved using newly-recruited couples from the ninth church to replace twelve earlier-recruited couples who had dropped out of the study. To accomplish this task while retaining group length-of-marriage parity, the newest-wed couple on the roster of the ninth church was assigned to the same group as the newest-wed dropping-out couple had been assigned. The second-newest-wed ninth-church couple was assigned to the same group as had been the second-newest-wed dropping-out couple, and so forth. Group assignment for the remaining ninth church couples (beyond the twelve earlier assigned) and all the tenth church couples was guided by the need to replace subsequent drop-out and no-show couples and to maintain the aforementioned goals of group balance.

Scheduling Participation

Where permitted and feasible, one or more testing opportunities were provided for couples on their own church campus soon after the recruiting visit. When an on-site opportunity could not be offered, couples were invited to join participants at a neighboring church testing session or to participate at one of the many testing sessions offered at the principal investigator's counseling office group room. Ten total testing

sessions were provided on seven church campuses. Fifty-eight couples participated in the experimental protocol on their own church campuses, joined by an additional five couples participating at church campuses other than their own. Sixty-nine couples participated in an experimental protocol session offered at the principal investigator's counseling office group room.

Couple participation scheduling was facilitated by e-mail, with occasional follow-up by phone. To organize this effort, twenty e-mail banks were established—a pre-test and post-test bank for each of the ten churches. Participant e-mail addresses were entered into their respective churches' pre-test banks after their completion of informed consent documents. Periodic reminders of upcoming testing opportunities were sent to all pre-test bank addresses until responses were received scheduling a testing session or requesting release from the study. Participant e-mail addresses were moved to their respective churches' post-test banks after their completion of the testing protocol. Post-test e-mail banks were used to facilitate registration for the couple communication seminars offered in appreciation of study participation.

Experimental Protocol and Data Gathering

The purpose of this section is to describe and discuss the following: (a) selection criteria and preparedness training for the surrogate who administered the experimental protocol; (b) the various stages of the experimental protocol administration, including pre- and post-administration activities; and (c) the pilot study experience that informed refinement of the experimental protocol.

Protocol administrator

The experimental protocol was administered by a surrogate whose credentials included a graduate degree in church ministry with a special emphasis on interpersonal

communication. The surrogate's background in church ministry enhanced pastoral comfort level necessary to gain cooperation for couple recruitment and on-site study administration. The surrogate's educational emphasis on interpersonal communication enhanced volunteer participant comfort and cooperation. Because some of the prospective participant couples knew the principal investigator through earlier speaking engagements or in the context of his longstanding local practice as a marriage counselor, the use of a surrogate to administer the experimental protocol served to protect the integrity of the study from inadvertent influence or the perception of same. Use of the same surrogate for all 42 administrations of the experimental protocol ensured uniformity of experience for group participants.

The surrogate underwent a six-phased training regimen preparatory to her administration of the experimental protocol: (1) First, the surrogate experienced an earlier version of the experimental protocol as a participant herself (Group 2 protocol). (2) Next, the surrogate observed the principal investigator's administration of the earlier version of the protocol to 20 pilot study participants in the graduate Marriage and Family class of the University of Florida's Department of Counselor Education—serving as the recorder in the post-session dialogue between the principal investigator and the pilot study participants. (3) Next, the principal investigator and the surrogate dialogued about protocol design changes informed by the pilot study experience. (4) Next, the surrogate familiarized herself with the final version of the experimental protocol. The experimental protocol is summarized in Figure 3-3 located at the end of this chapter. It is discussed in detail later in this section, and copies of its various participant tasks and related documents can be found in appendices E through P. (5) Next, the surrogate

performed a trial administration of the final version of the experimental protocol on two separate occasions to adult couples who were not participants in the study proper. (6) And finally, the surrogate dialogued with the principal investigator about concerns and questions that arose out of her trial administration experiences.

The principal investigator was available in the background or in the vicinity at each of the protocol administration sessions. Although his role was primarily one of helping the surrogate to coordinate set-up and testing-materials organization, his availability served to provide surrogate feedback after the early administration sessions, to run interference with any outside distractions, and to bolster surrogate confidence of assistance in the event of any unexpected occurrences.

Experimental protocol overview

Each administration of the experimental protocol was performed in a single session of approximately 50-55 minutes duration. Administration times were moderately compressed in sessions with fewer couple participants, because less than the maximum allotted time per section was utilized when it was clear that everyone had completed the section. Because multiple experimental or control conditions were represented in most administrations of the protocol, the four differing conditions were constructed with equivalently-timed tasks, and the surrogate script guided participants through the group-differing portions of their packets with general instructions and time prompts. A copy of the full session administration instructions and script can be located in appendix P.

Appendices E, F, G, L, M, N, and O reflect the participant tasks common to all four groups. Appendices H through K represent the differing conditions of the four groups (appendix H = secure-attachment-priming condition [Group 1]; appendix I = avoidant-

attachment-priming condition [Group 2]; appendix J = anxious-attachment- priming condition [Group 3]; and appendix K = neutral (control) condition [Group 4]). A complete discussion of the common and differing experimental and control condition tasks can be found in the following subsection. An overview of the various pre- and post-session activities and the seven participant tasks can be found in Figure 3-4 at the end of this chapter.

Experimental protocol session stages

Beginning the session. Testing room chairs were configured to allow ample spacing among participants. Seating assignments were made to limit tactile and eye contact between spouses. Because several of the session tasks required participants to focus on past memories of marriage partner distress, efforts to block spousal immediacy were intended to hinder present spousal interactions from interfering with engagement in the targeted memories. The session administrator distributed participant packets along with clipboards and pens, welcomed the participants, and provided opening instructions. To ensure correct distribution, each participant packet was enclosed in a large manila envelope bearing that participant's name. The front page of each participant packet contained the participant's confidential alpha-numeric identifier, but none of the participant worksheets contained the participant's name. The 11 single-sided worksheets of each participant packet were stapled together to avoid inadvertent loss or intermingling of data.

Participant task #1. Participants in all four groups completed the 36-item Experiences in Close Relationships Questionnaire—Revised (ECR-R) (Fraley, Waller, & Brennan, 2000), as adapted to this study. The results of the ECR-R—Adapted Version (ECR-R-AV) were obtained to assign attachment style avoidance and anxiety scores for

the purpose of analyzing how this intervening variable interacts with participants' experimental or control conditions. A copy of this participant task can be located in appendix E.

Participant task #2. Participants in all four groups completed a brief memory exercise distracter task in which they were asked to recall several rather innocuous memories from their past and to rate the certainty of their recollections using a 5-point Likert scale. The purpose of this task was two-fold: (a) to divert participants' attention from the questionnaire completed in the previous task, diluting the likelihood that recollections of the ECR-R-AV's content would frame participant approaches to subsequent tasks; and (b) to encourage participants' framing of subsequent tasks as assessments of their ability to recall events with certainty. The intent was that participants' competitive eagerness to display recall competence might encourage them to push past their resistance to retrieval of unpleasant memories in subsequent tasks. A copy of this participant task can be located in appendix F.

Participant task #3. Participants in all four groups were asked to search their memories for a specific episode in which their marriage partner experienced distress and wanted their comfort and support. Participants were asked to observe the following five criteria in episode memory selection: (a) Episode selected should be one in which the partner's distress level was significantly elevated. Lesser levels of partner distress would serve as insufficient stimuli for dependent variable measures. (b) Episode selected should be one in which the participant was not primarily to blame for the cause of the partner's distress. Defensiveness in the face of overt blame triggers self-focused responses at a level likely to dilute the other-focused responses central to dependent

variable measures. (c) Episode selected should be one whose impact more directly affected the partner than it did the participant. If the participant's distress over the triggering circumstances rivaled the partner's distress over those circumstances, the participant's focus risked diversion from attending to the partner's distress to attending to his or her own distress. (d) Episode selected should be one that did not result in a grand once-and-for-all resolution of the circumstances precipitating the partner's distress. Recollections of triumph surrounding sweeping problem resolution might overshadow participant recollection of partner distress preceding that resolution. And (e) Episode selected should be one that the participant could imagine recurring at some point in the future. In other words, the participant could imagine someday experiencing an episode with her or his partner similar to the one remembered. Participants were guided with reasoning, examples and prompts, to help them select and commit to a targeted memory before they moved on to the next task. A copy of this participant task can be located in appendix G.

Participant task #4. This task involved the manipulation of the independent variables of the priming of attachment security, attachment avoidance, or attachment anxiety representations within participants' semantic associative memory networks. As such, it was the only task providing differing experiences for the three experimental groups and the control group. Participants in the three experimental groups were asked to recall and to reflect upon a close relationship that substantially matched the characteristics of a prototype provided. These prototypes were adapted from those developed by Bartz and Lydon (2004) to reflect Hazan and Shaver's (1987) descriptions of secure, avoidant, or anxious attachment. The current study's prototypes represent a

blending of two sets of prototypes used by the above authors in parallel studies. Tables 3-8 thru 3-10, located at the end of this chapter, display in parallel columns the two sets of prototypes used by Bartz and Lydon (2004), along with the composite prototypes developed from them for use in this study.

Participants were guided by questions, prompts and exercises to help them maximize and sustain their engagement in the memory of a close relationship matching their group-specific prototype. Participants' 7-point Likert ratings of memory vividness provided the first of several measures of memory engagement used in primary data analyses. Control group participants experienced a parallel exercise designed to prompt reflection on a casual acquaintance, following guidelines that served to avoid the intentional priming of specific attachment representations. Copies of participant task variations for each of the four groups can be located in appendices H through K.

Participant task #5. In this task, participants were asked to return to the memory retrieved and selected in Task #3. Participants were guided by questions and prompts, to help them maximize their engagement in the memory of the episode earlier selected. Participants were asked to reflect upon what they were feeling, thinking, and wanting to do as they remember the targeted episode. Then participants were asked to provide 7-point Likert ratings of the vividness of the remembered episode as well as 7-point Likert ratings of the level of distress they believed their partner was experiencing in the episode they chose to think about.

After providing these ratings, participants were asked to imagine a present recurrence of an episode of partner distress with dynamics similar to the episode earlier remembered. Participants were guided by questions and prompts, to help them

maximize their engagement in the imagined recurrence of the earlier episode.

Participants were asked to reflect upon what they were feeling, thinking, and wanting to do in the episode's imagined recurrence. Finally, participants were asked to provide 7-point Likert ratings of the vividness of the episode's imagined recurrence. As with the ratings provided in the task #4 treatment variations, these measures were included to facilitate examination of participant memory engagement as a contributor to dependent variable response levels. Specifically, it was of interest to explore the degree to which weaker episode memory vividness and/or selection of episodes eliciting lower partner distress might explain less robust participant empathy and/or distress responses. A copy of this participant task can be located in appendix L.

Participant task #6. In this task, participants were asked to make a concerted effort to maintain focus on the imagined present recurrence of the earlier-targeted episode of their marriage partner in distress. While maintaining this focus, participants were asked to continue noticing what they were feeling, thinking, and wanting to do. Participants were then asked to report the degree to which they were currently experiencing empathy- and distress-related emotions, cognitions, and motivations in regard to the event recurrence they were imagining. Participant feedback was provided through 7-point Likert responses to Batson's Empathy and Distress Indices—Adapted Version (BEDI-AV) (Batson et al., 1983; Batson et al., 1987; Batson et al., 1989) and to the Pity Experience Inventories—Short Form—Revised (PEI-SF-R) (Florian, Mikulincer & Hirschberger, 2000), developed for this study (see discussions under the section entitled Instrumentation). At the bottom of each of the three pages of responses to these 44 items, participants were asked to provide updated 7-point Likert ratings of the

vividness of the imagined present recurrence of the remembered episode. This feedback mechanism was designed both to remind participants to remain focused on the imagined episode recurrence while responding to the items and to inform memory-engagement variable analyses of participant responses (as described for task #5). A copy of the two instruments used in this participant task can be located in appendices M and N.

Participant task #7. In this task, participants were asked to complete a two-page questionnaire inquiring about the quality of their marital communication as well as the quality of their communication with other partners in any earlier significant adult romantic relationships. In regard to their current marriage, participants were asked to rate the relative frequency of incidence of self- and partner- distress, as well as their partner's and their own effectiveness in responding in supportive ways at such times. In regard to any earlier partner relationships, participants were asked to report on (up to) three earlier relationships that were most significant, and then beginning with the most significant, to rate their partner's and their own effectiveness in responding to the other's distress in supportive ways. For each earlier relationship, participants were asked to designate the length of the relationship in years, and to specify whether it was a marriage, a cohabitating relationship, or merely an exclusive dating relationship. Seven-point Likert responses were used for all ratings questions. Participant responses to this questionnaire were used for post hoc analyses of secondary variables of interest. A copy of this participant task can be located in appendix O. After completion of this task, participants were asked to return worksheet packets to their envelopes of origin.

Emotional equilibrium restoring activity. After all packets were secured in their envelopes, the session administrator acknowledged the possibility that unwanted emotions aroused in the session might linger on for some participants. As a means of helping to dissipate such emotions, the session administrator presented a reading designed to help restore a sense of being cared-for and comforted. This reading was a composite of comfort-giving Psalms—appropriate for participants recruited from church worship services, and intended to prime secure attachment representations within participants' memory networks. A copy of this reading is included in the surrogate's session administration script, and can be located in appendix P.

After completion of the reading, the session administrator announced that participants who remained concerned about their level of emotional distress were welcome to remain after the session for additional assistance. Post-session support offered and provided included equilibrium-restoring dialogue and prayer, as well as help with finding a class or a counselor to assist with concerns brought to greater awareness by study task-performance. Participant couples lingered at the end of several of the experimental protocol sessions, and the session administrator provided the assistance or support requested. Per instructions, the session administrator was intentional in avoiding the suggestion of referral of any participants to the principal investigator's marriage counseling practice.

Ending the session. The session administrator collected the participant-packet envelopes, thanked participants for their valuable contribution to important research, and requested that couples refrain from discussing session content with any prospective participants who had not yet experienced the protocol. The session administrator then

reminded couples to avail themselves of their participation rewards: Selection (that day) of their choice between two marriage-communication books, and opportunity to attend either of two one-day marriage communication seminars scheduled during the month following the three-month testing protocol season. The principal investigator was available at the end of each testing session to provide feedback and to answer questions about the free book choices and the free reward seminars. After participants were dismissed, the session administrator remained behind to provide any of the aforementioned support activities that were requested.

After the session. The session administrator delivered to the principal investigator the envelopes containing the participant packets, calling to his attention any incidents during the administration of that session's protocol that might have bearing upon data integrity. Immediately after each session, the principal investigator updated the testing log and the appropriate church rosters. Testing logs entries denoted date, time, and location of protocol administration, the number of participant couples from each church, and any noteworthy happenings that might bear upon data integrity. Church rosters were updated to reflect the specific testing session completed by each couple. The principal investigator stored the participant-packet envelopes in a secure location until they were accessed for data entry. When the envelopes were opened, the principal investigator consulted the master list of participant names and assigned identifiers to verify correct match between participant packet-identifier-numbers and envelope names. After matches were confirmed, the envelopes were discarded. From that point on, the master list was secured for study integrity verification only, and participants were identified by alpha-numeric designation only.

Pilot study findings

Analyses of the pilot study data revealed patterns somewhat consistent with the primary directional hypotheses. Nevertheless, several factors demonstrated the limitations of these findings: (1) Group size was insufficient (N=5 for each of the four groups). (2) There was a less-than-optimum fit between the pilot participants and the targeted study participants (e.g., a number of the pilot participants were unmarried, and some reported either no current relationship partner or limited experiences with their current partner). And (3) Experimental design deficiencies became apparent as a result of the pilot study experience (see discussion below).

Most significant among the design changes informed by pilot-study-participant feedback were the five criteria established for participants' selection of a targeted memory of their partner in distress (see Participant Task #3 earlier in this section). These criteria grew out of questions and comments by pilot participants about the partner-in-distress memory retrieval task. Reflection on these questions following pilot-participant feedback made it clear that additional partner-in-distress episode-selection criteria were essential to protect against multiple-intervening-variable dilution of participant dependent variable response data.

Later reflection on the pilot study experience led to the making of an additional revision in the final experimental protocol design. In the pilot study, the attachment-priming task preceded the task of selecting and reflecting upon the partner-in-distress episode. A review of individual pilot-participant task-sheet responses suggested the possibility that selecting the targeted episode of partner distress after attachment priming might introduce an experimental-condition-specific episode-selection bias into that process. To correct this design flaw, the original task of selecting and reflecting on

the partner-in-distress episode was divided into two tasks: The selection of the partner-in-distress memory (Participant Task #3) was placed before the attachment-priming experience (Participant Task #4). While reflecting on the partner-in-distress episode and imagining its recurrence (Participant Task #5) remained in its original sequence of following the attachment-priming experience. Additional pilot-participant feedback was useful in revising the control group's parallel task, in refining the wording of participant instructions, in establishing timing parameters for each task, and in shaping the final version of the surrogate's protocol administration script. A copy of the surrogate's protocol administration script can be located in appendix P.

A critical component of pilot participant feedback was an examination of the level of residual distress experienced by participants in the aftermath of the experimental protocol experience. Pilot participants rated the degree to which their distress levels had increased (post-protocol), using a 7-point Likert response, with "1" representing no change and "7" representing a very significant increase in distress. Of the 20 pilot participants, one reported a decrease in distress level, five reported no change, nine reported an increase at levels of "3" or below, and the remaining five reported an increase at levels between "4" and "5". When asked to prescribe interventions suitable for reducing their distress to non-worrisome levels, those reporting higher distress levels described self-actions they were already implementing and their confidence in the adequacy of those interventions. This pilot participant feedback was used to inform emotional equilibrium restoring activities later made available to participants in the full study.

Data Analyses

Pearson Correlations were used to examine the relationships between and among the various demographic, intervening, and dependent variables of interest in this study. Pearson correlations and cross-correlations of matched-pair couples' data were used to examine relationships between and among couples' responses to the various questions of the Relationship Communication History Survey and the multiple variables of interest. Multiple ANOVA's were used to examine group differences, and Tukey's t-tests for multiple comparisons were used to confirm ANOVA findings of significance. The eleven research hypotheses were evaluated using multiple ANOVA's, Pearson correlations, and partial correlations. And various post hoc tests were performed to examine other relationships of interest. An alpha level of $p \leq .05$ was used to test the significance of observed differences, both for evaluating the hypotheses and for all post hoc comparisons.

Table 3-1. Batson's Empathy and Distress Indices Item Factor Loadings (1 of 2)
 (6 Earlier Studies) [Adapted from Batson et al., 1987] [continued in Table 3-2.]

Study #	1		2		3	
	D	E	D	E	D	E
Distress Adjectives						
Alarmed	*.75	0.01	*.72	0.49	*.63	0.15
Grieved	0.51	0.49	*.65	0.48	0.55	0.58
Upset	*.84	0.39	*.82	0.32	*.74	0.38
Worried	0.40	*.60	*.87	0.18	*.67	0.35
Disturbed	*.83	0.35	*.82	0.38	*.76	0.20
Perturbed	*.84	0.17	0.59	-0.11	*.76	-0.18
Distressed	*.62	0.56	*.65	0.48	*.81	0.32
Troubled	*.88	0.23	0.58	0.54	*.80	0.22
Empathy Adjectives						
Sympathetic	---	---	0.58	0.53	0.23	*.74
Moved	0.31	*.75	0.37	*.78	0.41	*.78
Compassionate	0.25	*.80	0.09	*.82	0.40	*.73
Tender	---	---	*.66	0.32	0.18	*.86
Warm	0.05	*.82	0.23	*.71	-0.03	*.80
Softhearted	0.12	*.85	0.14	*.73	0.11	*.80

Note: Study 1 (Coke et al., 1978); Study 2 (Batson et al., 1979); Study 3 (Coke, 1980);
 Values noted are factor loadings: D = Distress component; E = Empathy Component;
 Studies 1-3: Female participants only; Asterisk (*) denotes factor loading above .60

Table 3-2. Batson's Empathy and Distress Indices Item Factor Loadings (1 of 2)
 (6 Earlier Studies) [Adapted from Batson et al., 1987] [continued from Table 3-1.]

Study #	4		5		6	
	D	E	D	E	D	E
Distress Adjectives						
Alarmed	*.72	0.34	*.77	0.11	*.80	0.19
Grieved	*.70	0.33	*.68	0.42	*.72	0.30
Upset	*.80	0.38	*.87	0.17	*.89	0.28
Worried	*.72	0.34	*.78	0.18	*.81	0.39
Disturbed	*.76	0.38	*.89	0.18	*.90	0.24
Perturbed	*.69	-0.13	*.82	-0.02	*.68	0.11
Distressed	*.67	0.48	*.87	0.25	*.86	0.28
Troubled	*.75	0.33	0.59	0.39	*.87	0.32
Empathy Adjectives						
Sympathetic	0.29	*.69	0.04	*.84	0.20	*.82
Moved	0.42	*.74	0.31	*.67	0.40	*.72
Compassionate	0.24	*.80	0.14	*.86	0.17	*.90
Tender	0.28	*.78	0.31	*.78	0.36	*.74
Warm	0.19	*.80	0.20	*.68	0.15	*.66
Softhearted	0.17	*.86	0.05	*.83	0.29	*.86

Note: Study 4 (Toi & Batson, 1982); Study 5 (Fultz, 1982); Study 6 (Batson et al., 1980);
 Values noted are factor loadings: D = Distress component; E = Empathy Component;
 Study 4: Female participants only; Studies 5 and 6 Both Females and Males; Asterisk
 (*) denotes factor loading above .60

Table 3-3. Pity Experience Inventories Factor Loadings [Feelings Items] (1 of 2)
(adapted from Florian, et al., 2000) [continued in Table 3-4.]

Item Groupings / Items	Factor 1	Factor 2
Sorrow-related feelings: False superiority factor		
Sorrow	0.77	
Sadness	0.72	
Participation in grief	0.65	
Anguish	0.58	
Hope that suffering will end	0.58	
Helplessness	0.55	
Emotional pain	0.53	
Despair	0.47	
Anger at the cause of the suffering	0.45	
Emotional discomfort: False superiority factor		
Guilt feelings		0.73
Shame		0.70
Pangs of conscience		0.67
Discomfort		0.60
Disgust		0.58
Embarrassment		0.57
Explained Variance (%)	26%	12%

Table 3-4. Pity Experience Inventories Factor Loadings [Feelings Items] (2 of 2)
(adapted from Florian, et al., 2000) [continued from Table 3-3.]

Item Groupings / Items	Factor 3	Factor 4	Factor 5
Vulnerability feelings: False superiority factor			
Feeling you might get hurt	0.83		
Concerns over the future	0.77		
Fear of suffering a similar misfortune	0.64		
Anxiety	0.55		
Feeling exposed	0.45		
Sympathy-related feelings: Compassionate caring factor			
Love		0.81	
Closeness and warmth		0.77	
Sympathy		0.64	
Emotional identification		0.55	
Superiority feelings: False superiority factor			
Sense of superiority			0.85
Haughtiness			0.85
Feelings of power			0.77
Joy over your own good fortune			0.45
Explained Variance (%)	7%	5%	5%

Table 3-5. Pity Experience Inventories Factor Loadings [Thoughts Items]
(adapted from Florian, et al., 2000)

Item Groupings / Items	Factor 1	Factor 2	Factor 3
Action oriented thoughts: Compassionate caring factor			
How to encourage the other	0.81		
How to change the situation	0.78		
Your obligation to help	0.74		
How to cause pleasant feelings	0.71		
The need to comfort	0.68		
The way in which you behaved	0.65		
Misfortune contemplation: Passive identification factor			
How unfortunate the other person is		0.79	
How miserable the other's situation is		0.70	
Why did this have to happen		0.68	
That the other doesn't deserve it		0.67	
Self-focused thoughts: False superiority factor			
The possibility of ending up similarly			0.76
That it won't happen to you			0.69
How comparatively fortunate you are			0.63
Similar situations you are familiar with			0.62
Your part in causing this situation			0.51
Explained Variance (%)	34%	14%	9%

Table 3-6. Pity Experience Inventories Factor Loadings [Wishes Items]
 (adapted from Florian, et al., 2000)

Item Groupings / Items	Factor 1	Factor 2	Factor 3
Care-oriented wishes: Compassionate caring factor			
To talk to the other	0.81		
To comfort the other	0.81		
To get close to the other	0.79		
To understand the other	0.78		
To encourage and cheer up the other	0.78		
To calm the other	0.77		
To hug and caress the other	0.73		
To get to know the other better	0.70		
Unrealistic wishes: Passive identification factor			
To turn back the clock		0.80	
Wanting situation to suddenly go away		0.79	
That a miracle will happen		0.72	
That the suffering will cease		0.67	
Distancing wishes: False superiority factor			
To run away from the scene			0.85
To distance from the scene			0.80
To forget the event			0.73
Explained Variance (%)	38%	19%	8%

Table 3-7. ECR-R Normative Summary Statistics
 [adapted from R. C. Fraley's University of Illinois at Urbana-Champaign Website (2010)]

	Avoidance		Anxiety	
Overall (full sample)	M = 2.93	SD = 1.18	M = 3.64	SD = 1.33
Male	M = 2.88	SD = 1.15	M = 3.64	SD = 1.33
Female	M = 2.95	SD = 1.19	M = 3.64	SD = 1.33
Married	M = 2.87	SD = 1.27	M = 3.64	SD = 1.33
Single	M = 2.94	SD = 1.16	M = 3.71	SD = 1.31
Age 20	M = 2.90		M = 3.67	
Age 30	M = 2.97		M = 3.56	
Age 40	M = 3.04		M = 3.45	
Age 50	M = 3.11		M = 3.34	
Age 60	M = 3.18		M = 3.23	

Note: Normative data established on a sample exceeding 22,000 people; Average age = 24; SD = 10; Female = 78%; Male = 22%; Single = 85%; Married = 15%; Age-values represent predictions based on regression model; Full-sample correlation between avoidance and anxiety scales = .41

Table 3-8. Development of Secure-Attachment-Prototype-Priming Descriptor
 [Blending of Earlier Study Descriptors for Use in Current Study]

Secure attachment prime (Bartz & Lydon, 2004 [Study 1])	Secure attachment prime (Bartz & Lydon, 2004 [Study 2])	Secure attachment prime (Current Study) [Task #4; Group 1]
<p>Please think about a relationship you have had in which you have found that it was relatively easy to get close to the other person and you felt comfortable depending on the other person. In this relationship you didn't often worry about being abandoned by the other person and you didn't worry about the other person getting too close to you.</p>	<p>Please think about a relationship you have had in which you have found that it was easy to be emotionally close to the other person. In this relationship, you felt comfortable depending on the other person and having them depend on you. In this relationship you didn't particularly worry about being alone or about the other person not accepting you.</p>	<p>In this task, we want you to take a few moments to think about a relationship you have had in which you found it relatively easy to be emotionally close to the other person. In this relationship, you felt comfortable depending on this person and having this person depend on you. In this relationship you didn't worry about being abandoned by this person or about this person wanting to be closer than you wanted her or him to be. In this relationship you didn't have to worry about being alone or about this person not accepting you.</p>

Table 3-9. Development of Avoidant-Attachment-Prototype-Priming Descriptor
 [Blending of Earlier Study Descriptors for Use in Current Study]

Avoidant attachment prime (Bartz & Lydon, 2004 [Study 1])	Avoidant attachment prime (Bartz & Lydon, 2004 [Study 2])	Avoidant attachment prime (Current Study) [Task #4; Group 2]
<p>Please think about a relationship you have had in which you have found that you were somewhat uncomfortable being too close to the other person. In this relationship you found it was difficult to trust the other person completely and it was difficult to allow yourself to depend on the other person. In this relationship you felt yourself getting nervous when the other person tried to get too close to you and you felt that the other person wanted to be more intimate than you felt comfortable being.</p>	<p>Please think about a relationship you have had in which you felt comfortable not being emotionally close to the other person. In this relationship you felt that it was very important to be independent and self-sufficient and you preferred not to depend on the other person or have the other person depend on you.</p>	<p>In this task, we want you to take a few moments to think about a relationship you have had in which you felt somewhat uncomfortable being emotionally close to the other person. In this relationship you found it difficult to trust this person completely, or you felt it was very important to be independent and self-sufficient and not depend on this person or have this person depend on you. In this relationship you felt this person wanted to be closer than you did, and his or her efforts to get closer made you feel nervous.</p>

Table 3-10. Development of Anxious-Attachment-Prototype-Priming Descriptor
 [Blending of Earlier Study Descriptors for Use in Current Study]

Anxious attachment prime (Bartz & Lydon, 2004 [Study 1])	Anxious attachment prime (Bartz & Lydon, 2004 [Study 2])	Anxious attachment prime (Current Study) [Task #4; Group 3]
<p>Please think about a relationship you have had in which you have felt like the other person was reluctant to get as close as you would have liked. In this relationship you worried that the other person didn't really like you, or love you, and you worried that they wouldn't want to stay with you. In this relationship you wanted to get very close to the other person but you worried that this would scare the other person away.</p>	<p>Please think about a relationship you have had in which you have felt like you wanted to be completely emotionally intimate with the other person but felt that the other person was reluctant to get as emotionally close as you would have liked. In this relationship you felt uncomfortable being alone and worried that the other person didn't value you as much as you valued them.</p>	<p>In this task, we want you to take a few moments to think about a relationship you have had in which you felt like the other person was reluctant to get as close as you would have liked. In this relationship you worried that the other person didn't really love you or value you as much as you did her or him, and you worried that he or she wouldn't want to stay with you. In this relationship, you wanted to get emotionally closer to this person, but you worried that if you tried to get closer you might scare this person away.</p>

Pity Experience Inventories							
Beliefs	Feelings	Thoughts	Wishes	Behaviors			
20	+	28	+	15	+	16	
						+	
						17	
						=	
							96 total items



Inventories Relevant To Study Design						
Feelings		Thoughts		Wishes		
28	+	15	+	16	=	
						59 relevant items



Items with Adequate Face Validity for Response to Partner Distress						
Feelings		Thoughts		Wishes		
23	+	8	+	14	=	
						45 suitable items



Empathy Items	Distress Items	
<i>Compassionate Caring</i>	<i>Passive Identification</i>	<i>False Superiority</i>
15 items	16 items	14 items



Average % of Inventory Variance Attributable to Each Factor		
Empathy Items	Distress Items	
<i>Compassionate Caring</i>	<i>Passive Identification</i>	<i>False Superiority</i>
26%	20%	14%



% of Variance Explained by a Factor Determines # of Items Selected		
30 Total Items Prioritizing High Factor Loadings and High Face Validity		
Empathy Items	Distress Items	
<i>Compassionate Caring</i>	<i>Passive Identification</i>	<i>False Superiority</i>
13 items	10 items	7 items



Data analyses were performed utilizing full 17-item PEI distress index. Post hoc distress item analyses performed to examine avoidance/anxiety differentiating potential for the informing of future study.	<i>Passive Identification Factor Items</i>	<i>False Superiority Factor Items</i>
	Items thought to differentiate both avoidance and anxiety from attachment security equally well	Items thought to sometimes sacrifice security/insecurity differentiation in favor of more effectively differentiating between avoidance and anxiety

Figure 3-3. PEI-SF-R Instrument Development: Rationale and Process

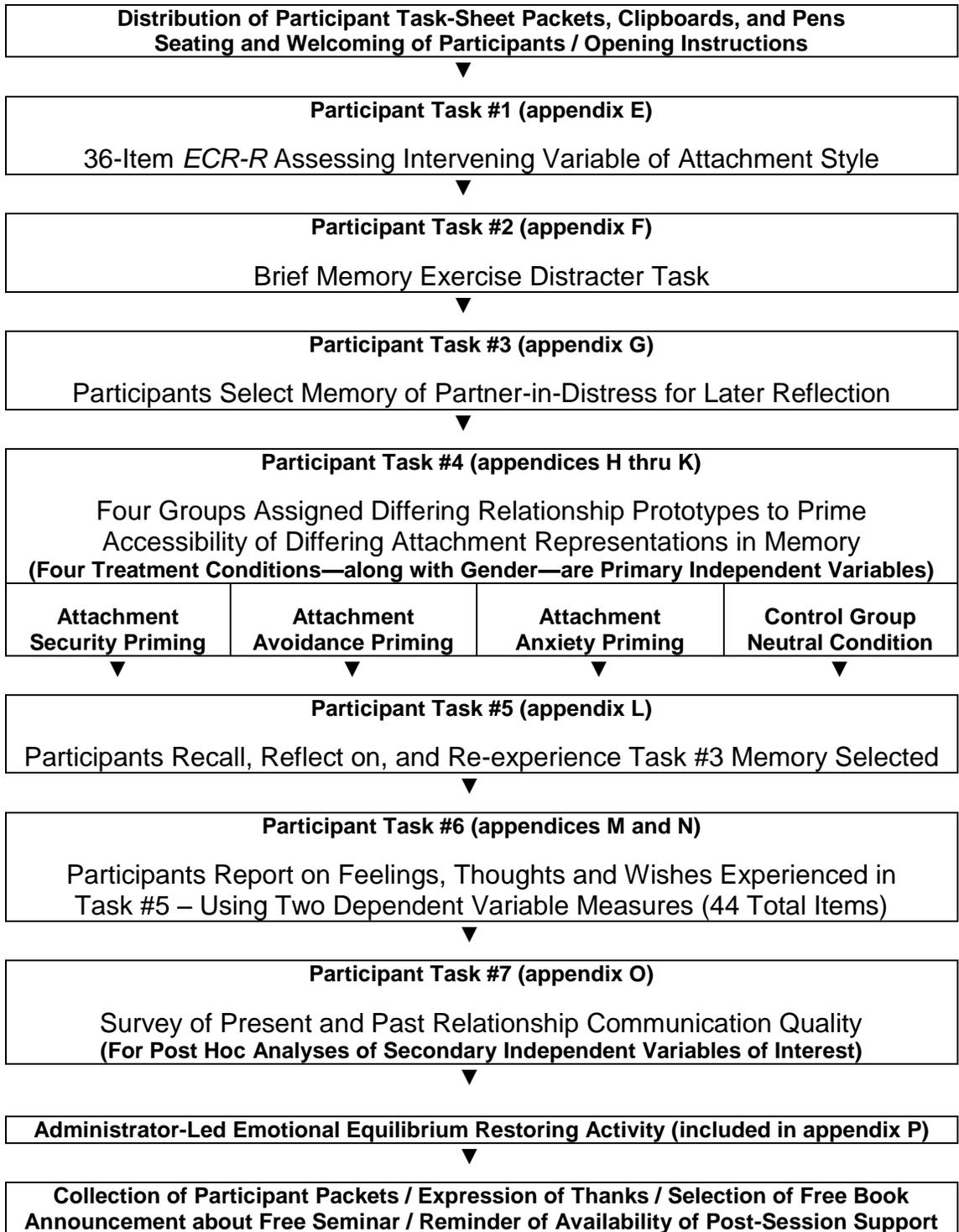


Figure 3-4. Experimental Protocol Session Activities and Participant Tasks

CHAPTER 4 DATA ANALYSES AND RESULTS

The purpose of this study was to investigate the effects of attachment style and contextual activation of attachment security and attachment insecurity on partner empathy and distress responses to episodes of romantic partner distress. More specifically, this research was designed to examine whether the priming of secure or insecure attachment memory representations influences emotional, cognitive, and motivational responses toward one's distressed spouse, and how one's more generalized attachment style influences these processes. The purpose of this chapter is to provide the following: (1) a description of the sample; (2) reliability findings for adapted instrumentation; (3) a description of the data; (4) testing of the research hypotheses; and (5) a summary of the findings. Tables referenced in this chapter can be located at the end of Chapter 4 unless they are included within the immediate text.

Description of the Sample

The participants for this study were married couples between the ages of 20 and 59 years, recruited from 10 churches of various denominations in and around Gainesville, Florida. The sample included 132 couples (264 individuals) who volunteered in response to recruitment announcements at their weekly church worship services. Participants were recruited from the following churches: Grace United Methodist (N=44); Vineyard Christian Fellowship (N=24); Servants of Christ [Anglican] (N=10); Campus Church of Christ (N=22); The Family Church [Interdenominational] (N=78); Saint Andrews Episcopal (N=16); Creekside Community [Evangelical Free] (N=20); Westside Baptist (N=10); First Assembly [Assemblies of God] (N=28); and First Baptist of Alachua (N=12). Comparative ease of participant recruitment from among

church-attendees provided a benefit inherently linked to limitations in generalizing study findings to broader populations. A discussion of these limitations can be found in Chapter 5.

Sixty-six participants (33 couples) were assigned to each of four groups: Attachment-security-priming condition (Group 1); attachment-avoidance-priming condition (Group 2); attachment-anxiety-priming condition (Group 3); or neutral condition (Group 4). Random assignment was stratified to achieve approximate group parity relative to the demographic variable of length-of-current-marriage. De facto stratification was achieved relative to the demographic variable of gender by assignment of couples to groups as intact pairs. Participants' length of current marriage ranged from zero years (less than six months) to 39 years, with a median of 12 years, a mean of 13.85 years, and a standard deviation of 10.66. No significant group differences were found relative to this demographic variable. A summary of length-of-current-marriage group comparisons for the recruited sample can be found in Table 4-1.

Table 4-1. Length of Current Marriage (Recruited Sample)

Group	N	Mean	Median	Std Dev	Min	Max	Range
1	66	14.03	10	11.44	0	36	36
2	66	14.12	13	10.44	0	39	39
3	66	13.70	13	10.04	0	31	31
4	66	13.55	10	10.90	0	37	37
Total	264	13.85	12	10.66	0	39	39

A total of 30 participant data sets from the recruited sample were discarded, and the resultant sample (N=234; hereinafter labeled the utilized sample) was used for all but one area of data analyses (see discussion of this exception later in this subsection). The decision rules governing data set elimination are described later in this chapter. The length-of-current-marriage range remained unchanged for each of the four groups

after data set reduction, with only modest changes in the median, mode, and standard deviation for the four groups. As with the recruited sample, there were no significant group differences relative to the length-of-current-marriage demographic variable.

Table 4-2 displays length of current marriage for the utilized sample in five-year increments, and Table 4-3 provides a comparison of the four groups in regard to this variable of group stratification.

Table 4-2. Years of Marriage 5-Year Increment Breakdown (Utilized Sample)

Years Married	N
5 Years or Less	69
6-10 Years	42
11-15 Years	31
16-20 Years	21
21-25 Years	32
26-30 Years	22
31-35 Years	8
36 Years or More	9
Total	234

Table 4-3. Length of Current Marriage (Utilized Sample)

Group	N	Mean	Median	Std Dev	Min	Max	Range
1	61	14.23	10	11.49	0	36	36
2	60	14.27	13	10.58	0	39	39
3	55	13.27	12	10.04	0	31	31
4	58	13.29	10	10.66	0	37	37
Total	234	13.78	12	10.67	0	39	39

Analyses of participants' Task #7 Relationship Communication History Survey (RCHS) responses required further reduction of the utilized sample (N=234). The nature of analyses desired for this segment of the data required that only paired-couples' data sets be examined. Achieving this further-reduced sample required the elimination of 28 data sets representing participants whose spouses' data sets had not earlier survived the utilized samples' data-set-exclusion decision rules (see Description

of the Data subsection later in this chapter). This resultant sample of 103 matched-pairs data sets (N=206; hereinafter labeled the matched-pairs sample) was used for analyses of couples' RCHS responses. Table 4-4 provides an overview of how the recruited sample was reduced to the utilized sample for all but one area of analyses, and then was further reduced to the matched-pairs sample for analyses of the Relationship Communication History Survey responses.

Table 4-4. Summary of Stages of Sample Reduction for Data Analyses

N (Total)	N (Male)	N (Female)	Sample Parameters
264	132	132	Recruited Sample (total study participants)
234	117	117	Utilized Sample (all but RCHS analyses)
206	103	103	Matched-Pairs Sample (RCHS analyses only)

Reliability Findings

Three instruments created for use in earlier psychological research were revised or adapted for use in this study. Chapter 3 includes sections describing the development and validation of the original instruments, as well as the rationale and processes for adapting or revising these instruments for use in the current study. The purpose of this section is to report the reliability statistics calculated from the use of the revised and adapted instruments in this study (based on the N=234 utilized sample). These statistics are then compared to reliability data reported for use of the original instruments in earlier studies.

Batson's Empathy and Distress Indices-Adapted Version (BEDI-AV)

Cronbach's alpha reliability coefficients were calculated to assess internal consistency of the two subscales of the BEDI-AV, adapted from the original BEDI for use in this study. A Cronbach's alpha coefficient of .96 was determined for the six-item empathy scale and a coefficient of .90 was determined for the eight-item distress scale.

These measures of reliability compare to the original BEDI Cronbach's alpha coefficients of .94 (empathy) and .88 (distress) reported for studies referenced in Chapter 3.

Pity Experience Inventories-Short Form-Revised (PEI-SF-R)

Cronbach's alpha reliability coefficients were calculated to assess internal consistency for the three subscales of the PEI-SF-R, revised from the PEI-SF by substituting and adding items from the original PEI item pool. A Cronbach's alpha coefficient of .94 was determined for the 13-item compassionate caring scale (empathy), a coefficient of .79 was determined for the 10-item passive identification scale (distress), and a coefficient of .78 was determined for the 7-item false superiority scale (distress). A Cronbach's alpha coefficient of .84 was calculated for the 17-item combined distress scale. These measures of reliability compare to the original PEI-SF Cronbach's alpha coefficients of .89 (14 empathy items) and .88 (10 distress items) reported for studies referenced in Chapter 3. Separate distress scale reliability coefficients were not calculated by the original PEI-SF authors because of meager use of items from the false superiority scale.

Experiences in Close Relationships Questionnaire-Revised-Adapted Version (ECR-R-AV)

Cronbach's alpha reliability coefficients were calculated to assess internal consistency for the two subscales of the ECR-R-AV, adapted from the original ECR-R for use in this study. A Cronbach's alpha coefficient of .93 was determined for the 18-item attachment avoidance scale and a coefficient of .90 was determined for the 18-item attachment anxiety scale. These measures of reliability compare to the original ECR-R Cronbach's alpha coefficients of .90 (attachment avoidance) and .90 (attachment

anxiety) reported for studies referenced in Chapter 3. Table 4-5 provides comparisons of reliability estimates for the various instruments and subscales revised or adapted for use in this study with those of the original instruments as reported in Chapter 3.

Table 4-5. Reliability Comparisons of Revised /Adapted Instruments with Originals

Revised or Adapted Instrument	Scale or Composite / Number of Items	α	Original Instrument	Scale or Composite / Number of Items	α
ECR-R-AV	Avoidance (18)	0.93	ECR-R	Avoidance (18)	0.90
	Anxiety (18)	0.90		Anxiety (18)	0.90
BEDI-AV	Empathy (6)	0.96	BEDI	Empathy (6)	0.94
	Distress (8)	0.90		Distress (8)	0.88
PEI-SF-R	Empathy (13) [A]	0.94	PEI-SF	Empathy (14) [A]	0.89
	Distress (10) [B]	0.79		Not Reported	N/A
	Distress (7) [C]	0.78		Not Reported	N/A
	PEI Distress (17)	0.84		PEI Distress (10)	0.88
Combined	Total Empathy (19)	0.96		Not Reported	N/A
Combined	Total Distress (25)	0.91		Not Reported	N/A

Note: α = Cronbach's alpha; ECR-R-AV = Experiences in Close Relationships Questionnaire-Revised-Adapted Version; BEDI-AV = Batson's Empathy and Distress Indices-Adapted Version; PEI-SF-R = Pity Experience Inventories-Short Form-Revised; [A] = Compassionate Caring (CC) subscale; [B] = Passive Identification (PI) subscale; [C] = False Superiority (FI) subscale; Reliability estimates calculated on sample size of N=234

Reliability estimates for the instruments revised and/or adapted for use in this study compare favorably with reported reliability estimates for the original instruments. Therefore, these instruments may be regarded as reliable measures for subsequent data analyses.

Description of the Data

Data Collection Activities

Participants completed an eleven-page assessment packet comprised of seven tasks. The intervening variables of attachment avoidance and anxiety were calculated from the 36-item ECR-R-AV [Task #1]. The dependent variables of empathy and

distress scores were calculated from the 14-item BEDI-AV [Task #6, page one] and the 30-item PEI-SF-R [Task #6, pages two and three]. Subscale scores were calculated for the PEI distress score. Indices of predominant emotional response (BEDI-AV PER) and (PEI-SF-R PER) were calculated by subtracting each measure's distress score from its empathy score. A total index of predominant emotional response (Total PER) was calculated by merging the two PER indices after conversion to standard scores.

Participants completed seven additional rating scales identified as follows: (a) a scale for reporting vividness of memory engagement with group-specific (attachment or control) prototype (prototype memory vividness) [Task #4]; (b) a scale for reporting level of distress experienced by spouse in remembered episode of spousal distress (memory distress level) [Task #5]; (c) a scale for reporting vividness of memory of episode of spousal distress [Task #5]; (d) a scale for reporting vividness of imagined recurrence of episode of spousal distress [Task #5]; and (e) three scales for reporting continued vividness of imagined recurrence of episode of spousal distress [participants completed this scale at the end of each of the three pages of Task # 6 eliciting the dependent variable empathy and distress responses]. The five scales described in (c), (d), and (e) were combined to form one partner-in-distress memory vividness mean.

Task #2 data (distracter task) were not analyzed. Narrative data from Tasks #3 and #4 were used to inform exclusion of data sets of participants who noted failure to engage in dependent-variable-activating memory of spousal distress episode [Task #3] or in memory engagement of interaction with group-specific prototype [Task #4]. Participant responses to the current-marriage portion of the Relationship Communication History Survey (RCHS) [Task #7, page one] were analyzed as

matched-pairs-only data sets (N=206). RCHS items relative to earlier romantic relationships [Task #7, page two] were omitted from analyses because of high incidence of missing, incomplete, or suspect responses. An overview of participant data collection categories and their use in analyses can be located in Table 4-6 at the end of this chapter.

Data Inclusion Decision Rules

After study participation, data sets for 30 of the participants were excluded for one or more of the following reasons: (a) grossly repetitive and/or nonsensical responses provided (3 participants); (b) indication of failure to retrieve memory of spousal distress episode matching criteria specified (7 participants); (c) indication of failure to retrieve memory of relationship matching group-specific attachment prototype described (10 participants); and (d) omission of responses to one or more of the 87 (non RCHS) analyses scaled-response items (10 participants). A miniscule portion of the data in the (N=234) data sets retained for analyses presented as non-whole-number responses (.04%; N=9 items). These incidents included the circling of two adjoining numbers on one of the vividness or severity scales (a total of eight incidents), or providing a numerical response representing the midpoint between two available response options on one of the dependent variable measurement questions (only one incident). Each of these responses was rounded down to the lower of the two whole number options indicated.

Data Analyses

Analyses of participant data is provided in two sections: (a) correlational data analyses and (b) experimental data analyses. The correlational data analyses section contains an examination of relationships between and among the 17 demographic,

intervening, memory-measure, and dependent variable measures for the utilized sample (N=234). It also includes correlations and cross-correlations of spousal responses to the Relationship Communication History Survey (RCHS), as well as correlations and cross-correlations between spousal responses and 14 of the afore-mentioned variables (N=206). All correlations reported in this section are zero-order correlations. The experimental data analyses section includes an examination of differences observed between and among the four groups: Attachment-security priming condition; attachment-avoidance priming condition; attachment-anxiety priming condition; and neutral condition (N=234).

Correlational data analyses

Pearson product moment correlation coefficients were calculated for 17 variables: (a) the two demographic variables of gender and length of marriage; (b) the two levels of the intervening variable of attachment style; (c) the three measures of memory engagement; and (d) the ten dependent variable measures of empathy and distress, including scales, subscales, and composite measures. For ease of presentation, the two demographic variables and the two intervening variables were combined in one matrix and correlated with each other (Table 4-7), with the three measures of memory engagement (Table 4-8), and with the ten dependent variable measures (Table 4-9). The three measures of memory engagement were correlated with each other (Table 4-10) and with the ten dependent variable measures (Table 4-11). And the ten dependent variable measures were correlated with each other in two parts (Tables 4-12 and 4-13).

Demographic variables. A negative correlation was found between gender and attachment anxiety ($r = -.237$; $p \leq .01$). Positive correlations were found between gender and the memory engagement measure of group prototype vividness ($r = .240$; $p \leq .01$)

and between gender and the BEDI Distress dependent variable scale ($r = .144$; $p \leq .05$). No other significant relationships were found between the demographic variables and the other variables of interest. Tables 4-7 thru 4-9 display the results of Pearson correlations for each of the two demographic variables with the other variables of interest.

Intervening variable measures. A positive correlation was found between the two intervening variables of attachment avoidance and attachment anxiety ($r = .53$; $p \leq .01$). Three matters should be noted about the level of correspondence observed between these two scales: (a) Developers of the ECR-R (see discussion in Chapter 3) found that the dimensions underlying avoidance and anxiety are essentially orthogonal ($r = .12$). (b) General population norms reported for ECR-R usage reveal avoidance/anxiety scales correlation of $r = .41$ (see Table 3-7). Such findings suggest that despite minimal overlap in what these two constructs measure, individual attachment styles represent a blending of competing attachment strategies. Thus individual attachment-dimension scores tend to overlap more highly than do the underlying dimensions they assess (see Chapter 3 discussion). And (c) The higher degree of overlap between the two scales for the current study sample ($r = .53$) versus that reported in the general population norms ($r = .41$) is likely attributable to the lower mean and standard deviation of the scores of the current study's sample (Current Study: Av: $M=2.69$; $SD=1.05$; Ax: $M=2.70$; $SD=0.97$; General Population Married Norms: Av: $M=2.87$; $SD=1.27$; Ax: $M=3.64$; $SD=1.33$). Chapter 5 includes a discussion of two literature-supported distinctions between the current study sample population and the general population that may help to account for these differences.

A negative correlation was found between attachment avoidance and the memory engagement measure of partner-in-distress vividness ($r = -.129$; $p \leq .05$). Significant correlations were found between attachment avoidance and eight of the ten dependent variable measures. Six of these correlations were significant at the $p \leq .01$ level: BEDI Empathy ($r = -.373$); BEDI PER ($r = -.334$); PEI CC ($r = -.380$); distancing ($r = .223$); PEI PER ($r = -.327$); and Total PER ($r = -.349$). The remaining two were found to be significant at the $p \leq .05$ level: PEI PI ($r = -.132$); and PEI FS ($r = .167$).

A negative correlation was found between attachment anxiety and the demographic variable of length of current marriage ($r = -.237$; $p \leq .01$). Significant correlations were found between attachment anxiety and seven of the ten dependent variable measures. Six of these correlations were significant at the $p \leq .01$ level: BEDI Empathy ($r = -.186$); BEDI Distress ($r = .185$); BEDI PER ($r = -.255$); PEI FS ($r = .231$); PEI PER ($r = -.212$); Total PER ($r = -.243$). The remaining correlation was found to be significant at the $p \leq .05$ level: PEI Distress ($r = .150$). Tables 4-7 thru 4-9 display the results of Pearson correlations for each of the two intervening variables with the other variables of interest.

Memory engagement measures. Significant positive correlations were found between the first and third measures of memory engagement (group prototype vividness and partner-in-distress vividness; $r = .538$; $p \leq .01$), and between the second and third measures (partner distress level and partner-in-distress vividness; $r = .457$; $p \leq .01$). Group prototype vividness and the demographic variable of gender were found to be positively correlated ($r = .240$; $p \leq .01$), and a negative correlation was found

between partner-in-distress vividness and the intervening variable of attachment avoidance ($r = -.129$; $p \leq .05$).

A positive correlation was found between group prototype vividness and the dependent variable measure of BEDI Empathy ($r = .154$; $p \leq .05$). Significant correlations were found between partner distress level and eight of the ten dependent variable measures. Six of the correlations were positive and were significant at the $p \leq .01$ level: BEDI Distress ($r = .387$); PEI CC ($r = .199$); PEI PI ($r = .384$); PEI FS ($r = .291$); distancing ($r = .230$); and PEI Distress ($r = .399$). The remaining two correlations were negative, and significant at the $p \leq .05$ level: BEDI PER ($r = -.151$) and Total PER ($r = -.137$). Significant positive correlations were found between partner-in-distress vividness and five of the ten dependent variable measures, all at the $p \leq .01$ level: BEDI Empathy ($r = .322$); BEDI Distress ($r = .309$); PEI CC ($r = .347$); PEI PI ($r = .309$); and PEI Distress ($r = .268$). Tables 4-8, 4-10, and 4-11 display the results of Pearson correlations for each of the memory engagement variables with the other variables of interest.

Dependent variable measures. Significant correlations between the ten dependent variable measures and the seven demographic, intervening, and memory engagement variables are described in the previous three subsections. Tables 4-9 and 4-11 display the results of all correlations between these variables. Concurrent validity of the two dependent variable empathy measures (BEDI Empathy and PEI CC) was high ($r = .822$), and each was highly correlated with the measures of predominant emotional response [PER] of which it was a component (correlations ranging from .695 to .781). Correlation of the two dependent variable distress measures (BEDI Distress

and PEI Distress) was less robust ($r = .660$) than was the correlation between their empathy counterparts, as were the negative correlations between these distress measures and the various PER measures to which they contributed (correlations ranging from $-.490$ to $-.663$).

No significant relationship was found between the BEDI Empathy and BEDI Distress measures. Significant correlations were found, however, between the PEI empathy measure (CC) and the PEI Distress subscales (PI and FS). The subscale designed to measure the more engaging aspects of response to another's distress (PEI PI) was positively correlated with empathy (PEI CC) at $r = .314$. While the subscale designed to assess the more distancing aspects of such a response (PEI FS) was negatively correlated with that same empathy measure ($r = -.334$). Both correlations were significant at the $p \leq .01$ level. An even stronger negative correlation was found between the false superiority subscale (PEI FS) of PEI Distress and the BEDI Empathy measure ($r = -.489$; $p \leq .01$). Tables 4-12 and 4-13 display the results of Pearson correlations for the ten dependent variable scales, subscales, and composites. These results are presented in two 5-variable by 10-variable matrices.

Relationship Communication History Survey (RCHS) response analyses.

Participants responded to the Relationship Communication History Survey (RCHS) after completion of the dependent variable data gathering (Task #6). Although the differing group conditions may have influenced participant responses, areas of interest for the RCHS data were confined to gender differences in perceived frequency of distress (both self- and partner-), perceived competency (both self- and partner-) at being a source of comfort during such times of distress, and the relationships between those assessments

and (both self- and partner-) dependent variable responses in the earlier imagined recurrence of an episode of partner distress.

RGHS descriptive statistics. Table 4-14 at the end of this chapter displays the descriptive statistics for gender comparisons in regard to the four RGHS questions. In Question #1, husbands rated their own frequency of distress ($M = 3.0874$) lower than wives rated their own frequency of distress ($M = 4.1262$). This finding mirrored Question #3 responses, where wives' ratings of their husbands' frequency of distress ($M = 2.9320$) were lower than the ratings by husbands of their wives' frequency of distress ($M = 4.2816$).

Independent samples t-tests were performed to test the equality of the means. Gender differences were found in regard to two of the questions: (Q#1) Husbands' and wives' reports of how frequently they experience distress accompanied by a desire for their spouses' comfort and support; and (Q#3) Husbands' and wives reports of how frequently their spouses experience distress accompanied by a desire for their support. Both differences were significant at the $p \leq .01$ level. Levene's test for equality of variances revealed significant variability in Q#1 responses ($\alpha = .013$) but not in Q#3 responses ($\alpha = .086$). No significant differences were found between the genders in regard to the other two questions: (Q#2) Husbands' and wives' assessment of their spouses' effectiveness at providing comfort and support when they are distressed; and (Q#4) Husbands' and wives' assessments of their own effectiveness at providing comfort and support when their spouses are distressed.

RGHS correlations. Pearson correlations were calculated for each of the four RGHS questions. Specifically, the response mean for each of the questions was

correlated with the response mean for each of the other questions. Correlations were calculated for all participants (N=206), as well as for husbands (N=103) and wives (N=103) separately. The results of these correlations are presented in Tables 4-15 through 4-17. Responses to each of the four RCHS questions were then correlated with 14 variables of interest from the primary study: the two demographic variables, the two intervening variables, and the ten dependent variable measures. The results of these correlations can be found in Tables 4-18 and 4-19.

Subsequently, two matched-pair data sets (N=103) were constructed from the original couples' data set (N=206) by pairing wives' data for the variables of interest with husbands' responses to the RCHS questions, and vice versa. Correlations were then calculated using these modified data sets: (a) Husbands' RCHS responses were correlated with wives' data (N=103); and (b) Wives' RCHS responses were correlated with husbands' data (N=103). Correlation between participants' RCHS responses and their own data informed a probing of the relationship between individuals' traits or tendencies and their own perceptions of communication quality. Expanding the analyses to cross-correlation of participant responses with spousal data provided a fuller basis for examining dyadic contributions to participants' RCHS assessments. The results of these cross-correlations can be located in Tables 4-20 through 4-23. It should be noted that because of its nature as a fixed factor, no data was generated for gender in cross-correlations. The following sections provide a description of the findings for both the participant RCHS correlations and the husbands/wives cross-correlations.

RCHS correlations: all responses with all responses. The strongest relationship between RCHS responses was noted between Q#2 (mate's effectiveness

as comfort-giver) and Q#4 (own effectiveness as comfort-giver) ($r = .457$; $p \leq .01$). Milder and negative correlations were found between Q#3 (mate's distress frequency) and Q#4 ($r = -.213$; $p \leq .01$) and between Q#1 (own distress frequency) and Q #3 ($r = -.154$; $p \leq .05$). Table 4-15 displays the full results of RCHS between-response correlations.

RCHS correlations: husbands' responses with husbands' responses.

Similarly, when correlating husbands' RCHS responses with one another, the strongest positive correlation was between the Q#2 and Q#4 assessments of self and mate comforting competence ($r = .462$; $p \leq .01$). Milder and negative correlations were found between Q#2 and Q#3 ($r = -.270$; $p \leq .01$) and between Q#3 and Q#4 ($r = -.205$; $p \leq .05$). Table 4-16 displays the full results of husbands' RCHS between-response correlations.

RCHS correlations: wives' responses with wives' responses. Wives' correlation of Q#2 and Q#4 responses were in the same direction and at the same level of strength as their husbands' responses ($r = .462$; $p \leq .01$). Unlike the husbands' responses, wives' Q#2 and Q#3 responses were virtually uncorrelated. But similar to the husbands' responses, a negative correlation was found between Q#3 and Q#4 ($r = -.217$; $p \leq .05$). Table 4-17 displays the full results of wives' RCHS between-response correlations.

RCHS correlations: gender. RCHS Q#1 was positively correlated with gender ($r = .386$; $p \leq .01$). Because the values of male=1 and female=2 were assigned to the fixed factor of gender, this correlation indicates that wives reported higher incidence of distress and desire for spousal support than did husbands. Predictably, then, Q#3 was

negatively correlated with gender ($r = -.458$; $p \leq .01$), with husbands reporting higher incidence than did wives of their spouses experiencing distress and wanting support. No correlations between gender and RCHS responses were generated for the matched-pair data sets because the nature of gender as a fixed factor precluded such analyses. Table 4-18 displays the full results of RCHS responses correlated with the demographic variable of gender.

RCHS correlations: years of current marriage. Participants who had been married to each other longer were more likely to rate their mates as more effective in providing support during their times of distress (Q#2). The correlation was significant ($r = .207$; $p \leq .01$), and was divided quite evenly between the genders as follows: The correlation between husbands' positive assessment of spousal comforting competence and wives' length of marriage was $r = .212$ ($p \leq .05$). While the correlation between wives' positive assessment and husbands' length of marriage was $r = .202$ ($p \leq .05$). Frequency of distress with attempts to elicit comfort was found to be negatively correlated with spouse's length of marriage: The correlation between husbands' Q#3 responses (frequency of spousal distress accompanied by bids for support) and wives' length of current marriage was $r = -.371$ ($p \leq .01$). Similarly the correlation between wives' Q#1 assessments of their own distress and support-eliciting frequency and husbands' length of current marriage was $r = -.313$ ($p \leq .01$). Tables 4-18, 4-20, and 4-22 display the full results of RCHS responses correlated with the demographic variable of years of current marriage.

RCHS correlations: intervening variables: all responses with own data. Attachment avoidance was negatively correlated with Q#2 (mate's effectiveness at

comforting; $r = -.505$) and with Q#4 (effectiveness at comforting mate; $r = -.424$). A positive correlation was found between attachment avoidance and Q#3 (mate's distress frequency; $r = .305$). Attachment anxiety was negatively correlated with Q#2 ($r = -.410$) and with Q#4 ($r = -.269$). A positive correlation was found between attachment anxiety and Q#1 (own frequency of distress; $r = .314$). All correlations were significant at the $p \leq .01$ level. Table 4-18 displays the full results of RCHS responses correlated with the intervening variable of attachment style.

RCHS correlations: intervening variables: husbands' responses with wives' data. Wives' attachment avoidance was negatively correlated with husbands' Q#2 responses (their perceptions of their wives' effectiveness as comfort-givers; $r = -.376$) and with husbands' Q#4 responses (their perceptions of their own effectiveness as comfort-givers; $r = -.320$). Wives' attachment anxiety was negatively correlated with husbands' Q#2 responses (their perceptions of their wives' effectiveness as comfort-givers; $r = -.374$) and with husbands' Q#4 responses (their perceptions of their own effectiveness as comfort-givers; $r = -.363$). All of these correlations were significant at the $p \leq .01$ level. Wives' attachment anxiety was positively correlated with husbands' Q#3 responses (husbands' reports of their wives' distress frequency) at the $p \leq .05$ level of significance ($r = .210$). Table 4-20 displays the full results of husbands' RCHS responses cross-correlated with wives' intervening variable data.

RCHS correlations: intervening variables: wives' responses with husbands' data. Husbands' attachment avoidance was negatively correlated with wives' Q#2 responses (their perceptions of their husbands' effectiveness as comfort-givers;

$r = -.464$) and with wives' Q#4 responses (wives' perceptions of their own effectiveness as comfort-givers; $r = -.446$). Husbands' attachment avoidance was positively correlated with wives' responses to Q#1 (their own distress frequency; $p = .288$). Husbands' attachment anxiety was negatively correlated with wives' Q#2 responses (wives' perceptions of their husbands' effectiveness as comfort givers; $r = -.347$) and with wives' Q#4 responses (wives' perceptions of their own effectiveness as comfort-givers; $r = -.467$). All correlations were significant at the $p \leq .01$ level. Table 4-22 displays the full results of wives' RCHS responses cross-correlated with husbands' intervening variable data.

RCHS correlations: dependent variables: all responses with own data. One's distress frequency (Q#1) was positively correlated with the following dependent variable scales, subscales, and composites: BEDI Distress ($r = .199$); PEI PI ($r = .210$); PEI FS ($r = .242$); and PEI Distress ($r = .257$). All correlations were significant at the $p \leq .01$ level. One's assessment of his or her mate's effectiveness as a comfort-giver (Q#2) was positively correlated with BEDI Empathy ($r = .348$); BEDI PER ($r = .312$); PEI CC ($r = .359$); PEI PER ($r = .274$); and Total PER ($r = .305$). Each of these correlations was significant at the $p \leq .01$ level. Q#2 responses were positively correlated with PEI PI ($r = .150$) at the $p \leq .05$ level. No significant relationships were found between the dependent variable measures and Q#3 (one's mate's frequency of distress) or Q#4 (one's assessment of his or her own effectiveness as a comfort-giver). Tables 4-18 and 4-19 display the full results of RCHS responses correlated with the dependent variable measures.

RCHS correlations: dependent variables: husbands' responses with wives'

data. Husbands' responses to Q#1 (their own distress frequency) were negatively correlated with wives' dependent variable PEI CC measures ($r = -.202$; $p \leq .05$). Husbands' responses to Q#2 (wives' comforting effectiveness) were positively correlated with wives' BEDI Empathy ($r = .236$; $p \leq .05$); BEDI PER ($r = .341$; $p \leq .01$); PEI CC ($r = .195$; $p \leq .05$); PEI PER ($r = .297$; $p \leq .01$); and Total PER ($r = .330$; $p \leq .01$). Husbands' Q#2 responses were negatively correlated with wives' BEDI Distress ($r = -.236$; $p \leq .05$) and PEI FS ($r = -.239$; $p \leq .05$). Husbands' responses to Q#3 (wives' frequency of distress) were positively correlated with wives' BEDI Distress ($r = .213$; $p \leq .05$); PEI PI ($r = .226$; $p \leq .05$); PEI FS ($r = .273$; $p \leq .01$); and PEI Distress ($r = .282$; $p \leq .01$). And husbands' responses to Q #4 (husbands' assessment of their own effectiveness as comfort-givers) were positively correlated with wives' BEDI Empathy ($r = .208$; $p \leq .05$); BEDI PER ($r = .274$; $p \leq .01$); PEI CC ($r = .210$; $p \leq .05$); PEI PER ($r = .223$; $p \leq .05$); and Total PER ($r = .256$; $p \leq .01$). Tables 4-20 and 4-21 display the full results of husbands' RCHS responses cross-correlated with wives' dependent variable data.

RCHS correlations: dependent variables: wives' responses with husbands'

data. Wives' responses to Q#1 (their own distress frequency) were negatively correlated with husbands' dependent variable data as follows: BEDI Empathy ($r = -.268$; $p \leq .01$); BEDI PER ($r = -.207$; $p \leq .05$); PEI CC ($r = -.224$; $p \leq .05$); PEI PER ($r = -.213$; $p \leq .05$); and Total PER ($r = -.223$; $p \leq .05$). Wives' responses to Q#2 (husbands' comforting effectiveness) were positively correlated with husbands' data for BEDI Empathy ($r = .286$; $p \leq .01$); BEDI PER ($r = .237$; $p \leq .05$); PEI CC ($r = .236$; $p \leq .05$);

PEI PER ($r = .209$; $p \leq .05$); and Total PER ($r = .233$; $p \leq .05$). Wives Q#2 responses were negatively correlated with husbands' distancing scores ($r = -.266$; $p \leq .01$). No significant correlations were found between the husbands' dependent variable measures and wives' Q#3 responses (husbands' frequency of distress) or wives' Q#4 responses (wives' assessment of their own effectiveness as comfort-givers). Tables 4-22 and 4-23 display the full results of wives' RCHS responses cross-correlated with husbands' dependent variable data.

Experimental data analyses

Experimental data analyses performed on the utilized sample ($N=234$) included the following: (a) calculation of descriptive statistics for each group for each of 15 measures (two intervening variable measures; three measures (scales or composites) of quality of engagement in targeted memories; and ten dependent variable measures (including subscales and composites); (b) performance of one-way analyses of variance (ANOVA) to determine level of significance of observed group differences; and (c) conducting of post hoc tests to explore group differences revealed by ANOVA at $p \leq .05$ level of significance.

Descriptive statistics. Tables 4-24 thru 4-26 at the end of this chapter display the descriptive statistics for the four groups for each of the 15 variables calculated. Measures of central tendency observed among these statistics fall within the range reported by the literature and anticipated in this study.

Analyses of variance. One way analyses of variance were performed to examine the significance of group differences observed for each of the descriptive statistics. Differences at the $p \leq .05$ level were observed for the intervening variable of attachment avoidance ($df = 3, 230$; $F = 2.711$; $\alpha = .046$), the memory engagement measure of

group-specific prototype reflection vividness ($df = 3, 230$; $F = 1.045$; $\alpha = 0.011$), and the PEI false superiority distress scale measure ($df = 3, 230$; $F = 2.729$; $\alpha = .045$). No other between-group differences were found. Tables 4-27 and 4-28 at the end of this chapter display the results of the one-way analyses of variance for the 15 outcome measures.

Post hoc analyses of group differences. Tukey's t-tests for multiple comparisons were performed for the three measures displaying significant group differences ($p \leq .05$) in the one-way analyses of variance. Significant differences were confirmed for prototype reflection vividness and PEI false superiority. A discussion of possible explanations for these group differences is included in Chapter 5. The ANOVA finding of significant differences for attachment avoidance was not confirmed when accounting for multiple group comparisons. Table 4-29 display the findings of Tukey's t-tests for multiple comparisons for those measures showing significant group differences in the ANOVA.

Research Hypotheses and Questions

This study was designed to address the following four global research questions:

- (1) Does the priming of attachment security or insecurity differentially affect the experience of empathy and distress in response to one's distressed marriage partner?
- (2) Does gender differentially affect the experience of empathy and distress in response to one's distressed marriage partner?
- (3) How does attachment style interact with contextual attachment security or insecurity priming to affect the experience of empathy and personal distress in response to one's distressed marriage partner?
- And (4) Does attachment avoidance promote suppression of partner-in-distress memory vividness as an emotion regulation coping strategy?

The four global research questions were focused on the effects of the independent variable of group condition (Hypothesis 1, three Questions), the demographic variable of gender (Hypothesis 2, two Questions), the intervening variable of attachment style (Hypothesis 3, three Questions), and defensive processes that might influence level of engagement with stimuli intended to prompt dependent variable empathy and distress responses (Hypothesis 4, three Questions). One of the questions under Hypothesis 4 (Question 11) examined gender as a possible level-of-engagement correlate. The purpose of this section is to examine the eleven research questions in the light of the data presented in the previous section.

Analyses of variance (ANOVA's) were performed to investigate Questions 1 thru 3. Pearson correlation coefficients were calculated to investigate Questions 4 thru 8. And partial correlations were performed to investigate Questions 9 thru 11. An alpha level of .05 was selected to test the significance of the observed comparisons and correlations.

Question 1 (H1): Attachment-security priming condition will result in higher empathy-positive scores (empathy score minus distress score) than will attachment-avoidance priming condition, attachment-anxiety priming condition, or control condition.

The Null Hypothesis stated that there would be no difference between the groups in regard to the dependent variable composite of predominant emotional response (PER). The PER is a composite score achieved by subtracting each participant's distress score from his or her empathy score. A higher empathy-positive score is a PER score representing a larger positive number or a smaller negative number than the scores to which it is compared. One-way analyses of variance (ANOVA) were performed comparing the means of each group's empathy and distress responses,

including all scales and subscales. The results of these analyses can be located in Tables 4-27 thru 4-29. No significant differences were observed for any of the empathy or distress scales or subscales, with the exception of the PEI Distress false superiority subscale ($p \leq .05$). No significant group differences were observed for any of the three PER dependent variable measures (BEDI PER, PEI PER, or Total PER). Thus, the Null Hypothesis was retained.

Question 2 (H1): Attachment-avoidance priming condition will result in lower empathy scores than will attachment-anxiety priming condition.

The Null Hypothesis stated that there would be no difference between the groups in regard to the dependent variable empathy. One-way analyses of variance (ANOVA) were performed comparing the means of each group's empathy responses. The results of these analyses can be located in Tables 4-27 and 4-28. No significant group differences were observed for either of the two empathy measures (BEDI Empathy or PEI Empathy). Thus, the Null Hypothesis was retained.

Question 3 (H1): Attachment-anxiety priming condition will result in higher distress scores than will attachment-avoidance priming condition.

The Null Hypothesis stated that there would be no difference between the groups in regard to the dependent variable distress. One-way analyses of variance (ANOVA) were performed comparing the means of each group's distress responses. The results of these analyses can be located in Tables 4-27 and 4-28. The only significant difference observed was for the PEI Distress false superiority subscale ($p \leq .05$), and these differences were not observed between the attachment-anxiety priming condition

(Group 3) and the attachment-avoidance priming condition (Group 2). Thus, the Null Hypothesis was retained.

Question 4 (H2): Females will exhibit higher empathy scores than will males in response to marriage partner distress.

The Null Hypothesis stated that there would be no difference between females and males in regard to the dependent variable empathy. Pearson correlations of the fixed factor gender with the two empathy measures revealed no significant relationship between gender and empathy responses to marriage partner distress ($r = .00$ BEDI Empathy; $r = .04$ PEI CC Empathy). The results of these analyses can be located in Table 4-9. Thus, the Null Hypothesis was retained.

Question 5 (H2): Males will exhibit greater use of distancing strategies than will females in response to marriage partner distress.

The Null Hypothesis stated that there would be no difference between males and females in regard to the dependent variable distancing score. Pearson correlation of the fixed factor gender with the distancing subscale of the PEI Distress false superiority subscale revealed no significant relationship between gender and the use of distancing strategies in response to marriage partner distress ($r = .05$). The results of these analyses can be located in Table 4-9. Thus, the Null Hypothesis was retained.

Question 6 (H3): Higher attachment-avoidance scores will predict lower empathy-positive scores (empathy score minus distress score) for all three experimental conditions and control condition in response to marriage partner distress.

The Null Hypothesis stated that there would be no relationship between the intervening variable of attachment avoidance and the dependent variable composite of

predominant emotional response (PER). Pearson correlations of attachment-avoidance scores (Av) with the three PER scores revealed a significant negative relationship between attachment avoidance and predominant emotional response to the episode of marriage partner distress. The relationship between the variables was in the direction predicted. The Av with BEDI PER correlation was $r = -.334$; the Av with PEI PER correlation was $r = -.327$; and the Av with Total PER correlation was $r = -.349$. All correlations were significant at the $p \leq .01$ level. The results of these analyses can be located in Table 4-9. Thus, the Null Hypothesis was rejected.

Question 7 (H3): Higher attachment-anxiety scores will predict lower empathy-positive scores (empathy score minus distress score) for all three experimental conditions and control condition in response to marriage partner distress.

The Null Hypothesis stated that there would be no relationship between the intervening variable of attachment anxiety and the dependent variable composite of predominant emotional response (PER). Pearson correlations of attachment-anxiety scores (Ax) with the three PER scores revealed a significant negative relationship between attachment anxiety and predominant emotional response to the episode of marriage partner distress. The relationship between the variables was in the direction predicted. The Ax with BEDI PER correlation was $r = -.255$; the Av with PEI PER correlation was $r = -.212$; and the Av with Total PER correlation was $r = -.243$. All correlations were significant at the $p \leq .01$ level. The results of these analyses can be located in Table 4-9. Thus, the Null Hypothesis was rejected.

Question 8 (H3): Higher attachment-avoidance scores will predict greater use of distancing strategies in response to marriage partner distress when controlling for experimental condition and gender.

The Null Hypothesis stated that there would be no relationship between the intervening variable of attachment avoidance and participants' use of distancing strategies in response to marriage partner distress when controlling for experimental condition and gender. Pearson correlation of attachment-avoidance scores (A_v) with the distancing subscale of the PEI Distress false superiority subscale revealed a significant positive correlation ($r = .223$; $p \leq .01$) between attachment avoidance and the tendency to employ distancing strategies in response to the episode of marriage partner distress (see Table 4-9). The relationship between the two variables when controlling for group and gender ($r = .238$) was in the direction predicted and was significant at the $p \leq .01$ level. Thus, the Null Hypothesis was rejected.

Question 9 (H4): Higher attachment-avoidance scores will predict lower partner-in-distress memory vividness ratings when controlling for experimental condition and gender.

The Null Hypothesis stated that there would be no relationship between the intervening variable of attachment avoidance and the (5-score-composite-mean) vividness rating of the partner-in-distress episode. The zero-order correlation between these two variables is displayed in Table 4-8. Partial correlations were calculated between participants' attachment-avoidance scores (A_v) and partner-in-distress vividness means, controlling for group and gender. A significant negative correlation

was found between the variables at the $p \leq .05$ level, and in the direction predicted by the hypothesis ($r = -.137$). Thus, the Null Hypothesis was rejected.

Question 10 (H4): Attachment-avoidance priming condition will result in lower partner-in-distress memory vividness ratings when controlling for attachment style and gender.

The Null Hypothesis stated that there would be no difference between the groups in regard to the (5-score-composite-mean) vividness rating of the partner-in-distress episode. Table 4-24 displays the group means for participants' partner-in-distress vividness ratings. The means ranged from a low of 5.14 (control condition) to a high of 5.42 (attachment-avoidance priming condition). There were no significant differences found between the groups regarding the partner-in-distress vividness ratings when conducting partial correlations controlling for attachment avoidance, attachment anxiety, and gender. Thus, the Null Hypothesis was retained.

Question 11 (H4): Males will exhibit lower partner-in-distress memory vividness ratings when controlling for experimental condition and attachment style.

The Null Hypothesis stated that there would be no difference between males and females in regard to the (5-score composite-mean) vividness rating of the partner-in-distress episode. The zero-order correlation between these two variables is displayed in Table 4-8. Partial correlations were conducted between gender and participants' partner-in-distress vividness means, controlling for group, attachment avoidance, and attachment anxiety. Although in the direction predicted, the relationship between the variables was not significant ($r = .098$; $\alpha = .137$). Thus, the Null Hypothesis was retained.

Summary

In Chapter 4 I have provided a description of the sample, an examination of reliability findings for adapted instrumentation, a reporting of data analyses procedures and results, and the conclusions of outcomes-testing of the research hypotheses. The null hypotheses were retained for seven of the research questions posed in the study design. The null was rejected in regard to the other four research questions. Additional findings from the primary and secondary analyses of the collected data were reported. The relevance of these findings to the existing body of marital research, along with the implications for future research is discussed in Chapter 5.

Table 4-6. Overview of Participant Data Collection Categories and their Uses

Task #	Data Label	Subscale	# of Items	Description
1	ECR-R-AV	Full (36)		
		Avoidance (Av)	18	Intervening Variable
		Anxiety (Ax)	18	Intervening Variable
2	Distracter			Discarded (per design)
3	Narrative			PID Memory Selection
4	Narrative			Prototype Memory Selection
4	PT Mem Viv		1	Group-Specific Prompt
5	Mem Viv	PID Mem Viv	1	5-Item Mean (1 of 5)
5	Mem Dis Lev		1	Partner Distress Level
5	Imag Viv	PID Mem Viv	1	5-Item Mean (1 of 5)
6	Imag Viv	PID Mem Viv	3	5-Item Mean (3 of 5)
6	BEDI-AV	Full (14)		
		Empathy	6	Dependent Variable
		Distress	8	Dependent Variable
6	PEI-SF-R	Full (30)		
		Empathy (CC)	13	Dependent Variable
		Distress (PI)	10	Dependent Variable
		Distress (FS)	7	Dependent Variable
		Distancing (3)		PEI FS Subscale
	Total Items		87	All But RCHS Analyses (N=234)
7	RCH Survey	(page 1)	4	Communication Quality
7	RCH Survey	(page 2)		Discarded (flawed data)
	Total Items		4	RCHS Analyses (N=206)

Note: ECR-R-AV = Experiences in Close Relationships Questionnaire-Revised-Adapted Version; PID = Partner-In-Distress; PT Mem Viv = Prototype Memory Vividness rating; PID Mem Viv = Vividness of Memory of partner-in-distress episode; Mem Dis Lev = Level of partner distress in episode remembered; Imag Viv = Vividness of Imagined recurrence of partner-in-distress episode; BEDI-AV = Batson's Empathy and Distress Indices-Adapted Version; PEI-SF-R = Pity Experience Inventories-Short Form-Revised; CC = Compassionate Caring subscale; PI = Passive Identification subscale; FS = False Superiority subscale; RCH Survey (RCHS) = Relationship Communication History Survey

Table 4-7. Pearson Correlations (1 of 7)
 [Demographic and Intervening Variables with Each Other]

		Gender	Years Married	Av	Ax
Gender (M/F)	Pearson Correlation	1	0.029	-0.075	0.07
	Sig. (2-tailed)		0.656	0.256	0.287
	N	234	234	234	234
Years Married	Pearson Correlation	0.029	1	-0.102	-.237**
	Sig. (2-tailed)	0.656		0.121	0
	N	234	234	234	234
Attachment Avoidance Score (Av)	Pearson Correlation	-0.075	-0.102	1	.528**
	Sig. (2-tailed)	0.256	0.121		0
	N	234	234	234	234
Attachment Anxiety Score (Ax)	Pearson Correlation	0.07	-.237**	.528**	1
	Sig. (2-tailed)	0.287	0	0	
	N	234	234	234	234

Note: ** Correlation is significant at the .01 level (2-tailed)

Table 4-8. Pearson Correlations (2 of 7)
 [Demographic and Intervening with Memory-Engagement Variables]

		Group Prototype Vividness	Partner Distress Level	PID Mean Vividness Level
Gender (M/F)	Pearson Correlation	.240**	-0.122	0.121
	Sig. (2-tailed)	0	0.062	0.064
	N	234	234	234
Years Married	Pearson Correlation	-0.028	-0.067	-0.089
	Sig. (2-tailed)	0.668	0.304	0.173
	N	234	234	234
Attachment Avoidance Score (Av)	Pearson Correlation	-0.071	0.01	-.129*
	Sig. (2-tailed)	0.277	0.876	0.049
	N	234	234	234
Attachment Anxiety Score (Ax)	Pearson Correlation	0.069	0.027	0.039
	Sig. (2-tailed)	0.294	0.686	0.554
	N	234	234	234

Note: ** Correlation is significant at the .01 level (2-tailed); * Correlation is significant at the .05 level (2-tailed); PID = Partner-In-Distress

Table 4-9. Pearson Correlations (3 of 7)
 [Dependent Variables with Demographic and Intervening Variables]

		Gender	Years Married	Av	Ax
BEDI	Pearson Correlation	0	0.045	-.373**	-.186**
Empathy	Sig. (2-tailed)	0.995	0.495	0	0.004
	N	234	234	234	234
BEDI	Pearson Correlation	.144*	-0.064	0.087	.185**
Distress	Sig. (2-tailed)	0.027	0.332	0.186	0.004
	N	234	234	234	234
BEDI PER	Pearson Correlation	-0.09	0.073	-.334**	-.255**
	Sig. (2-tailed)	0.17	0.263	0	0
	N	234	234	234	234
PEI CC	Pearson Correlation	-0.039	-0.02	-.380**	-0.118
	Sig. (2-tailed)	0.557	0.76	0	0.071
	N	234	234	234	234
PEI PI	Pearson Correlation	0.09	0	-.132*	0.057
	Sig. (2-tailed)	0.168	0.998	0.043	0.383
	N	234	234	234	234
PEI FS	Pearson Correlation	0.101	-0.055	.167*	.231**
	Sig. (2-tailed)	0.124	0.404	0.01	0
	N	234	234	234	234
Distancing	Pearson Correlation	0.046	0.031	.223**	0.116
Score	Sig. (2-tailed)	0.485	0.64	0.001	0.077
	N	234	234	234	234
PEI Distress	Pearson Correlation	0.11	-0.027	-0.008	.150*
	Sig. (2-tailed)	0.095	0.686	0.902	0.022
	N	234	234	234	234
PEI PER	Pearson Correlation	-0.113	0.002	-.327**	-.212**
	Sig. (2-tailed)	0.085	0.98	0	0.001
	N	234	234	234	234
Total PER	Pearson Correlation	-0.11	0.033	-.349**	-.243**
	Sig. (2-tailed)	0.094	0.618	0	0
	N	234	234	234	234

Note: ** Correlation is significant at the .01 level (2-tailed); * Correlation is significant at the .05 level (2-tailed); BEDI = Batson's Empathy and Distress Indices; PER = Predominant Emotional Response; PEI = Pity Experience Inventories; CC = Compassionate Caring subscale; PI = Passive Identification subscale; FS = False Superiority subscale

Table 4-10. Pearson Correlations (4 of 7)
 [Memory-Engagement Variables with Each Other]

		Group Prototype Vividness	Partner Distress Level	PID Mean Vividness Level
Group	Pearson Correlation	1	0.08	.538**
Prototype	Sig. (2-tailed)		0.225	0
Vividness	N	234	234	234
Partner	Pearson Correlation	0.08	1	.457**
Distress	Sig. (2-tailed)	0.225		0
Level	N	234	234	234
PID Mean	Pearson Correlation	.538**	.457**	1
Vividness	Sig. (2-tailed)	0	0	
Level	N	234	234	234

Note: ** Correlation is significant at the .01 level (2-tailed); PID = Partner-In-Distress

Table 4-11. Pearson Correlations (5 of 7)
 [Dependent Variables with Memory-Engagement Variables]

		Group Prototype Vividness	Partner Distress Level	PID Mean Vividness Level
BEDI	Pearson Correlation	.154*	0.121	.322**
Empathy	Sig. (2-tailed)	0.018	0.065	0
	N	234	234	234
BEDI	Pearson Correlation	0.049	.387**	.309**
Distress	Sig. (2-tailed)	0.452	0	0
	N	234	234	234
BEDI PER	Pearson Correlation	0.085	-.151*	0.048
	Sig. (2-tailed)	0.197	0.021	0.465
	N	234	234	234
PEI CC	Pearson Correlation	0.114	.199**	.347**
	Sig. (2-tailed)	0.083	0.002	0
	N	234	234	234
PEI PI	Pearson Correlation	0.027	.384**	.309**
	Sig. (2-tailed)	0.683	0	0
	N	234	234	234
PEI FS	Pearson Correlation	-0.03	.291**	0.124
	Sig. (2-tailed)	0.647	0	0.059
	N	234	234	234
Distancing Score	Pearson Correlation	-0.031	.230**	0.042
	Sig. (2-tailed)	0.639	0	0.518
	N	234	234	234
PEI Distress	Pearson Correlation	0.003	.399**	.268**
	Sig. (2-tailed)	0.958	0	0
	N	234	234	234
PEI PER	Pearson Correlation	0.097	-0.114	0.11
	Sig. (2-tailed)	0.139	0.082	0.092
	N	234	234	234
Total PER	Pearson Correlation	0.097	-.137*	0.09
	Sig. (2-tailed)	0.137	0.037	0.17
	N	234	234	234

Note: ** Correlation is significant at the .01 level (2-tailed); * Correlation is significant at the .05 level (2-tailed); BEDI = Batson's Empathy and Distress Indices; PER = Predominant Emotional Response; PEI = Pity Experience Inventories; CC = Compassionate Caring subscale; PI = Passive Identification subscale; FS = False Superiority subscale

Table 4-12. Pearson Correlations (6 of 7)
 [Dependent Variables with Each Other (First Half)]

		BEDI Empathy	BEDI Distress	BEDI PER	PEI CC	PEI PI
BEDI Empathy	Pearson Correlation	1	-0.05	.781**	.822**	.314**
	Sig. (2-tailed)		0.45	0	0	0
	N	234	234	234	234	234
BEDI Distress	Pearson Correlation	-0.05	1	-.663**	0.062	.613**
	Sig. (2-tailed)	0.45		0	0.345	0
	N	234	234	234	234	234
BEDI PER	Pearson Correlation	.781**	-.663**	1	.578**	-.148*
	Sig. (2-tailed)	0	0		0	0.023
	N	234	234	234	234	234
PEI CC	Pearson Correlation	.822**	0.062	.578**	1	.445**
	Sig. (2-tailed)	0	0.345	0		0
	N	234	234	234	234	234
PEI PI	Pearson Correlation	.314**	.613**	-.148*	.445**	1
	Sig. (2-tailed)	0	0	0.023	0	
	N	234	234	234	234	234
PEI FS	Pearson Correlation	-.334**	.512**	-.571**	-.146*	.485**
	Sig. (2-tailed)	0	0	0	0.026	0
	N	234	234	234	234	234
Distance Score	Pearson Correlation	-.489**	.396**	-.614**	-.362**	.283**
	Sig. (2-tailed)	0	0	0	0	0
	N	234	234	234	234	234
PEI Distress	Pearson Correlation	0.05	.660**	-.375**	.228**	.906**
	Sig. (2-tailed)	0.45	0	0	0	0
	N	234	234	234	234	234
PEI PER	Pearson Correlation	.684**	-.422**	.777**	.711**	-.265**
	Sig. (2-tailed)	0	0	0	0	0
	N	234	234	234	234	234
Total PER	Pearson Correlation	.766**	-.551**	.919**	.695**	-.230**
	Sig. (2-tailed)	0	0	0	0	0
	N	234	234	234	234	234

Note: ** Correlation is significant at the .01 level (2-tailed); * Correlation is significant at the .05 level (2-tailed); BEDI = Batson's Empathy and Distress Indices; PER = Predominant Emotional Response; PEI = Pity Experience Inventories; CC = Compassionate Caring subscale; PI = Passive Identification subscale; FS = False Superiority subscale

Table 4-13. Pearson Correlations (7 of 7)
 [Dependent Variables with Each Other (Second Half)]

		PEI FS	Distance Score	PEI Distress	PEI PER	Total PER
BEDI Empathy	Pearson Correlation	-.334**	-.489**	0.05	.684**	.766**
	Sig. (2-tailed)	0	0	0.45	0	0
	N	234	234	234	234	234
BEDI Distress	Pearson Correlation	.512**	.396**	.660**	-.422**	-.551**
	Sig. (2-tailed)	0	0	0	0	0
	N	234	234	234	234	234
BEDI PER	Pearson Correlation	-.571**	-.614**	-.375**	.777**	.919**
	Sig. (2-tailed)	0	0	0	0	0
	N	234	234	234	234	234
PEI CC	Pearson Correlation	-.146*	-.362**	.228**	.711**	.695**
	Sig. (2-tailed)	0.026	0	0	0	0
	N	234	234	234	234	234
PEI PI	Pearson Correlation	.485**	.283**	.906**	-.265**	-.230**
	Sig. (2-tailed)	0	0	0	0	0
	N	234	234	234	234	234
PEI FS	Pearson Correlation	1	.825**	.809**	-.712**	-.693**
	Sig. (2-tailed)		0	0	0	0
	N	234	234	234	234	234
Distance Score	Pearson Correlation	.825**	1	.589**	-.743**	-.731**
	Sig. (2-tailed)	0		0	0	0
	N	234	234	234	234	234
PEI Distress	Pearson Correlation	.809**	.589**	1	-.522**	-.490**
	Sig. (2-tailed)	0	0		0	0
	N	234	234	234	234	234
PEI PER	Pearson Correlation	-.712**	-.743**	-.522**	1	.962**
	Sig. (2-tailed)	0	0	0		0
	N	234	234	234	234	234
Total PER	Pearson Correlation	-.693**	-.731**	-.490**	.962**	1
	Sig. (2-tailed)	0	0	0	0	
	N	234	234	234	234	234

Note: ** Correlation is significant at the .01 level (2-tailed); * Correlation is significant at the .05 level (2-tailed); BEDI = Batson's Empathy and Distress Indices; PER = Predominant Emotional Response; PEI = Pity Experience Inventories; CC = Compassionate Caring subscale; PI = Passive Identification subscale; FS = False Superiority subscale

Table 4-14. Gender Comparisons for RCH Survey Questions

	Gender	N	Mean	Standard Deviation
Q#1 Your Distress	Male	103	3.09	1.18
Frequency	Female	103	4.13	1.31
Q#2 Mate's Comforting	Male	103	4.51	1.53
Effectiveness	Female	103	4.32	1.47
Q#3 Mate's Distress	Male	103	4.28	1.35
Frequency	Female	103	2.93	1.29
Q#4 Your Comforting	Male	103	4.00	1.31
Effectiveness	Female	103	4.15	1.30

Table 4-15. RCH Survey Between-Response Correlations: All Participants

		Q #1	Q #2	Q #3	Q #4
Q #1 Your Own	Pearson Correlation	1	-0.051	-.154*	-0.078
Distress	Sig. (2-tailed)		0.466	0.027	0.267
Frequency	N	206	206	206	206
Q #2 Mate's	Pearson Correlation	-0.051	1	-0.093	.457**
Comforting	Sig. (2-tailed)	0.466		0.185	0
Effectiveness	N	206	206	206	206
Q #3 Mate's	Pearson Correlation	-.154*	-0.093	1	-.213**
Distress	Sig. (2-tailed)	0.027	0.185		0.002
Frequency	N	206	206	206	206
Q #4 Your Own	Pearson Correlation	-0.078	.457**	-.213**	1
Comforting	Sig. (2-tailed)	0.267	0	0.002	
Effectiveness	N	206	206	206	206

Note: ** Correlation is significant at the .01 level (2-tailed); * Correlation is significant at the .05 level (2-tailed)

Table 4-16. RCH Survey Between-Response Correlations: Husbands Only

		Q #1	Q #2	Q #3	Q #4
Q #1 Your Own	Pearson Correlation	1	0.067	0.102	-0.139
Distress	Sig. (2-tailed)		0.501	0.307	0.161
Frequency	N	103	103	103	103
Q #2 Mate's	Pearson Correlation	0.067	1	-.270**	.462**
Comforting	Sig. (2-tailed)	0.501		0.006	0
Effectiveness	N	103	103	103	103
Q #3 Mate's	Pearson Correlation	0.102	-.270**	1	-.205*
Distress	Sig. (2-tailed)	0.307	0.006		0.038
Frequency	N	103	103	103	103
Q #4 Your Own	Pearson Correlation	-0.139	.462**	-.205*	1
Comforting	Sig. (2-tailed)	0.161	0	0.038	
Effectiveness	N	103	103	103	103

Note: ** Correlation is significant at the .01 level (2-tailed); * Correlation is significant at the .05 level (2-tailed)

Table 4-17. RCH Survey Between-Response Correlations: Wives Only

		Q #1	Q #2	Q #3	Q #4
Q #1 Your Own	Pearson Correlation	1	-0.118	-0.041	-0.08
Distress	Sig. (2-tailed)		0.236	0.678	0.423
Frequency	N	103	103	103	103
Q #2 Mate's	Pearson Correlation	-0.118	1	0.006	.462**
Comforting	Sig. (2-tailed)	0.236		0.948	0
Effectiveness	N	103	103	103	103
Q #3 Mate's	Pearson Correlation	-0.041	0.006	1	-.217*
Distress	Sig. (2-tailed)	0.678	0.948		0.028
Frequency	N	103	103	103	103
Q #4 Your Own	Pearson Correlation	-0.08	.462**	-.217*	1
Comforting	Sig. (2-tailed)	0.423	0	0.028	
Effectiveness	N	103	103	103	103

Note: ** Correlation is significant at the .01 level (2-tailed); * Correlation is significant at the .05 level (2-tailed)

Table 4-18. Correlation of RCHS Responses with Variables of Interest (1 of 6)
 [Participants' Responses Correlated with Own Data- Part 1]

		Q #1	Q #2	Q #3	Q #4
Gender	Pearson Correlation	.386**	-0.065	-.458**	0.056
	Sig. (2-tailed)	0	0.355	0	0.425
	N	206	206	206	206
Years of Current Marriage	Pearson Correlation	-0.083	.207**	-0.096	0.127
	Sig. (2-tailed)	0.233	0.003	0.171	0.069
	N	206	206	206	206
Attachment Avoidance Score (Av)	Pearson Correlation	-0.034	-.505**	.305**	-.424**
	Sig. (2-tailed)	0.629	0	0	0
	N	206	206	206	206
Attachment Anxiety Score (Ax)	Pearson Correlation	.314**	-.410**	0.076	-.269**
	Sig. (2-tailed)	0	0	0.276	0
	N	206	206	206	206
BEDI Empathy	Pearson Correlation	0.046	.348**	-.224**	.402**
	Sig. (2-tailed)	0.514	0	0.001	0
	N	206	206	206	206
BEDI Distress	Pearson Correlation	.199**	-0.074	0.076	-0.063
	Sig. (2-tailed)	0.004	0.288	0.277	0.367
	N	206	206	206	206
BEDI PER	Pearson Correlation	-0.094	.312**	-.219**	.346**
	Sig. (2-tailed)	0.181	0	0.002	0
	N	206	206	206	206

Note: ** Correlation is significant at the .01 level (2-tailed); BEDI = Batson's Empathy and Distress Indices; PER = Predominant Emotional Response

Table 4-19. Correlation of RCHS Responses with Variables of Interest (2 of 6)
 [Participants' Responses Correlated with Own Data- Part 2]

		Q #1	Q #2	Q #3	Q #4
PEI CC	Pearson Correlation	0.097	.359**	-0.094	.415**
	Sig. (2-tailed)	0.165	0	0.179	0
	N	206	206	206	206
PEI PI	Pearson Correlation	.210**	.150*	0.005	0.101
	Sig. (2-tailed)	0.002	0.032	0.941	0.148
	N	206	206	206	206
PEI FS	Pearson Correlation	.242**	-0.09	0.134	-.194**
	Sig. (2-tailed)	0	0.197	0.054	0.005
	N	206	206	206	206
Distancing	Pearson Correlation	0.08	-0.128	.153*	-.209**
	Sig. (2-tailed)	0.253	0.066	0.028	0.003
	N	206	206	206	206
PEI Distress	Pearson Correlation	.257**	0.057	0.068	-0.025
	Sig. (2-tailed)	0	0.412	0.335	0.725
	N	206	206	206	206
PEI PER	Pearson Correlation	-0.1	.274**	-0.131	.382**
	Sig. (2-tailed)	0.154	0	0.06	0
	N	206	206	206	206
Total PER	Pearson Correlation	-0.103	.305**	-.175*	.388**
	Sig. (2-tailed)	0.142	0	0.012	0
	N	206	206	206	206

Note: ** Correlation is significant at the .01 level (2-tailed); * Correlation is significant at the .05 level (2-tailed); PEI = Pity Experience Inventories; CC = Compassionate Caring subscale; PI = Passive Identification subscale; FS = False Superiority subscale; PER = Predominant Emotional Response

Table 4-20. Correlation of RCHS Responses with Variables of Interest (3 of 6)
 [Husbands' Responses Correlated with Wives' Data- Part 1]

		Q #1	Q #2	Q #3	Q #4
Gender	Pearson Correlation	-	-	-	-
	Sig. (2-tailed)	-	-	-	-
	N	103	103	103	103
Years of Current Marriage	Pearson Correlation	0.157	.212*	-.371**	0.159
	Sig. (2-tailed)	0.114	0.032	0	0.108
	N	103	103	103	103
Attachment Avoidance Score (Av)	Pearson Correlation	0.039	-.376**	0.077	-.320**
	Sig. (2-tailed)	0.698	0	0.44	0.001
	N	103	103	103	103
Attachment Anxiety Score (Ax)	Pearson Correlation	-0.173	-.374**	.210*	-.363**
	Sig. (2-tailed)	0.08	0	0.033	0
	N	103	103	103	103
BEDI Empathy	Pearson Correlation	-0.088	.236*	0.035	.208*
	Sig. (2-tailed)	0.376	0.016	0.728	0.035
	N	103	103	103	103
BEDI Distress	Pearson Correlation	0.137	-.236*	.213*	-0.165
	Sig. (2-tailed)	0.168	0.017	0.031	0.095
	N	103	103	103	103
BEDI PER	Pearson Correlation	-0.158	.341**	-0.104	.274**
	Sig. (2-tailed)	0.112	0	0.295	0.005
	N	103	103	103	103

Note: ** Correlation is significant at the .01 level (2-tailed); * Correlation is significant at the .05 level (2-tailed); BEDI = Batson's Empathy and Distress Indices; PER = Predominant Emotional Response

Table 4-21. Correlation of RCHS Responses with Variables of Interest (4 of 6)
 [Husbands' Responses Correlated with Wives' Data- Part 2]

		Q #1	Q #2	Q #3	Q #4
PEI CC	Pearson Correlation	-.202*	.195*	0.109	.210*
	Sig. (2-tailed)	0.041	0.048	0.274	0.033
	N	103	103	103	103
PEI PI	Pearson Correlation	-0.132	-0.08	.226*	-0.014
	Sig. (2-tailed)	0.185	0.423	0.022	0.891
	N	103	103	103	103
PEI FS	Pearson Correlation	0.117	-.239*	.273**	-0.075
	Sig. (2-tailed)	0.238	0.015	0.005	0.453
	N	103	103	103	103
Distancing	Pearson Correlation	0.106	-0.174	0.098	-0.119
	Sig. (2-tailed)	0.286	0.079	0.323	0.231
	N	103	103	103	103
PEI Distress	Pearson Correlation	-0.03	-0.168	.282**	-0.045
	Sig. (2-tailed)	0.761	0.089	0.004	0.65
	N	103	103	103	103
PEI PER	Pearson Correlation	-0.163	.297**	-0.1	.223*
	Sig. (2-tailed)	0.101	0.002	0.316	0.023
	N	103	103	103	103
Total PER	Pearson Correlation	-0.169	.330**	-0.107	.256**
	Sig. (2-tailed)	0.088	0.001	0.283	0.009
	N	103	103	103	103

Note: ** Correlation is significant at the .01 level (2-tailed); * Correlation is significant at the .05 level (2-tailed); PEI = Pity Experience Inventories; CC = Compassionate Caring subscale; PI = Passive Identification subscale; FS = False Superiority subscale; PER = Predominant Emotional Response

Table 4-22. Correlation of RCHS Responses with Variables of Interest (5 of 6)
 [Wives' Responses Correlated with Husbands' Data- Part 1]

		Q #1	Q #2	Q #3	Q #4
Gender	Pearson Correlation				
	Sig. (2-tailed)				
	N	103	103	103	103
Years of Current Marriage	Pearson Correlation	-.313**	.202*	0.168	0.095
	Sig. (2-tailed)	0.001	0.04	0.089	0.342
	N	103	103	103	103
Attachment Avoidance Score (Av)	Pearson Correlation	.288**	-.464**	-0.07	-.446**
	Sig. (2-tailed)	0.003	0	0.485	0
	N	103	103	103	103
Attachment Anxiety Score (Ax)	Pearson Correlation	0.112	-.347**	0.011	-.467**
	Sig. (2-tailed)	0.262	0	0.912	0
	N	103	103	103	103
BEDI Empathy	Pearson Correlation	-.268**	.286**	0.055	0.103
	Sig. (2-tailed)	0.006	0.003	0.579	0.299
	N	103	103	103	103
BEDI Distress	Pearson Correlation	0.037	-0.063	0.04	-0.073
	Sig. (2-tailed)	0.712	0.525	0.686	0.465
	N	103	103	103	103
BEDI PER	Pearson Correlation	-.207*	.237*	0.011	0.119
	Sig. (2-tailed)	0.036	0.016	0.912	0.232
	N	103	103	103	103

Note: ** Correlation is significant at the .01 level (2-tailed); * Correlation is significant at the .05 level (2-tailed); BEDI = Batson's Empathy and Distress Indices; PER = Predominant Emotional Response

Table 4-23. Correlation of RCHS Responses with Variables of Interest (6 of 6)
 [Wives' Responses Correlated with Husbands' Data- Part 2]

		Q #1	Q #2	Q #3	Q #4
PEI CC	Pearson Correlation	-.224*	.236*	0.032	0.115
	Sig. (2-tailed)	0.023	0.017	0.748	0.246
	N	103	103	103	103
PEI PI	Pearson Correlation	-0.048	0.097	0.11	0.172
	Sig. (2-tailed)	0.633	0.329	0.268	0.083
	N	103	103	103	103
PEI FS	Pearson Correlation	0.144	-0.177	0.057	-0.071
	Sig. (2-tailed)	0.146	0.074	0.567	0.474
	N	103	103	103	103
Distancing	Pearson Correlation	0.183	-.266**	0.088	-0.162
	Sig. (2-tailed)	0.065	0.007	0.375	0.102
	N	103	103	103	103
PEI Distress	Pearson Correlation	0.035	-0.016	0.102	0.085
	Sig. (2-tailed)	0.726	0.871	0.304	0.396
	N	103	103	103	103
PEI PER	Pearson Correlation	-.213*	.209*	-0.049	0.034
	Sig. (2-tailed)	0.031	0.034	0.626	0.732
	N	103	103	103	103
Total PER	Pearson Correlation	-.223*	.233*	-0.025	0.073
	Sig. (2-tailed)	0.024	0.018	0.799	0.464
	N	103	103	103	103

Note: ** Correlation is significant at the .01 level (2-tailed); * Correlation is significant at the .05 level (2-tailed); PEI = Pity Experience Inventories; CC = Compassionate Caring subscale; PI = Passive Identification subscale; FS = False Superiority subscale; PER = Predominant Emotional Response

Table 4-24. Descriptive Statistics for Attachment Style and Memory Measures

Data Label	Group	N	Mean	Std Dev	Min	Max
Attachment Avoidance Score (Av)	1	61	2.89	1.11	1.33	6.06
	2	60	2.83	1.03	1.17	5.67
	3	55	2.39	0.97	1.06	5.61
	4	58	2.63	1.04	1.00	5.28
	Total	234	2.69	1.05	1.00	6.06
Attachment Anxiety score (Ax)	1	61	2.73	0.98	1.17	6.22
	2	60	2.85	1.06	1.56	5.22
	3	55	2.65	0.99	1.06	5.28
	4	58	2.55	0.83	1.22	5.06
	Total	234	2.70	0.97	1.06	6.22
Group-Specific Prototype Memory Vividness	1	61	5.90	1.12	2.00	7.00
	2	60	5.75	1.07	3.00	7.00
	3	55	5.91	0.97	2.00	7.00
	4	58	5.33	1.10	3.00	7.00
	Total	234	5.72	1.09	2.00	7.00
Partner-in-Distress Episode Severity Level	1	61	5.69	1.10	3.00	7.00
	2	60	5.87	1.16	2.00	7.00
	3	55	5.80	1.18	3.00	7.00
	4	58	5.74	1.21	2.00	7.00
	Total	234	5.77	1.16	2.00	7.00
Partner-in-Distress Vividness Scales (5-Score Composite)	1	61	5.29	0.84	3.20	7.00
	2	60	5.42	0.90	2.60	7.00
	3	55	5.32	1.01	3.00	7.00
	4	58	5.14	0.90	3.20	7.00
	Total	234	5.29	0.91	2.60	7.00

Table 4-25. Descriptive Statistics for Dependent Variable Measures (Part 1)

Data Label	Group	N	Mean	Std Dev	Min	Max
BEDI Empathy	1	61	4.66	1.65	1.00	7.00
	2	60	4.84	1.81	1.00	7.00
	3	55	4.83	1.54	1.00	7.00
	4	58	4.64	1.72	1.00	7.00
	Total	234	4.74	1.68	1.00	7.00
BEDI Distress	1	61	3.59	1.29	1.00	6.13
	2	60	3.59	1.44	1.00	6.13
	3	55	3.33	1.40	1.00	6.38
	4	58	3.91	1.45	1.13	6.38
	Total	234	3.61	1.40	1.00	6.38
BEDI PER (BEDI Empathy minus BEDI Distress)	1	61	1.07	1.98	-4.50	6.00
	2	60	1.25	2.21	-4.33	4.96
	3	55	1.51	2.28	-5.00	6.00
	4	58	0.73	2.45	-4.83	4.63
	Total	234	1.14	2.24	-5.00	6.00
PEI Compassionate Caring (CC)	1	61	4.95	1.28	1.46	6.85
	2	60	4.96	1.42	1.62	7.00
	3	55	5.06	1.18	1.23	6.69
	4	58	5.00	1.20	1.54	7.00
	Total	234	4.99	1.27	1.23	7.00
PEI Passive Identification (PI)	1	61	4.19	1.22	1.30	6.60
	2	60	4.21	1.15	1.20	6.40
	3	55	3.97	1.23	1.50	6.60
	4	58	4.27	1.21	1.70	6.80
	Total	234	4.16	1.20	1.20	6.80

Note: BEDI = Batson's Empathy and Distress Indices; PER = Predominant Emotional Response; PEI = Pity Experience Inventories

Table 4-26. Descriptive Statistics for Dependent Variable Measures (Part 2)

Data Label	Group	N	Mean	Std Dev	Min	Max
PEI False Superiority (FS)	1	61	2.87	1.07	1.00	5.29
	2	60	2.71	1.13	1.00	5.71
	3	55	2.55	1.23	1.00	5.86
	4	58	3.17	1.42	1.29	6.86
	Total	234	2.83	1.23	1.00	6.86
Distancing Score (3-item FS subset)	1	61	2.55	1.50	1.00	6.67
	2	60	2.41	1.53	1.00	6.67
	3	55	2.33	1.50	1.00	7.00
	4	58	2.88	1.78	1.00	7.00
	Total	234	2.54	1.59	1.00	7.00
PEI Distress (PI + FS)	1	61	3.64	1.01	1.41	5.88
	2	60	3.59	0.93	1.29	5.65
	3	55	3.38	1.08	1.41	5.82
	4	58	3.82	1.15	1.59	6.41
	Total	234	3.61	1.05	1.29	6.41
PEI PER (PEI CC minus PEI Distress)	1	61	1.31	1.21	-1.24	3.63
	2	60	1.37	1.60	-2.29	4.68
	3	55	1.68	1.49	-2.59	4.66
	4	58	1.18	1.48	-3.26	3.88
	Total	234	1.38	1.45	-3.26	4.68
Total PER (scaled score merging BEDI PER and PEI PER)	1	61	51.65	9.64	27.35	67.81
	2	60	52.33	12.38	25.77	75.97
	3	55	54.47	11.83	24.34	76.97
	4	58	50.26	12.23	15.61	71.71
	Total	234	52.14	11.58	15.61	76.97

Note: PEI = Pity Experience Inventories; FS = False Superiority; PI = Passive Identification; PER = Predominant Emotional Response; CC = Compassionate Caring; BEDI = Batson's Empathy and Distress Indices

Table 4-27. One-Way Analyses of Variance (Part 1)

		Sum of Squares	Df	Mean Square	F	α
Av	Between Groups	8.82	3	2.94	2.711	0.046*
	Within Groups	249.44	230	1.085		
	Total	258.26	233			
Ax	Between Groups	2.947	3	0.982	1.045	0.374
	Within Groups	216.311	230	0.94		
	Total	219.258	233			
PT Mem Viv	Between Groups	12.963	3	4.321	3.794	0.011*
	Within Groups	261.981	230	1.139		
	Total	274.944	233			
Mem Dis Lev	Between Groups	1.06	3	0.353	0.262	0.853
	Within Groups	309.936	230	1.348		
	Total	310.996	233			
PID Mem Viv	Between Groups	2.418	3	0.806	0.969	0.408
	Within Groups	191.349	230	0.832		
	Total	193.766	233			
BEDI Empathy	Between Groups	2.046	3	0.682	0.24	0.868
	Within Groups	653.22	230	2.84		
	Total	655.265	233			
BEDI Distress	Between Groups	9.712	3	3.237	1.667	0.175
	Within Groups	446.637	230	1.942		
	Total	456.349	233			
BEDI PER	Between Groups	17.965	3	5.988	1.2	0.311
	Within Groups	1,147.91	230	4.991		
	Total	1,165.87	233			

Note: * Correlation is significant at the .05 level (2-tailed); Av = Attachment Avoidance score; Ax = Attachment Anxiety score; PT Mem Viv = Prototype Memory Vividness rating; Mem Dis Lev = Level of partner distress in episode remembered; PID Mem Viv = Vividness of Memory of partner-in-distress episode; BEDI = Batson's Empathy and Distress Indices; PER = Predominant Emotional Response

Table 4-28. One-Way Analyses of Variance (Part 2)

		Sum of Squares	Df	Mean Square	F	α
PEI CC	Between Groups	0.45	3	0.15	0.092	0.965
	Within Groups	375.971	230	1.635		
	Total	376.421	233			
PEI PI	Between Groups	2.916	3	0.972	0.675	0.568
	Within Groups	331.396	230	1.441		
	Total	334.311	233			
PEI FS	Between Groups	12.125	3	4.042	2.729	0.045*
	Within Groups	340.615	230	1.481		
	Total	352.74	233			
Distancing (FS subset)	Between Groups	10.258	3	3.419	1.364	0.255
	Within Groups	576.704	230	2.507		
	Total	586.962	233			
PEI Distress (PI + FS)	Between Groups	5.439	3	1.813	1.663	0.176
	Within Groups	250.709	230	1.09		
	Total	256.147	233			
PEI PER	Between Groups	7.499	3	2.5	1.19	0.314
	Within Groups	483.208	230	2.101		
	Total	490.707	233			
Total PER	Between Groups	520.243	3	173.414	1.299	0.276
	Within Groups	30,711.7	230	133.529		
	Total	31,231.9	233			

Note: * Correlation is significant at the .05 level (2-tailed); PEI = Pity Experience Inventories; CC = Compassionate Caring subscale; PI = Passive Identification subscale; FS = False Superiority subscale; PER = Predominant Emotional Response

Table 4-29. Tukey's t-tests for Multiple Comparisons [Group Differences]

	Group (I)	Group (J)	Mean Difference (I – J)	α
Attachment Avoidance Score (Av)	1	2	0.059	0.989
		3	0.501	0.050
		4	0.260	0.523
	2	1	-0.059	0.989
		3	0.442	0.108
		4	0.201	0.721
	3	1	-0.501	0.050
		2	-0.442	0.108
		4	-0.240	0.611
	4	1	-0.260	0.523
		2	-0.201	0.721
		3	0.240	0.611
Group-Specific Prototype Memory Vividness rating	1	2	0.152	0.863
		3	-0.007	1.000
		4	.574(*)	0.019*
	2	1	-0.152	0.863
		3	-0.159	0.855
		4	0.422	0.141
	3	1	0.007	1.000
		2	0.159	0.855
		4	.582(*)	0.021*
	4	1	-.574(*)	0.019*
		2	-0.422	0.141
		3	-.582(*)	0.021*
Pity Experience Inventories False Superiority subscale (PEI FS)	1	2	0.157	0.893
		3	0.318	0.496
		4	-0.306	0.519
	2	1	-0.157	0.893
		3	0.161	0.893
		4	-0.463	0.167
	3	1	-0.318	0.496
		2	-0.161	0.893
		4	-.624(*)	0.035*
	4	1	0.306	0.519
		2	0.463	0.167
		3	.624(*)	0.035*

Note: * Correlation is significant at the .05 level (2-tailed)

CHAPTER 5 DISCUSSION

The purpose of this study was to investigate the effects of attachment style and contextual activation of attachment security and attachment insecurity on partner empathy and distress responses to episodes of romantic partner distress. The purpose of this chapter is to discuss the findings of that investigation. This chapter begins with brief overviews of the literature review conducted and the methodology utilized in this study. It then moves to an in-depth discussion of the results of the study protocol. Subsequent to this discussion, implications of the study are stated, study limitations are identified, and recommendations for future research are offered. This chapter then concludes with a brief summary.

Literature Review

The theoretical foundation for this study was built upon a substantial body of literature relating to adult attachment, cognitive structuring, emotion regulation, and memory systems. Well established findings in these overlapping domains informed the design of the study's protocol. Gaps in the exploration of the applicability of those findings to an area of clinical interest helped also to shape the design of the current study. The review of the literature foundational to this study was organized into six areas of inquiry.

The first area was an examination of whether attachment is a relevant lens for viewing romantic relationships. That is, whether romantic relationships include functional similarities to earlier-developmental-stage attachment relationships. The second area involved an exploration of the malleability of earlier-shaped attachment dynamics. Or more specifically, the degree to which earlier-established ways of relating

in attachment-relevant contexts remains open to influence. The third area centered on internal working models of attachment, as likely mediators of attachment style continuity and change. And the fourth area gave focus to the role that memory systems play in resisting accommodation of new attachment-relevant information to existing cognitive and affective schema. The fifth area of inquiry related to the relationship between attachment security and prosocial motivation. Specifically, it involved an examination of whether and how states of dispositional and/or contextually-felt attachment security enhance one's emotional resources, and therefore one's inclination, to help others. And the sixth area pertained to studies investigating secure-base and safe-haven behaviors in romantic relationships, including discussion of a gap in this area of inquiry that has helped inform the design of the current study.

Methodology

This study was designed to facilitate examination of the independent and interactional effects of attachment style and attachment context as influences in how one responds to a distressed romantic partner's bids for empathy and support. A four-group design (three experimental conditions and one control condition) was used to facilitate manipulation of attachment context. Existing instruments were adapted to operationalize attachment style and responses to partner distress. A brief overview of participants and procedures is provided in this section.

Study Participants

The participants in this study were 132 married couples (264 individuals) between the ages of 20 and 59 years, recruited from 10 churches in Alachua County, Florida. Length of current marriage ranged from a few months to 39 years, with a median of 12 years and a mean of just under 14 years. Random stratification, with length-of-current-

marriage as the stratifying variable, was used to assign 33 couples (66 individuals) to each of four groups. A total of 30 data sets were excluded for missing or unusable data, leaving 234 data sets for analyses. Examination of couple-communication-quality questions required the use of only matched-pairs data sets. For this area of analyses only, 28 sets of otherwise-useable data were omitted, because their corresponding spousal data sets had been among those earlier excluded. Analyses of this component, then, were limited to 103 matched-pair data sets (206 individuals).

Study Procedures

Participation required pen-and-paper responses to seven tasks, encompassing eleven pages, and requiring approximately one hour of time. Six of the seven tasks were identical for all participants, with the remaining task representing the four-group differing conditions of the study. Separate administrations of the study protocol often included multiple couples, representing more than one group. This was possible because the four-group differing tasks were parallel in structure and length, permitting the protocol session administrator to simultaneously guide participants through divergent content with uniform timing prompts.

In the first task, assessment of the intervening variable of attachment style was operationalized by participants' completion of the 36-item Experiences in Close Relationships Questionnaire-Revised, adapted for use in this study. Participants' baseline levels of attachment avoidance and attachment anxiety were calculated from the two 18-item subscales of this instrument.

The second task was a distracter task, in which participants were asked to recall several rather innocuous events from their past, and to rate the certainty of their recollections. This task was designed both to divert participant attention from the task

just completed, and to frame subsequent tasks as memory exercises, with the hope of eliciting more eager engagement in subsequent tasks involving the revisiting of less pleasant memories.

In the third task, participants were asked to select a memory of a time when their spouse was highly distressed and desiring their comfort and support. Memories selected were later used as stimuli for eliciting participant dependent variable empathy and distress responses. Memory-selection criteria were provided, with the goal that both the level and the nature of participant emotional arousal induced would serve as an ample stimulus for later dependent variable responses.

The fourth task was designed to stimulate within participants the differing group-specific variations of attachment context. Participants in the first group were guided in reflecting upon a relationship fitting a prototype provided, designed to heighten accessibility of secure attachment memory representations. Similarly, the group two prototype was intended to heighten attachment avoidance, and the group three prototype to heighten attachment anxiety. The control condition (group four) involved a neutral reflection task—a prototype-related memory activity designed not to activate any aspect of the attachment system. At the end of this task, participants in all four groups rated the vividness of their immersion in memory with the person fitting the prototype provided.

In the fifth task, participants were asked to revisit the memory of partner distress selected in task three. Prompts provided were designed to encourage participants to immerse themselves in the memory, after which they were asked to rate the degree of that immersion and the severity of their spouse's distress in the remembered episode.

Subsequent to this activity, participants were asked to imagine a recurrence of this episode of partner distress. Again, prompts encouraged participant immersion in the imagined episode recurrence and vividness level ratings were again recorded.

The sixth task was an assessment of participants' dependent variable empathy and distress responses to the spousal distress episode stimulus. Empathy and distress were operationalized by participants' completion of two existing instruments, adapted for use in this study: (a) the 14-item Batson's Empathy and Distress Indices; and (b) a 30-item version of the Pity Experience Inventories. These 44 items were presented in three pages, and at the end of each page participants again rated their success at sustaining immersion in the imagined recurrence of the spousal distress episode.

In the seventh task, participants were asked to provide rating responses to four questions assessing empathy-eliciting and empathy-providing behaviors in their current marriage: (a) frequency of their own distress accompanied by desire for spousal support; (b) effectiveness of their spouse's responses at such times; (c) frequency of spouse's distress accompanied by desire for their support; and (d) effectiveness of their own responses at such times. Additional questions elicited participant ratings of self and partner as empathy-givers in significant relationships predating the current marriage. This data was not processed, however, for reasons discussed in Chapter 4.

Data collected from the various procedures were in the form of 7-point Likert responses. There were 91 such responses: (a) 36 items assessing the intervening variable of attachment style (Task #1); (b) 44 items assessing the dependent variable of empathy and distress responses (Task #6); (c) 7 items assessing various aspects of

memory engagement (Tasks #4, #5, and #6); and (d) 4 items assessing spousal communication quality (Task #7).

Results

This section includes discussion of results relative to instrument reliability, attachment style effects, attachment context effects, gender effects, and other effects. Relationship Communication History Survey (RCHS) findings are discussed, as are certain instrument development findings of note.

Instrument Reliability

Internal consistency estimates for the three instruments adapted for use in this study were comparable to those reported in the literature for use of the original instruments. A summary of these comparisons is displayed in Table 4-5. The reliability coefficients for the avoidance scale ($\alpha = .93$) and for the anxiety scale ($\alpha = .90$) of the adapted version of the ECR-R used in this study were similar to those commonly reported for the two scales ($\alpha = .90$ avoidance; $\alpha = .90$ anxiety) in uses of the original ECR-R (Fraley, Waller, & Brennan, 2000; Sibley & Liu, 2004). Reliability estimates for the empathy scale ($\alpha = .96$) and for the distress scale ($\alpha = .90$) of the adapted version of the BEDI used in this study were comparable to those reported for the original BEDI ($\alpha = .94$ empathy; $\alpha = .88$ distress) in Mikulincer et al.'s (2001) studies that the current study was designed to extend.

The reliability coefficient for the empathy scale of this study's version of the PEI ($\alpha = .94$) was somewhat higher than the coefficient ($\alpha = .89$) reported for the earlier version of the PEI to which it was compared. The internal consistency estimate for the distress scale of the current study's PEI ($\alpha = .84$) was moderately lower than the estimate ($\alpha = .88$) reported for the earlier version's use. Because the PEI measure

used in the current study differed substantively from the version used by Mikulincer et al. (2001), current-study versus earlier-version reliability measures represent comparisons of response consistency to an array of both shared and differing items. The Instrument Development section later in this chapter includes an extensive discussion of how distinctions between the earlier and current PEI versions' test-selection criteria may have contributed to their respective internal consistency estimates. Notwithstanding these caveats subsequently discussed, reliability coefficients for five of the six current study scales were equal to or higher than those reported in earlier uses of the instruments adapted. And the one exception was only moderately lower. Therefore, with the current study reliability estimates ranging from $\alpha = .84$ to $\alpha = .96$, the data collected from the three instruments adapted or developed for use in this study may be regarded as reliable.

Effects of Attachment Style

Four of the study's eleven research questions (Q6, Q7, Q8, and Q9) related to the effects of the intervening variable of attachment style on the dependent variable empathy and distress responses to partner distress. These research questions are enumerated below along with a discussion of the findings.

Question 6 (H3): Higher attachment-avoidance scores will predict lower empathy-positive scores (empathy score minus distress score) for all three experimental conditions and control condition in response to marriage partner distress.

The hypothesis represented by this research question was confirmed. Correlations of participants' attachment avoidance scores (A_v) with each of the three measures of predominant emotional response were significant at the $p \leq .01$ level. All correlations were negative, and they ranged from $r = -.327$ to $r = -.349$. Because

predominant emotional response (PER) is a composite score derived by subtracting the distress score from the empathy score, an examination of the component scores may provide insight into the emotion regulation processes specific to attachment avoidance.

Correlations between attachment avoidance and the two empathy measures (BEDI and PEI CC) were negative and even stronger than the avoidance/PER correlations ($r = -.373$; $p \leq .01$ and $r = -.380$; $p \leq .01$ respectively). This finding suggests that attachment avoidance prompts suppression of empathic feelings, thoughts and motivations toward partner distress as a means of regulating personal distress. This interpretation seems to be supported by the component avoidance/distress scale correlations, where the PEI passive identification subscale score was negatively correlated with attachment avoidance ($r = -.132$; $p \leq .05$), while the PEI false superiority subscale score was positively correlated with attachment avoidance ($r = .167$; $p \leq .05$). A discussion of the distinction between these two subscales can be found in the Instrument Development section later in this chapter. For purposes of the present discussion, it is interesting to note that attachment avoidance was negatively correlated with the tendency to comfort one's partner as a means of regulating one's own distress (PEI PI), but was positively correlated with the more highly defensive and egoistic feelings, thoughts, and wishes of the PEI FS measure.

The combined distress measures revealed no significant correlation with attachment avoidance (BEDI distress: $r = .087$; PEI total distress: $r = -.008$). Taken together, these findings suggest that the inter- and intrapersonal strategies underlying attachment avoidance include the following: (a) an increased tendency to suppress empathy-related emotions, cognitions, and motivations toward a distressed partner; (b)

a decreased tendency to seek to calm a distressed partner as a strategy for self-regulation of negative affect; (c) an increased tendency to self-regulate by avoidance of identification with the distressed partner's suffering; and (d) the regulation of interpersonal and intrapersonal distance to achieve the overall goal of not exceeding a given distress level set point. These findings are consistent with Bowlby's theoretical description of attachment avoidance dynamics (1969/1982; 1973; 1980), as well as with summaries of adult attachment literature exploring attachment avoidance in romantic couples' relationship dynamics (Mikulincer & Shaver, 2007).

Question 7 (H3): Higher attachment-anxiety scores will predict lower empathy-positive scores (empathy score minus distress score) for all three experimental conditions and control condition in response to marriage partner distress.

The hypothesis represented by this research question was confirmed. Correlations of participants' attachment anxiety scores (Ax) with each of the three measures of predominant emotional response were somewhat lower than the Av/PER correlations, yet still were significant at the $p \leq .01$ level. Each of these correlations were negative also, ranging from $r = -.212$ to $r = -.255$. The results of an examination of the component scores comprising these measures seem to suggest which emotion-regulation processes underlying attachment anxiety may be parallel to processes undergirding attachment avoidance, and which may be divergent.

Correlations between attachment anxiety and the two empathy measures (BEDI and PEI CC) were much milder than those between attachment avoidance and empathy. The BEDI empathy with Ax correlation was $r = -.186$; $p \leq .01$ (compared to BEDI with Av: $r = -.373$; $p \leq .01$); and the PEI CC empathy with Ax correlation was

$r = -.118$; not significant (compared to PEI CC with Av: $r = -.380$; $p \leq .01$). Furthermore, in contrast to the negative correlation between attachment avoidance and the somewhat other-oriented PEI PI distress measure ($r = -.132$; $p \leq .05$), the PEI PI with Ax correlation (though meager), was in the opposing direction ($r = .057$; not significant). Taken together, these findings suggest that attachment-anxious individuals are less likely than are those who are attachment-avoidant to suppress empathy-related emotions, cognitions, and motivations, or to resist other-identifying orientations, as emotion-regulation strategies in the face of partner distress.

A comparison of Ax scores with the various component distress scores, however, may indicate that this difference comes at a cost. In contrast to the insignificant correlations between attachment avoidance and both BEDI and PEI total distress ($r = .087$ and $r = -.008$ respectively), the Ax with BEDI distress correlation ($r = .185$; $p \leq .01$) and the Ax with PEI total distress correlation ($r = .150$; $p \leq .05$) seem to suggest lesser efficacy for attachment-anxiety-spawned emotion regulation strategies when encountering partner distress. These findings seem to support the characterization of anxiously-attached individuals' tendencies to emotionally merge with another, along with the approach-avoidance conflict these individuals subsequently experience when such merging leads to emotional flooding (Bowlby, 1969/1982; 1973; 1980; Bretherton & Munholland, 1999).

This difference between anxious and avoidant attachment emotion regulation strategies may help to explain the even stronger positive Ax with PEI FS correlation ($r = .231$; $p \leq .01$) than the Av with PEI FS correlation ($r = .167$; $p \leq .05$). A likely explanation is that compared to those whose attachment insecurity manifests as

avoidance, the anxious individual is less able to avert emotional flooding by suppression of empathy-related cognitions, affect, and motivations, and thus must more strongly revert to more rigidly-defensive processes (such as those measured by the PEI FS scale). Such an interpretation is consistent with Florian et al.'s findings that attachment anxiety correlated more strongly with the PEI FS than did attachment anxiety (2000).

Question 8 (H3): Higher attachment-avoidance scores will predict greater use of distancing strategies in response to marriage partner distress when controlling for experimental condition and gender.

The hypothesis represented by this research question was confirmed. The three-item distancing subscale of the seven-item PEI false superiority subscale was composed of those items that indicate the motivation to use physical or emotional distance as a means of self-regulation in response to partner distress [PEI Q6: I find myself wanting to run away from the scene; PEI Q8: I find myself wanting to forget about all this that is happening; and PEI Q25: I find myself wanting to emotionally distance from the scene]. The correlation between attachment avoidance and the PEI FS distancing score was positive ($r = .223$), and was significant at the $p \leq .01$ level. By contrast, the positive correlation between attachment anxiety and the PEI FS distancing score did not rise to the level of significance ($r = .116$).

The fact that the Av with PEI FS distancing correlation ($r = .223$; $p \leq .01$) was much stronger than the Ax with PEI FS distancing correlation ($r = .116$; not significant), yet the overall Av with PEI FS correlation ($r = .167$; $p \leq .05$) was weaker than the overall Ax with PEI FS correlation ($r = .231$; $p \leq .01$), suggests some Av/Ax differentiating dynamic in the remaining four PEI FS scale items strong enough to account for such a major swing.

Indeed such findings were observed. A moderate difference was found in attachment style correlations with PEI Q18 [I find myself afraid that I am going to get hurt as this situation unfolds; correlation with Av: $r = .137$; $p \leq .05$; correlation with Ax: $r = .196$; $p \leq .01$]. Much larger differences, however, were found in regard to PEI Q11 [I find myself feeling ashamed that I don't know how to fix this situation; correlation with Av: $r = .053$; correlation with Ax: $r = .208$; $p \leq .01$]; PEI Q22 [I find myself feeling concerned about the future; correlation with Av: $r = .014$; correlation with Ax: $r = .197$; $p \leq .01$]; and PEI Q29 [I find myself feeling guilty about not being able to help my husband or wife; correlation with Av: $r = .005$; correlation with Ax: $r = .146$; $p \leq .05$]. A complete listing of distress item correlations with attachment avoidance and anxiety scores can be found in Tables 5-1 and 5-2 at the end of this chapter. These examples, however, seem to provide compelling evidence that attachment avoidance prompts emotional distancing strategies as a means of negative affect regulation, while attachment anxiety results in more self-focused introspective distress ruminations in response to partner distress. These findings are consistent with Mikulincer and Shaver's descriptions of the differential affects of attachment style on intra-psychic processes (2007).

Question 9 (H4): Higher attachment-avoidance scores will predict lower partner-in-distress memory vividness ratings when controlling for experimental condition and gender.

As with the earlier three questions regarding the effects of attachment style, the hypothesis representing this research question was also confirmed. The correlation between attachment avoidance and partner-in-distress memory vividness ratings (when controlling for experimental condition and gender) was negative ($r = -.129$), and was

significant at the $p \leq .05$ level. This was in contrast to the insignificant Ax with PID vividness correlation ($r = .039$), and is consistent with earlier discussions in this subsection of the emotion regulation strategies characteristic of attachment avoidance. Specific to this research question, participants higher in attachment avoidance exhibited a significantly greater tendency to suppress engagement in the memory and the imagined recurrence of the episode of partner distress, as a means of regulating negative affect associated with such visualizations. By contrast, participants higher in attachment anxiety did not attempt (or were not successful in their attempts) to regulate their negative affect by such strategies.

The fact that all four hypotheses relative to attachment style were confirmed seems all the more significant in light of the lower mean and standard deviation of scores of the current study's sample (Av: $M=2.69$; $SD=1.05$; Ax: $M=2.70$; $SD=0.97$) compared to the norms reported for the married population in general (Av: $M=2.87$; $SD=1.27$; Ax: $M=3.64$; $SD=1.33$) (Note: scores reflect 7-point Likert ratings). The lower mean scores in the current study may have served to compress the variability of the scores, and consequently inflated the level of correspondence between the two sets of scores ($r = .53$), compared to the level of correspondence between attachment avoidance and attachment anxiety scores reported for the general population ($r = .41$; see Table 3-7). An alternative hypothesis is that the comparative range restriction of avoidance and anxiety scores was merely an artifact of the current study's sample. Given the lower Av and Ax means of the current study's sample, the greater restriction of range of scores, and the resultant higher Av/Ax scores correspondence, it seems possible that findings for the general population might yield even stronger correlations

than those calculated in testing the above four hypotheses relative to the effects of attachment style.

Effects of Attachment Context

Four of the study's eleven research questions (Q1, Q2, Q3, and Q10) related to the effects of the differing group conditions of attachment security priming, attachment avoidance priming, attachment anxiety priming, or neutral priming, on dependent variable empathy and distress responses to partner distress. These research questions are enumerated below, and are then discussed as a group.

Question 1 (H1): Attachment-security priming condition will result in higher empathy-positive scores (empathy score minus distress score) than will attachment-avoidance priming condition, attachment-anxiety priming condition, or control condition.

Question 2 (H1): Attachment-avoidance priming condition will result in lower empathy scores than will attachment-anxiety priming condition.

Question 3 (H1): Attachment-anxiety priming condition will result in higher distress scores than will attachment-avoidance priming condition.

Question 10 (H4): Attachment-avoidance priming condition will result in lower partner-in-distress memory vividness ratings when controlling for attachment style and gender.

None of these four research hypotheses relating to the effects of attachment context were confirmed. The following discussion addresses four (potentially overlapping) reasons that might explain these findings: (a) the likelihood that the effects of attachment style dwarfed the effects of attachment context; (b) the likelihood that attachment-context-priming-resistance dynamics at work in responses to partner distress are greater than those at work in responses to stranger distress; (c) the

possibility that the methodology chosen to prime specific attachment mental representations in memory was less-than-optimum for the combination of target participants (couples) and the target empathy and distress-invoking stimulus (episode of partner distress); and (d) that there are nuanced factors at work when priming the full spectra of attachment memory representations (security-, avoidance-, and anxiety-, compared with neutral-priming) in the current study, that were not equally operational in earlier studies' comparisons of attachment security priming with neutral- and positive-affect priming.

The first possibility in considering the absence of significant group differences, attributable to the priming of group-differing attachment-relevant memory representations, is that the effects of participants' attachment style, that is their default mode of responding in attachment-relevant contexts, dwarfed any effects contributed by the attachment priming. That attachment style itself had significant effects on each of the variables central to these research questions (predominant emotional response; empathy responses; distress responses; partner-in-distress vividness ratings) was evident from discussions earlier in this section. A complicating factor may have been that despite random assignment, the (latent) level of attachment avoidance for the attachment-security-priming group (group one) fell just short of being significantly higher than that for the other groups. It seems likely that the effect size for participants' latent attachment avoidance and anxiety (attachment style) was large enough to overrun any actual affects from the differing attachment-context-priming conditions of the various groups.

The second possibility in considering the absence of significant group differences is that there are more malleable dynamics at play in priming an altruistic mindset toward a stranger in distress, than there are in contextual attempts to alter one's default response-tendencies toward spousal distress. The suggestion of this possibility is not to be confused with the more cynical observation that it is easier to be kind to a stranger than it is to be kind to your spouse. Instead, it is intended to give weight to the likelihood that a heightened sense of felt security may increase an altruistic sense of resource expendability on behalf of a distressed stranger (earlier studies: e.g., Mikulincer et al., 2001; Bartz & Lydon, 2004; Mikulincer et al., 2005), in ways that are less easily influenced within the multi-faceted milieu of habitual and reciprocal partner response histories (current study).

The third possibility for explaining the absence of group differences relates to experimental design deficiencies. It is possible that a more powerful attachment priming effect might have been achieved by utilizing a partner-based attachment prototype. Specifically, the effects of the manipulation of attachment context priming might have been more powerful had participants been asked to reflect upon an interaction with their spouse that fit the group-specific prototype. Although attachment theory tenets relative to internal working model function and memory system interplay suggest that earlier attachment prototypes coningle with and influence current attachment relationships (see Chapter 2 discussion), direct targeting of secure-, avoidant-, or anxious-attachment schema embedded within memories of current partner interactions may serve as more effective stimuli for priming attachment context.

Imagining the recurrence of an earlier episode of partner distress may also have represented a less-than-optimum design distinctive. Theoretically, the heightened or diminished sense of attachment security resulting from the group-specific priming condition should serve to frame an already-lived episode in a new light—and thus to increase or decrease accessibility of certain altruistic or egoistic cognitions, affect, and motivations (see discussion in Chapter 2). But practically speaking, memory of actual thoughts, feelings, and wishes in the original episode may have served to limit a fresh experience of the episode, thus diluting the effects of contextual attachment priming as a means of bringing a new set of eyes to the earlier-experienced event. The potential limitations of this study design feature were anticipated when exploring methodological alternatives, but were overcome by a paucity of design alternatives lending themselves to implementation in a group setting.

The fourth possibility for no significant differences found between the groups is a more nuanced one, and relates to the complexity of altruistic and egoistic processes that seem to be at play when the opportunity or need to support a distressed other is juxtaposed with the need to regulate one's own emotions. This possibility was considered in an effort to explain an unexpected group difference, where group four (neutral priming) participants exhibited significantly higher PEI FS distancing scores ($\alpha = .045$) than did the other groups. That this difference was a mere chance occurrence seemed particularly unlikely in that PEI FS scores were positively (and significantly) correlated with attachment avoidance and anxiety, yet group four participants exhibited the second lowest latent Av scores and the lowest latent Ax scores of any of the four groups. Initial attempts to make sense of this intriguing

outcome centered on the nature of the neutral-priming activity—imagining and reflecting upon an acquaintance, who might be effective serving as mayor of a town or small city. It was considered that perhaps what had been intended as a neutral exercise had instead tapped into a sense of cynicism associated with the political climate at the time of protocol administration (the months immediately preceding the 2008 national elections). Yet analyses of individual item response group differences seemed to suggest another cause.

Most of what distinguished group four PEI FS responses from those of the other groups was related to the more highly self-protective-by-distancing wishes sampled by the PEI FS scale (see discussion earlier in this section). In other words, it seemed that there was something about the group four priming stimulus that served to render participants comparatively defenseless in the face of an imagined recurrence of partner distress. An intriguing possibility for explaining this phenomenon may be extrapolated from the discussion of findings under the earlier Effects of Attachment Style section. Although involving more complexity than a brief explanation can encompass, the reasoning underlying this possibility might be summarized in the following three propositions:

- That the process of effectively responding empathically to partner distress does not so much call for the eradication of one's own distress, as if personal distress were antithetical to the giving of empathy, but rather it calls for the ability to manage that distress as a means of other-oriented perspective-taking, resulting in intuitive formulations of empathic response.
- That attachment security serves to enhance distress management by increasing one's tolerance for it. By contrast, attachment avoidance serves to enhance distress management by contributing to defensive processes that abet inter- and intra-personal distancing from its source. And attachment anxiety serves to manage distress by inducing ambivalent merging with, and sometimes subsequent abrupt withdrawal from, its source. And finally...

- That however imperfectly the priming of attachment security, avoidance, or anxiety contributed to participants' attachment-relevant strategies for managing their own distress relative to the remembered partner-in-distress episode, the attachment systems of those in the first three groups had been activated prior to the event-revisiting task. By contrast, group four participants were comparatively ambushed, prompting them to resort to more overt distancing strategies as a means of distress management.

Clinical and research implications associated with this finding of group difference, and arising from the possibility that this difference may be accounted for by the hypothesis proposed, will be discussed later in this chapter.

Effects of Gender

Three of the study's eleven research questions (Q4, Q5, and Q11) related to the effects of gender on dependent variable empathy and distress responses to partner distress. These research questions are enumerated below, and are then discussed as a group.

Question 4 (H2): Females will exhibit higher empathy scores than will males in response to marriage partner distress.

Question 5 (H2): Males will exhibit greater use of distancing strategies than will females in response to marriage partner distress.

Question 11 (H4): Males will exhibit lower partner-in-distress memory vividness ratings when controlling for experimental condition and attachment style.

None of these three research hypotheses relating to the effects of gender were confirmed. The original PEI authors (Florian et al., 2000) found gender differences in both the PEI empathy measure (compassionate caring scale) and in its somewhat other-oriented distress measure (passive identification subscale). In both cases, they cited significantly higher scores for women. Because these scores were virtually

uncorrelated with gender in the current study's administration of the PEI, post hoc analyses of data were conducted in an effort to explain this unexpected outcome.

The only significant gender difference found among the variables analyzed related to the vividness level reported for participant visualization of the group-specific prototype, where women provided vividness ratings that were significantly higher than those provided by their male counterparts ($r = .240$; $p \leq .01$). It is possible that these differences may be artifacts of a gender vividness-rating bias, as opposed to evidence that men actually had greater difficulty with (or expended lesser effort toward) engaging vividly in memory with the person/relationship fitting the group-specific prototype. Yet lower male ratings of partner-in-distress mean vividness approached significant difference levels as well ($r = .121$; $\alpha = .06$). Taken together, and examined through the earlier-suggested lens of competing altruistic and egoistic processes precipitated by the current study's design, it is possible that males were able to overcome the predicted empathy shortfall through emotion-regulation strategies, including suppression of visual engagement in unpleasant stimuli related to the attachment prototype and the remembered episode of partner distress. [Note: See also the finding of Fehr, 2008 (cited by Fehr, 2010) that gender differences in regard to empathy expression was not maintained when the target was one's romantic partner].

Other Effects

Two additional effects are worthy of note in discussing findings of significance in the current study. The first is the finding that the demographic variable length-of-current-marriage was negatively correlated with attachment anxiety ($r = -.237$; $p \leq .01$). That is, attachment anxiety scores tended to go down the longer one was married. Three possibilities are suggested for this phenomenon: One possibility is that a greater

sense of attachment security is achieved as a couple negotiates a mutually-supportive relationship over time. Another possibility is that higher-anxiety relationships tend to be winnowed out through divorce over time, with the effect of skewing individual anxiety levels downward among relationships that survive. And yet another possibility is that longer-married higher-anxiety couples may have been less likely to volunteer for the study. The correlation between attachment avoidance and marriage longevity was in the same direction, but fell short of statistical significance ($r = -.102$; $\alpha = .12$). These findings may be compared with Fraley's (2010) ECR-R normative data (Table 3-7), indicating that attachment anxiety declines with age, while attachment avoidance increases. Married individuals were underrepresented in Fraley's sample, however, and the median age of 24 years somewhat limits the applicability of this normative data as a reference point for the current study's findings.

The second finding of note not earlier discussed represents an artifact of study design that is statistically significant but of seeming little practical import. This finding relates to the lower group four prototype memory vividness ratings ($\alpha = .01$). The most obvious reason for this difference is that reflection on the individual fitting the group four (neutral priming) condition prototype did not lend itself to a level of vividness commensurate with the secure-, avoidant-, or anxious-attachment priming prototype-reflection-tasks of the three non-control groups. Specifically, participants in the first three groups were asked to reflect upon a relationship that matched a provided attachment prototype, while the group four participants were asked to imagine a casual acquaintance functioning in the role of mayor of a town or small city. Because reflection on a historically-experienced relationship is arguably more likely to be vivid than

imagination of an event never experienced, the finding of lower control group prototype vividness levels seems both expected and non-problematic.

Relationship Communication History Survey (RCHS)

Participants provided ratings to four items in the RCHS, intended to assess the frequency with which each sought the others' support when distressed, and the quality of partner empathy that was provided on such occasions. In response to the first question (Q#1), participants reported their own frequency of distress accompanied by support seeking, and in the second question (Q#2), they reported their mate's effectiveness in responding supportively. In the third question (Q#3), participants reported how often their spouses looked to them for support when distressed, and in the fourth question (Q#4), they provided an assessment of their own competence at giving support at such times. Analyses of between-question correlations spoke to the question of whether and how self- and other- distress frequency was related to other- and self-comforting effectiveness. Responses to the four questions were subsequently correlated with the demographic, intervening, and dependent variable responses in the main study, and gender differences were examined. These analyses were an attempt to answer the question of how one's own personal characteristics and response tendencies translate into marital distress- and empathy-exchange dynamics. Finally, matched-pairs data sets were used to correlate husbands' responses with wives' main study data, and vice versa. These analyses examined the question of how one's spouse's personal characteristics and response tendencies translate into marital distress- and empathy-exchange dynamics.

Correlates of distress frequency with desire for spousal comfort (Q#1)

Reports of one's own distress frequency (Q#1) were positively correlated with gender ($r = .386$; $p \leq .01$), indicating that wives reported significantly higher frequency of their own distress accompanied by bids for spousal support, than did husbands.

Arguing against the possibility that this finding represents a gender bias in self-reports of distress frequency, was the fact that Q#3 responses were also positively correlated with gender ($r = -.458$; $p \leq .01$), indicating that both husbands and wives reported higher distress frequency incidence for wives. An alternative hypothesis to the conclusion that wives are more frequently distressed than are husbands, may be extrapolated from the earlier discussion suggesting husbands' greater tendencies to suppress distressing thoughts, feelings, and wishes as an emotion regulation strategy. Such may suggest that rather than being less frequently distressed, husbands may merely be less likely than wives to seek partner support during such times. This hypothesis is seemingly supported by the finding that reports of one's own distress frequency were negatively correlated with reports of mate distress frequency (Q#3) ($r = -.154$; $p \leq .05$). Because increased frequency of partner distress would seemingly increase one's own distress, this may suggest that spouses differ in the degree to which they choose other-regulated versus self-regulated processes to ameliorate distress. Other findings subsequently discussed seem to lend weight to this hypothesis.

Participants' Q#1 responses were positively correlated with attachment anxiety ($r = .314$; $p \leq .01$), and consequently with each of the four distress measures correlating significantly with attachment anxiety (ranging from $r = .199$ to $r = .257$; $p \leq .01$).

Interestingly, when linking husbands' Q#1 responses and wives' main study data, only one significant correlation was observed (at the $p \leq .05$ level). Yet when linking wives'

Q#1 responses and husbands' data, seven of the correlations were significant (three at the $p \leq .01$ level; four at the $p \leq .05$ level). Compared with wives' responses to higher incidence of husbands' distress, husbands' empathy responses associated with increased spousal distress frequency were more meager. Husbands' data also revealed a more liberal use of distancing strategies, perhaps as a means of regulating their own distress precipitated by more frequent spousal bids for emotion-regulation assistance. This possibility seems consistent with the finding that although one's own attachment anxiety was positively linked with one's own distress frequency ($r = .314$; $p \leq .01$), the data went opposing directions when linking Q#1 responses with spousal data: Husbands whose wives were higher in anxiety were less likely to seek spousal support ($r = -.173$; $\alpha = .08$), while wives whose husbands were higher in anxiety were more likely to seek spousal support ($r = .112$; $\alpha = .26$). Although the individual breakdowns fall short of statistical significance, such data continues to be consistent with the earlier-discussed male bias of distancing from the source of distress as an emotion-regulation strategy.

In examining other areas of gender differences, husbands' attachment avoidance was positively correlated with wives' distress frequency ($r = .288$; $p \leq .01$), yet wives' attachment avoidance was virtually uncorrelated with husbands' distress frequency ($r = .039$). A possible explanation for this difference emerges when considering the tendency of partner attachment avoidance to exacerbate one's feelings of distress (e.g., Mikulincer and Shaver, 2007), coupled with earlier-discussed findings of gender bias toward differing emotion regulation strategies. Specifically, it may be that husbands' greater tendencies toward the use of egoistic strategies in the face of partner distress

may permit them to default to self-regulation of distress when married to attachment-avoidant wives, more readily than can wives who are married to attachment-avoidant husbands.

Another intriguing finding of difference was the substantial gap between wives' and husbands' reports of distress frequency as a correlate of the length-of-current-marriage variable: Wives' distress frequency was negatively correlated with length of marriage ($r = -.313$; $p \leq .01$); while husbands' distress frequency increased with marital longevity ($r = .157$; $\alpha = .11$). Multiple factors may be contributing to this pronounced gender difference. One possibility may relate to the finding that both husbands and wives reported significantly greater incidence among wives of eliciting partner support during times of distress (see earlier discussion). Consequently, there was more room for wives' distress frequency levels to regress to the overall mean over time. Assuming that this factor accounts for some of the decrease in distressed-wives' spousal-support-seeking as a function of marriage length, this does not explain the change in the opposite direction accompanying marital longevity for husbands. An additional contributing factor, then, may be related to gender differences in regard to empathy (see Chapter 2 discussion). Consistent findings of women's superior capacity to both provide and garner empathy (e.g., Fehr, 2010), suggest that wives may be more successful than their husbands at support-network formation. And that having more reliable alternative others as sources of empathy, wives may be better able than their husbands to adapt their partner-directed empathy-seeking bids to the level of empathy-giving competence their spouses have demonstrated.

Correlates of perceived spousal comforting competence (Q#2)

Reports of one's spouse's comforting competence (Q#2) were positively linked with assessments of one's own competence to comfort one's distressed partner (Q#4) ($r = .457$; $p \leq .01$), suggesting that these two components of marital reciprocity may be interwoven. Specifically, it may suggest that emotional-equilibrium-restoring outcomes arising from more predictably-available empathy from one's partner may both equip and predispose a spouse to reciprocate when the shoe is on the other foot. Husbands, who reported more frequent distress among their wives (Q#3), also rated their wives less successful as comforters ($r = -.270$; $p \leq .01$), while wives reported virtually no relationship between those two variables. Viewing this distinction through the lens of earlier-discussed gender differences in employing distance as a means of emotion regulation, it may be that husbands are more readily deterred than are wives from seeking support from a partner whose own emotion-regulation strategies rely on amplification rather than suppression of distress. In other words, it is possible that the perception of one's partner as frequently distressed may bias husbands (more than wives) toward self-regulation strategies, averting the perceived potential of spousal distress induction resulting from their bids for support.

Perceptions of one's spouse's comforting competence (Q#2) were positively correlated with length of marriage ($r = .207$; $p \leq .05$), and both types of insecure attachment were negatively correlated with Q#2 responses (Avoidance (Av): $r = -.505$; $p \leq .01$; Anxiety (Ax): $r = -.410$; $p \leq .01$). Because of the strength of these correlations, dependent variable responses that were significantly correlated with Av and Ax scores in the main study showed predictable direction and strength of correlation when linked with Q#2 responses. Interestingly, the strength of negative correlation between wives'

reports of husbands' comforting effectiveness and husbands' use of distancing strategies ($r = -.266$; $p \leq .01$) was stronger than were the corresponding correlations associated with husbands' assessment of their wives' comforting efficacy ($r = -.174$; $\alpha = .08$). Although this difference was relatively mild, it was in the direction of multiple earlier-discussed findings suggesting that overcoming a default tendency to use distance as an emotion-regulation strategy may be more central to husbands' comforting efficacy than it is to that of their wives.

Correlates of spousal distress frequency with desire for comfort (Q#3)

The frequency of partner distress (Q#3) was negatively correlated with self-perceptions of efficacy as a comforter ($r = -.213$; $p \leq .01$). This finding was reflected at virtually equal levels for both husbands and wives. It is not difficult to imagine why this is so. Similar to the findings discussed relative to Q#1, frequency of spousal distress accompanied by desire for partner support varied with the length-of-current-marriage variable in opposing directions for the two spouses. Husbands' reports of their wives' frequency of distress accompanied by bids for empathy was negatively correlated with length of marriage ($r = -.371$; $p \leq .01$), while wives' reports of their husbands' frequency of distress accompanied by bids for their support increased with marriage longevity ($r = .168$). Thus, both the gap, and the length-of-marriage-related opposing directions, were perceived by both husbands and wives (of themselves and of each other), lending weight to the unlikelihood that such differences were chance occurrences, and perhaps lending credence to the underlying causes hypothesized in earlier discussion.

One's own attachment avoidance scores were positively correlated with spousal distress frequency ($r = .305$; $p \leq .01$). This finding was in tune with frequent clinical observations that the more dismissive strategies with which attachment-avoidant

individuals seek to regulate their own emotions tend to be both unwelcome and ineffective as strategies for ameliorating partner distress, and indeed may serve to exacerbate it. Assessments of partner distress frequency were negatively correlated with participants' BEDI empathy scores ($r = -.224$; $p \leq .01$) and were positively correlated with their distancing scores ($r = .153$; $p \leq .05$). These findings suggest that one's use of personal-distress-managing distancing strategies as substitutes for empathy provision serves to exacerbate frequency of spousal distress. Reciprocally, they may also suggest dynamics of empathy fatigue leading to the use of distancing strategies in the face of unrequited partner distress.

In examining gender differences associated with Q#3 responses, it was noted that there were no findings of significance when correlating wives' reports of husbands' distress frequency with husbands' main study data. Yet wives' attachment avoidance scores ($r = .210$; $p \leq .05$) and all four of their distress scale scores (ranging from $r = .213$; $p \leq .05$ to $r = .282$; $p \leq .01$) were positively correlated with husbands' reports of wives' distress frequency. In other words, wives whose husbands rated them more frequently distressed and support-seeking were more likely to be high in latent attachment anxiety, and consistently reported higher levels of distress in response to the partner-in-distress episode task of the main study. In stark contrast, husbands whose wives reported them as more frequently distressed and seeking their support showed insignificant main study distress elevations (correlations with the four distress scales ranged from $r = .04$ to $r = .11$; alpha levels ranged from .27 to .69). And correlation with the distancing scale was also mild ($r = .09$; $\alpha = .38$). Viewed in the light of earlier discussions, this finding may indicate that husbands who more frequently seek

support from their wives in times of distress may not be more frequently distressed than those who do not, but instead may merely be choosing other-oriented strategies over more egoistic strategies for mediating episodes of personal distress.

Correlates of one's own perceived comforting competence (Q#4)

The sense of oneself as an effective comfort-giver rose with length of marriage, albeit at a level falling short of statistical significance ($r = .127$; $\alpha = .07$). Perceived efficacy as a comforter of one's distressed spouse correlated negatively with both attachment avoidance ($r = -.424$; $p \leq .01$) and attachment anxiety ($r = -.269$; $p \leq .01$). Comforting efficacy correlated positively with the two empathy measures (BEDI: $r = .402$; $p \leq .01$; PEI: $r = .415$; $p \leq .01$), and with the three measures of predominant emotional response (ranging from $r = .346$ to $r = .388$; $p \leq .01$). The fact that PER score correlations are only moderately lower than empathy score correlations reflects the finding that overall distress scores were not significantly elevated among those rating themselves more highly in spousal comforting effectiveness. The data indeed indicates moderately positive distress scale correlations with comforting competence ratings, but interesting these are largely offset by the negative correlation with the PEI FS distancing subscale ($r = -.209$; $p \leq .01$). These findings indicate that higher levels of both avoidance and anxiety hinder spousal comforting efficacy, and that the ability to manage one's own distress associated with partner bids for empathy without resorting to distancing strategies is a significant factor in such efficacy.

As with several findings earlier discussed, an examination of the cross-correlated data suggested significant gender differences regarding spousal characteristics associated with higher ratings of one's own comforting efficacy. Although a more minor difference, it is worthy of note that both attachment avoidance and attachment anxiety

were more highly contraindicated for husbands whose wives rated themselves as effective comforters (Av: $r = -.446$; $p \leq .01$; Ax: $r = -.467$; $p \leq .01$), than for wives whose husbands gave themselves higher comfort-giving ratings (Av: $r = -.320$; $p \leq .01$; Ax: $r = -.363$; $p \leq .01$). More significantly, wives whose husbands rated themselves higher in comforting efficacy scored higher on both empathy measures (BEDI: $r = .208$; $p \leq .05$; PEI: $r = .210$; $p \leq .05$), and on all three measures of predominant emotional response (ranging from $r = .223$; $p \leq .05$ to $r = .274$; $p \leq .01$). In contrast, none of the husbands' main study scores were significantly correlated with wives' higher ratings of husbands' comforting competence.

Earlier findings (see Table 4-9) showed both Av and Ax negatively correlated with both empathy measures and all three PER measures. Taken alone, this would argue for higher empathy ratings among those lower in avoidance and anxiety (husbands of women rating themselves higher in comforting efficacy). Yet the reverse direction appeared. Once again, this suggests a gender difference in empathy-eliciting and empathy-providing tendencies among the subject couples, and one that supports a view of women as more effective empathy-givers (Fehr, 2010). It may be that higher empathy in wives contributes to a climate that permits men to overcome distancing tendencies in favor of giving them comfort when distressed, thus making emotion-regulation a collaborative venture. By contrast, it may be that wives do not need the comparative safety of higher-empathy husbands to achieve comfort-giving competency in the face of their husbands' distress.

Instrument Development

In contrast to the ECR-R-AV and the BEDI-AV of the current study, representing relatively minor adaptations of the original instruments, the version of the PEI used in

this study represents a more ambitious instrument development effort. The version of the PEI used by Mikulincer et al. (2001) utilized 24 items (14 empathy items and 10 distress items) from an earlier-developed 59-item pool of (PEI) feelings-, thoughts-, and wishes- sampling items. The version of the PEI developed for use in this study utilized 30 items (13 empathy items and 17 distress items) from that same 59-item pool. Figure 3-3 (at the end of Chapter 3) provides a schematic summary of the rationale and item-selection process utilized in development of the current study's version of the PEI.

Mikulincer and his colleagues (2001) did not list the 14 empathy items they selected for their short form version of the PEI (PEI-SF), from among the 18 available empathy items in the original PEI item pool. Therefore, apart from the three item examples cited in the authors' narrative discussion of methodology, the exact items forming this earlier version's empathy scale is unknown. Consequently, it is uncertain how many of the 13 empathy items selected for use in the current study's PEI short form (PEI-SF-R) overlap with those used in the earlier version. Given the fairly modest gap between the higher reliability estimate of the current study's PEI version empathy scale ($\alpha = .94$) and that of the earlier-used version ($\alpha = .89$), the difference may fall within the range of chance. Two factors converge to argue for at least considering another possibility, however. The first is that although the two scales of necessity shared a significant number of items in common, they were not identical. And the second is that the current version's PEI item selection process included input from a panel of experts, assessing which items exhibited optimum face validity as viable response options to one's distressed marital partner. It is possible that this test-

construction distinctive contributed to higher item homogeneity in the current study's PEI empathy scale version, and consequently to higher internal consistency estimates.

As with the empathy scale, Mikulincer et al. (2001) did not provide a listing of the 10 distress items they used in their short-form version of the PEI. Complicating this uncertainty even more, however, was the authors' assertion that all 10 of their version's distress items were chosen from the full PEI's 18-item passive identification subscale, and that none were selected from the full PEI's 23-item false superiority subscale. Yet two of the three distress items the authors cite as PEI-SF examples were indeed taken from the full PEI's false superiority subscale. Whereas a significant overlap can be assumed between the earlier and current studies' PEI empathy scales (the earlier version used 14 of the available 18 items while the current study's version used 13 of the available 18 items), the earlier and current studies' distress scales can be assumed to be far more divergent. There are three reasons for this assumption: First, the probability of any-given-item correspondence between the two versions is diminished because of the higher number of distress items ($N=41$) than empathy items ($N=18$) in the 59-item PEI pool tapped in constructing the respective versions' scales. Second, the broader discrepancy between the two versions' distress scale size (10 items in the earlier version; 17 items in the current study's version) compared with empathy-scale-size discrepancy (14 items in the earlier version; 13 items in the current study's version) ensures divergent item selection. And third, the earlier authors stated their intent to achieve relative distress item homogeneity by sampling only from the PEI's passive identification distress subscale (despite their apparent inadvertent straying into the false

superiority item pool). But the design of the current study argued for intentional and generous sampling from both PEI distress subscales.

A more thorough discussion of the rationale behind the use of a less homogenous distress item scale in the current study can be found in Chapter 3. For the purposes of this discussion, that rationale can be summarized as follows: In contrast to the multiple studies by Mikulincer et al. (2001), that were designed to compare the effects of secure attachment priming with positive affect priming and neutral priming, the current study was designed to compare the effects of secure-, avoidant-, anxious-, and neutral-attachment priming on empathy and distress responses to a distressed other. In the earlier studies, therefore, it was not essential to account for the phenomenon that attachment avoidance and attachment anxiety describe divergent emotion-regulation strategies for compensating for a void in felt security, because study design dictated the need only to distinguish between attachment-secure and attachment-insecure responses in general. The current study's design, however, did argue for such an attempt to differentiate attachment-avoidance-promoted responses from attachment-anxiety-promoted responses.

Little was found in the literature to inform the attempt to distinguish between (what I have labeled) attachment-insecurity-homogenous items (those useful merely for differentiating attachment security from insecurity in general) and attachment-insecurity-divergent items (those useful for distinguishing between the two types of attachment insecurity). The one exception to this silence was the observation of Florian, Mikulincer, and Hirschberger (2000) that the 23-item false superiority distress subscale correlated more highly with attachment anxiety ($r = .51$; $p \leq .01$) than with attachment avoidance

($r = .36$; $p \leq .01$). Although these correlations revealed greater shared variance (insecurity versus security) than unshared variance (anxiety versus avoidance), the level of differentiation revealed for the false superiority scale as a whole argued for the possibility that specific scale items might display greater levels of divergence. An additional factor argued for more generous sampling of the false superiority scale items in the current study's version of the PEI in an attempt to mine attachment-insecurity-divergent items. Although somewhat of an oversimplification, it would not be inaccurate to view the distinction between the empathy scale and the two separate distress scales as follows: The empathy (compassionate caring) scale samples other-oriented (altruistic) feelings, thoughts, and wishes directed toward alleviating another's suffering. The passive identification distress subscale samples self-and-other-oriented responses that compel alleviation of another's suffering as a necessary prerequisite to restore one's own emotional equilibrium. And the false superiority distress subscale samples self-oriented responses that indicate a higher level of intra-psychic enmeshment in, or distancing from, the other's distress as a means of self-regulation.

Given these distinctions, coupled with the need to differentiate attachment-avoidance-motivated responses from attachment-anxiety-motivated responses, development of the current study's PEI distress scale required some foreseen sacrifice in overall scale internal consistency (see Chapter 3 discussion). Simply put, it seemed unlikely that attachment-avoidant responses could be distinguished from attachment-anxiety responses without drawing generously from the pool of distress items sampling the more extreme defensive responses to another's distress. And sampling generously from that item pool would of necessity provide a downward skew to the homogeneity of

full-distress scale responses, because participants biased toward attachment avoidance in their response to another's distress would likely give lower ratings to attachment-anxiety-biased items and those with a bent toward attachment anxiety would provide lower marks to avoidance-biased items. The fruits of this tradeoff were evident in the current study's moderately lower full distress scale internal consistency estimate ($\alpha = .84$) compared to that for the earlier study's distress scale ($\alpha = .88$), despite the comparatively higher number of distress items in the current study (17 items) than in the earlier studies (10 items). That this lower internal consistency estimate is attributable to this tradeoff seems likely from the fact that current study reliability coefficients were of equal magnitude or higher than those reported in the literature for each of the other five scales adapted for use in this study (see Figure 4-5 and Instrument Reliability discussion earlier in this chapter).

Because no significant group differences were found that could be attributable to the differential attachment priming conditions (see discussion earlier in this chapter under Effects of Attachment Context), the methodological consideration of examining such differences through the lens of attachment-insecurity-differentiating items (see Chapter 3 discussion) became moot. However, the presentation of the current study's distress item analyses findings may be useful for informing future research, where refining of methodologies for the priming of differing types of attachment representations in memory might lead to future observations of significant difference. These findings have been displayed in three tables at the end of this chapter, incorporating both the 17 distress items of the current study's version of the PEI, and the 8 distress items of the current study's adaptation of the BEDI. Table 5-1 provides distress item correlations

with (ECR-R-AV) attachment avoidance scores, ranked from strongest to weakest. Six correlations were significant at the $p \leq .01$ level, and three more at the $p \leq .05$ level. Table 5-2 provides distress item correlations with (ECR-R-AV) attachment anxiety scores, ranked from strongest to weakest. Seven correlations were significant at the $p \leq .01$ level, and three more at the $p \leq .05$ level. Table 5-3 displays the absolute-value-differences between each item's respective correlation coefficients with the separate attachment constructs (avoidance and anxiety).

The items in Table 5-3 are presented in a manner that rank-orders (highest to lowest) the level of item property effectiveness in discriminating attachment avoidance from attachment anxiety. Absolute value differences ranged from a high of $r = .260$ to a low of $r = .007$. As suggested by the original PEI authors (Florian, Mikulincer, and Hirschberger, 2000), the false superiority distress items correlated more highly with attachment anxiety than with attachment avoidance. In fact in the rank order of strength of correlation, four PEI false superiority distress items and five BEDI distress items preceded the highest correlated passive identification item (Table 5-2). By contrast, passive identification items were better represented among those items most highly correlated with attachment avoidance than were those from the false superiority scale (Table 5-1). Both PEI distress subscales contributed amply to the list of items most effectively discriminating avoidant from anxious responses (Table 5-3), validating the methodological decision to sample generously from the false superiority subscale in constructing the overall PEI distress scale.

Implications of the Study

Multiple implications of the findings of this study may be suggested to inform clinical work with couples and research examining couples' attachment-related

dynamics. Several of these research and clinical implications will be discussed in this section. Additional implications may be extrapolated from subsequent discussions in the sections addressing study limitations and suggestions for future research.

One implication of study findings that may inform future research relates to the complexity of inter- and intra-personal empathy-and-distress-exchange dynamics between couples, in comparison to the dynamics involved in responses to stranger distress, which were the subject of earlier studies informing the design of the current study. Heightening a sense of felt security to stimulate more altruistic momentary responses to a stranger, a transaction neither embedded in historical context with that individual nor engendering future expectations by that individual, can more easily be manipulated than can the dynamics associated with the long-embedded interactional patterns inherent in couples' relationships. Consequently, it seems likely that in future research efforts designed to examine couples' interactions, more individual-couple-tailored attachment priming methodologies may be necessary to create a significant attachment-context effect.

This conclusion suggests an implication of the study findings for clinical practice. Because the effects of attachment insecurity adversely, and at a significant level, interfere with optimum couple empathy exchange in response to partner distress, and because clinical interventions aimed at influencing (global) attachment style tend to result in only incremental gains, clinical strategies designed to help couples create more relationship-specific attachment contexts appear to be the most promising counterbalance to couples' longstanding problematic attachment-related relationship

dynamics. Although by no means a new thought, the critical nature of such strategies was affirmed by the findings of this study.

Another implication for clinical practice emerges from the gender differences observed in the main study, that were even more pronounced in correlations of post-study participant ratings of distressed-partner empathy-bid frequency and other-partner response quality. These gender differences argue for a component in the earlier-recommended clinical strategies for helping couples create relationship-specific attachment contexts. This component relates to the current study findings of greater tendency on the part of husbands to use distancing strategies in response to partner distress, the likelihood that the use of such strategies serves to exacerbate partner distress, and the partner-perceived comforting effectiveness of husbands who resist the tendency to distance. Clinical interventions aimed at helping couples bring to conscious awareness the processes underlying these emotion-regulation strategies, and helping them construct alternative means of bidding for support and framing interpretations of such bids, may be instrumental in helping couples create an attachment context specific to their relationship. Such a context, reinforced by more beneficial outcomes over time, may provide a more fruitful route to bypassing resistant-to-change problematic attachment schema. As with the earlier clinical implication cited, this suggestion is by no means a new one. But the findings of this study shed additional light on the value of such clinical strategies.

An unanticipated study finding suggests implications both for future research and for clinical practice. This finding was the unexpected observation of differences in the PEI FS distress scale for the control (neutral priming) group. Although this group was

among the lowest in participants' baseline attachment avoidance and anxiety scores, an artifact of random assignment that would suggest lower PEI FS scores, the group instead scored significantly higher on the PEI FS measure of more extreme distress response. And this difference was accounted for largely by the distancing subscale. In earlier discussion a hypothesis was proposed, suggesting that despite the differing priming conditions of the three treatment groups, what the participants shared in common was that all were induced into an attachment state-of-mind prior to the task of reflecting on the partner-in-distress episode, whereas participants in the neutral priming condition were not. And that however imperfectly these emotion-regulation systems were functioning for these participants, the group four participants were by comparison ambushed by the partner-in-distress episode and thus forced to resort to more extreme distancing strategies as their means of emotion regulation.

Future researchers investigating the effects of attachment priming on couples' empathy and distress dynamics are encouraged to incorporate study design elements suitable for evaluating this proposed framework for understanding this unanticipated finding. Whether subsequent research reinforces the hypothesized causes, or merely suggests that the finding of difference was a statistical anomaly, the occasion for attempting to understand this phenomenon draws further attention to the earlier-stated value of utilizing clinical strategies that help couples develop more attachment-secure relationship contexts. Specifically, reflection on potential causes underlying this finding calls attention to the phenomenon that avoidant- and anxious- attachment strategies are motivated by attempts to be adaptive to current relationship experiences in such a way that the vital priority of emotion regulation is maintained. Such attempts, shaped by

attachment-history-biased interpretations of earlier and current attachment contexts, are often maladaptive. Consequently, the occasion of this unexpected finding of difference highlights the value of clinical strategies aimed at bringing this phenomenon to light with client couples, accompanied by a coaching of their communication exchanges in ways that help bring to conscious awareness their own and their partners' default strategies for maintaining emotional equilibrium. In his own clinical practice, this author has observed that approaches to this theme that combine insight and skills-practice tend to defuse couple recriminations aimed at partner default emotion-regulation strategies, and consequently to enhance couple collaboration in constructing interactional environments more conducive to empathy exchange.

An additional implication of study findings that may serve to inform future research relates to instrument-development. Included in Chapter 3 is a discussion of the rationale and the processes involved in developing for use in this study a short-form version of the Pity Experience Inventories (Florian, Mikulincer, & Hirschberger, 2000) from the original PEI item pool. Such development was necessary because an earlier short-form version of the PEI developed by Hirschberger (2000) was inadequate to distinguish between distress responses motivated by attachment avoidance and those motivated by attachment anxiety. In the PEI short-form version developed for the current study, item selection from the original PEI item pool was guided by the goal of including items with properties suitable to distinguish between the two types of insecure attachment. The findings generated by the current study's use of this developed instrument are discussed earlier in this chapter and are displayed in Tables 5-1 thru 5-3 at the end of this chapter.

It seems likely that Table 5-3 estimates of specific items' Av/Ax discriminating properties may prove to be underestimates when used with participants with the higher Av and Ax scores representing general population norms. This likelihood is supported by a comparison of Av/Ax score correlations for current study participants ($r = .53$) with the smaller degree of overlap reported by Fraley (2010) ($r = .41$), a difference doubtless attributable to the current-study participants' lower-than-general-population Av/Ax scores. These findings of difference suggest that PEI distress items nearer the top of Table 5-3 may exhibit even stronger Av/Ax discriminating properties for the general population than were demonstrated by their use in the current study. This author is unaware of any instrument in current use that attempts to make the attachment-style-motivated distinctions validated by the use of this instrument in the current study. Future researchers of adult attachment dynamics may find these instrument-development findings helpful in studies where distinguishing the underlying forces motivating nuanced insecure attachment dynamics is an area of focus.

In addition to the clinical and research implications earlier discussed, the current study's findings suggest certain implications both for counseling theory and for the training of couples' counselors in university settings. Theoretical approaches that focus on coaching couples to alter problematic communication dynamics as a means of enhancing relationship stability (e.g., Gottman, 1994) may be informed by the current study's findings regarding attachment-insecurity-related emotions and cognitions that may be motivating the behavioral patterns the couple is seeking to change. Similarly, theoretical approaches that focus on helping couples attend to emotional dynamics facilitating or impeding safe haven communication behaviors (e.g., Johnson, 1996) may

be informed by the current study's findings concerning the cognitive and motivational processes heightened by differing attachment states-of-mind and inextricably linked with those affective processes. Certain experiential approaches to counselor training (e.g., Rennie, 1998) advocate role-playing activities in which trainees alternately occupy the positions of client and counselor, as a means of better learning the skills of process identification in the counseling dyad setting. A learning module that permits counselor trainees to experience the current study's experimental protocol as participants, followed by group discussions of the emotions, cognitions, and motivations they experienced in response to the partner-in-distress episode, could serve as an effective assist in helping marriage and family counseling trainees more intuitively grasp the attachment-related emotion-regulation processes they will be called upon to help couples identify as a prerequisite to their building of more supportive dyadic exchanges.

Limitations of the Study

Limitations of the study may be categorized as both sample related and protocol-design related. Sample-related limitations to generalizability included the use of volunteer participant couples. It may be that those self-selecting for participation in a study examining responses to partner distress differ as a group from those choosing not to respond to the invitation to participate. Another limitation was the somewhat underrepresentation of racial minorities in the sample, compared to such representations in the population at large. And yet another limitation to generalizability was the recruitment of participants from evangelical churches. In their development of the Pity Experience Inventories, Florian, Mikulincer, and Hirschberger (2000) found that those identifying themselves as religious scored higher on the empathy scale (PEI CC) and the other-oriented distress scale (PEI PI) than did those who identified themselves

as non-religious. [Note: But see also the finding of Sprecher and Fehr, 2005 (cited by Fehr, 2010) that spirituality/religiosity was a correlate of empathic response to stranger distress but not to partner distress].

In light of the inverse relationship between empathy and both manifestations of attachment insecurity, religiosity and/or other factors associated with the context of participant recruitment may help to explain why current study subjects scored lower than the overall ECR-R norms (see Table 3-7) published by Fraley (2010) on both attachment avoidance (Av) and attachment anxiety (Ax) [Av: current study = 2.69; married norm = 2.87; Ax: current study = 2.70; married norm = 3.64]. In considering what portion of the observed differences might be attributable to subject religiosity, it should be noted in regard to the larger Ax gap that Fraley's norm group had a median age of 24 years, that his findings predicted declining Ax scores with ascending age, and that current study findings reflected a negative correlation between anxiety scores and length of current marriage. Fraley's norm data also predicted Av score increases with ascending age. Therefore, it would be a mistake to attribute the full (above-noted) Ax gap to religiosity and/or other factors related to self-selection of participants, and a wider Av gap (than that noted above) should be assumed because of the current study participants' higher median age. Weighing all of these factors, findings do suggest that subject religiosity as well as other sampling and self-selection criteria likely contributed to the obtaining of a sample with higher levels of attachment security, and consequently with greater tendencies toward empathic responding than those observed in the broader population. Although this sampling limitation cannot be disregarded, it can conversely be argued that given the relative absence of extremes in participant attachment

insecurity, findings of difference correlated with avoidance and anxiety scores may be all the more noteworthy.

Several limitations related to the design of the study itself are worthy of note. Some of these limitations were foreseeable, yet were necessary tradeoffs involved in using a larger number of participants. Included among these limitations were potential response biases associated with pen-and-paper data collection. Partial compensation for such response biases could have been made by the inclusion of a social desirability scale—an oversight in the current study's design. Another limitation of confining data collection to participant pen-and-paper responses was that observation of participant behaviors in response to actual episodes of partner distress might have provided a fuller picture of couple interactional dynamics associated with bids for empathy and partner responses to those bids. Florian, Mikulincer, and Hirschberger (2000) developed a PEI behaviors inventory in addition to their thoughts, feelings, and wishes inventory used in this study. But observations of couple behaviors in response to partner distress would have required a commitment of time and resources not possible within the scope of the current study.

The finding of no significant differences between the groups in regard to differing attachment priming conditions may have been related to both sample and protocol design limitations. In regard to the sample itself, the current study's lower-mean and consequently restricted-range avoidance and anxiety scores (see discussion earlier in this chapter) may have served to suppress the effect size attributable to the differing attachment priming conditions. Two separate yet interrelated issues associated with protocol design may have provided limitations to the study as well. First, it seems likely

that the comparative effect size of the partner-in-distress episode stimulus, coupled with the pull of historically-established couple interactional dynamics, may have dwarfed the treatment effect itself. And second, it seems possible that attachment-priming stimuli that were more partner-specific might have created a greater effect size than the ones provided. For example, instead of assigning group one to reflect upon a relationship that fit the secure-attachment prototype, participants might have been asked to reflect upon a time with their spouse that was characterized by the [secure attachment] description provided.

Such a design change might have helped to mediate the problems associated with the dependent-variable-inducing stimulus of imagining the recurrence of a past episode of partner distress. Given the constraints (including perhaps the ethical ones) of precipitating real-time partner-in-distress episodes as response stimuli, it was necessary to revisit episodes from participants' memories. The step of imagining the episode's recurrence was informed by attachment theory research suggesting the effects of attachment states-of-mind on one's attention to differing details of a given attachment-relevant event. Imagining a recurrence of the partner-in-distress episode, then, was intended to prompt participants to re-experience the event in their currently-induced attachment state-of-mind, rather than merely reporting what they thought, felt, and wished at the time of the event's actual occurrence. Given the above-cited limitations of reporting on memory reenactments, rather than observing real-time behaviors, the priming of attachment state-of-mind with actual spouse-specific memories may prompt participants to re-experience partner-in-distress episodes with different eyes, and thus may serve as more effective priming prompts.

One outcome arising from the finding of no significant group difference, was that participants' responses in the Relationship Communication History Survey could be correlated with their dependent variable responses to the partner-in-distress stimulus, with no muddying of the data by the (earlier task) differing group conditions. This outcome was a somewhat redemptive one, with some of the most intriguing findings emerging from this portion of the data. The design of the current study rested upon a foundation that had been substantively laid within its major areas of inquiry, yet it also reached into a domain hitherto not thoroughly explored. Like any such reach, it was rudimentary and inherently in need of refinement. Future researchers are invited to build upon its incremental reach toward informing clinical strategies designed to enhance secure-base and safe-haven behaviors in couples' relationships.

Suggestions for Future Research

Future researchers may wish to extend the findings of this study to more racially diverse populations by providing invitations to participate at less racially homogenous gatherings than did the current study. They may also wish to recruit participants from social networks unidentified with any religious persuasion. Overcoming the limitation of self-selection is a more difficult undertaking, however. Involuntary participation seems likely to diminish the level of engagement and response authenticity in regard to study tasks that are both personally intrusive and unpleasant. And the de facto captive audience for much psychological research (university students) poses its own self-selection problems (aptitude and perhaps economic status), not to mention generalizability problems to the target population (married couples, from newlywed to seasoned). Future researchers are encouraged to weigh the tradeoffs of self-selection with other means of securing participation as well as to sample from a more diverse

array of venues with the goal of minimizing current study sample limitations earlier discussed.

Future researchers who seek to build upon this study using pen-and-paper data gathering may wish to consider embedding a social desirability scale within participant response options. They may also wish to utilize more partner-specific attachment - priming stimuli for the independent variable group-differing conditions. Specifically, it is suggested that future researchers redesign the attachment-context-priming prototypes presented in Tables 3-8 thru 3-10 in such a way that participants are instructed to think about a time in their relationship with their spouse that fit the attachment criteria cited, rather than thinking about a specific (non-spousal) relationship that was characterized by the prototype description. Future researchers with fewer time (and other resource) constraints are encouraged to consider use of real-time laboratory observations of spousal behaviors in response to partner-in-distress episodes accompanied by bids for support, as an alternative to self-reports of current responses to remembered events. Finally, given the intriguing gender and attachment-style differences observed in participant responses to the Relationship Communication History Survey (RCHS), future researchers are encouraged to attempt to refine this rudimentary instrument, and/or to cross-validate its findings with the use of other measurements of relationship satisfaction.

Summary

This study was designed to examine the effects of participants' latent attachment avoidance and anxiety, coupled with the effects of the priming of specific attachment representations in memory, on their emotions, cognitions, and motivations in response to a remembered episode of spousal distress. Significant effects were found for the

two-part intervening variable of attachment avoidance and anxiety, in correlations with dependent variable empathy and distress responses to partner distress. No significant effects were found for the group-differing conditions of attachment priming. Significant effects for both attachment style and gender were found when correlating participants' post-study communication-quality survey responses with participants' main-study empathy and distress responses to spousal distress. Implications of these findings were discussed, along with limitations of the study and recommendations for future research.

Table 5-1. Distress Item Correlations with Attachment Avoidance [Av]
(in rank order from greatest to smallest) [N=234]

Index	Q #	Distress Item Core Phrase	Pearson Correlation
BEDI	6	find self becoming perturbed by spouse's behavior	.323**
PEI PI	27	sharing spouse's grief; feeling spouse's pain	-.322**
PEI PI	16	feeling sadness at what spouse is going through	-.305**
PEI FS	6	find self wanting to run away from scene	.232**
PEI PI	2	thinking spouse did not deserve for this to happen	-.213**
PEI FS	25	wanting to emotionally distance from scene	.209**
PEI FS	8	find self wanting to forget about what is happening	.145*
PEI FS	18	afraid I'm going to get hurt as situation unfolds	.137*
PEI PI	4	feeling helpless to relieve spouse's suffering	.134*
PEI PI	17	wishing a miracle would happen	-0.121
BEDI	10	find self grieved by whole situation	-0.097
BEDI	5	find self becoming alarmed about situation	0.095
BEDI	8	find self feeling troubled	0.083
BEDI	3	find self becoming disturbed	0.077
BEDI	13	find self becoming worried	0.062
PEI FS	11	feeling ashamed don't know how to fix situation	0.053
PEI PI	14	find self thinking--why did this have to happen?	-0.051
PEI PI	12	wishing situation would turn out to be a mistake	0.037
PEI PI	20	find self wishing I could turn back clock	-0.020
PEI FS	22	feeling concerned about future	0.014
BEDI	1	feeling upset about what is happening	0.011
BEDI	12	find self becoming upset about whole thing	-0.010
PEI PI	24	find self having feelings of despair about situation	-0.008
PEI FS	29	feeling guilty about inability to help spouse	0.005
PEI PI	7	feeling anger at cause of spouse's suffering	0.002

Note: ** Correlation is significant at the .01 level (2-tailed); * Correlation is significant at the .05 level (2-tailed); BEDI = Batson's Empathy and Distress Indices; PEI = Pity Experience Inventories; PI = Passive Identification subscale; FS = False Superiority subscale; Av = Experiences in Close Relationships Questionnaire Attachment Avoidance subscale

Table 5-2. Distress Item Correlations with Attachment Anxiety [Ax]
(in rank order from greatest to smallest) [N=234]

Index	Q #	Distress Item Core Phrase	Pearson Correlation
BEDI	6	find self becoming perturbed by spouse's behavior	.256**
PEI FS	11	feeling ashamed don't know how to fix situation	.208**
PEI FS	22	feeling concerned about future	.197**
PEI FS	18	afraid I'm going to get hurt as situation unfolds	.196**
BEDI	13	find self becoming worried	.183**
BEDI	5	find self becoming alarmed about situation	.181**
PEI FS	6	find self wanting to run away from scene	.174**
BEDI	3	find self becoming disturbed	.158*
BEDI	8	find self feeling troubled	.156*
PEI PI	4	feeling helpless to relieve spouse's suffering	.152*
BEDI	1	feeling upset about what is happening	.147*
PEI FS	29	feeling guilty about inability to help spouse	.146*
PEI PI	24	find self having feelings of despair about situation	0.114
PEI PI	16	feeling sadness at what spouse is going through	-0.106
BEDI	12	find self becoming upset about whole thing	0.104
PEI PI	17	wishing a miracle would happen	0.103
PEI PI	12	wishing situation would turn out to be a mistake	0.100
PEI PI	2	thinking spouse did not deserve for this to happen	-0.092
PEI FS	25	wanting to emotionally distance from scene	0.073
PEI PI	27	sharing spouse's grief; feeling spouse's pain	-0.062
PEI FS	8	find self wanting to forget about what is happening	0.060
PEI PI	14	find self thinking--why did this have to happen?	0.057
BEDI	10	find self grieved by whole situation	-0.039
PEI PI	20	find self wishing I could turn back clock	0.025
PEI PI	7	feeling anger at cause of spouse's suffering	0.009

Note: ** Correlation is significant at the .01 level (2-tailed); * Correlation is significant at the .05 level (2-tailed); BEDI = Batson's Empathy and Distress Indices; PEI = Pity Experience Inventories; FS = False Superiority subscale; PI = Passive Identification subscale; Ax = Experiences in Close Relationships Questionnaire Attachment Anxiety subscale

Table 5-3. Distress Items Discriminating Attachment Avoidance from Anxiety
(in rank order from highest discriminating to lowest discriminating) [N=234]

Index	Q #	Distress Item Root	Av	Ax	Difference (Absolute Value)
PEI PI	27	feeling spouse's grief and pain	-0.322	-0.062	0.260
PEI PI	17	wishing a miracle would happen	-0.121	0.103	0.224
PEI PI	16	feeling sadness at spouse's plight	-0.305	-0.106	0.199
PEI FS	22	feeling concerned about future	0.014	.197**	0.183
PEI FS	11	shame about inability to fix	0.053	.208**	0.155
PEI FS	29	guilt about inability to help	0.005	0.146	0.141
BEDI	1	upset about what is happening	0.011	.147*	0.136
PEI FS	25	wanting to emotionally distance	.209**	0.073	0.136
PEI PI	24	feeling despair over situation	-0.008	0.114	0.122
BEDI	13	find self becoming worried	0.062	.183**	0.121
PEI PI	2	thinking spouse didn't deserve this	-0.213	-0.092	0.121
BEDI	12	becoming upset over whole thing	-0.010	0.104	0.114
PEI PI	14	wondering why this had to happen	-0.051	0.057	0.108
BEDI	5	becoming alarmed about situation	0.095	.181**	0.086
PEI FS	8	wanting to forget what is happening	.145*	0.060	0.085
BEDI	3	finding self becoming disturbed	0.077	.158*	0.081
BEDI	8	finding self feeling troubled	0.083	.156*	0.073
BEDI	6	perturbed by spouse's behavior	.323**	.256**	0.067
PEI PI	12	wishing it would be a mistake	0.037	0.100	0.063
PEI FS	18	fearing getting hurt	.137*	.196**	0.059
BEDI	10	finding self grieved	-0.097	-0.039	0.058
PEI FS	6	wanting to run away from scene	.232**	.174**	0.058
PEI PI	20	wanting to turn back clock	-0.020	0.025	0.045
PEI PI	4	helpless to relieve suffering	.134*	.152*	0.018
PEI PI	7	anger at cause of suffering	0.002	0.009	0.007

Note: ** Correlation is significant at the .01 level (2-tailed); * Correlation is significant at the .05 level (2-tailed); PEI = Pity Experience Inventories; PI = Passive Identification subscale; FS = False Superiority subscale; BEDI = Batson's Empathy and Distress Indices; Av = Experiences in Close Relationships Questionnaire Attachment Avoidance subscale; Ax = Experiences in Close Relationships Questionnaire Attachment Anxiety subscale

APPENDIX A
INSTITUTIONAL REVIEW BOARD APPROVAL FORM

UF Institutional Review Board
UNIVERSITY of FLORIDA

PO Box 112250
Gainesville, FL 32611-2250
352-392-0433 (Phone)
352-392-9234 (Fax)
irb2@ufl.edu

DATE: January 14, 2008

TO: Stephen C. Figley

FROM: Ira S. Fischler, PhD; Chair *ISF*
University of Florida
Institutional Review Board

SUBJECT: Approval of Protocol #2008-U-0012

TITLE: The Effects of Attachment Style and Contextual Activation of Attachment Security and Attachment Insecurity on Partner Empathy and Distress Responses to Episodes of Romantic Partner Distress

SPONSOR: None

I am pleased to advise you that the University of Florida Institutional Review Board has recommended approval of this protocol. Based on its review, the UFIRB determined that this research presents no more than minimal risk to participants. Given your protocol, it is essential that you obtain signed documentation of informed consent from each participant. Enclosed is the dated, IRB-approved informed consent to be used when recruiting participants for the research.

It is essential that each of your participants sign a copy of your approved informed consent that bears the IRB approval stamp and expiration date.

If you wish to make any changes to this protocol, *including the need to increase the number of participants authorized*, you must disclose your plans before you implement them so that the Board can assess their impact on your protocol. In addition, you must report to the Board any unexpected complications that affect your participants.

If you have not completed this protocol by January 9, 2009, please telephone our office (392-0433), and we will discuss the renewal process with you. It is important that you keep your Department Chair informed about the status of this research protocol.

ISF:dl

APPENDIX B
LETTER TO PASTORS: PERMISSION TO RECRUIT

Dear Pastor _____,

I am a private-practice counselor who often receives marriage counseling referrals from local pastors. It has long been an interest of mine to better understand the emotional dynamics that serve to facilitate or to hinder responding empathically to ones distressed spouse. Indeed, exploring that phenomenon has become such a passion to me that gaining greater insight into that mystery has become the focus of my doctoral research.

The purpose of my writing to you is to request your permission and support in my recruitment of couples to participate in that study. I am intending to recruit 120 couples from a total of 6-12 churches, to participate in a session that is estimated to require about 50 minutes of their time. Your help—and theirs—will assist me in learning more about this vital area of interest, and it will also facilitate my completion of my doctoral studies.

If you feel that you are able to support me in this endeavor, I would seek to meet with you in the near future to work out the details of presenting the opportunity to your congregant couples. At a minimum, the invitation to participate would be provided through a bulletin insert (prepared by me and subject to your approval), designating a room for interested couples to meet briefly after the church service. Ideally, the written invitation would be reinforced by a brief announcement from me at the service where the bulletin insert is provided.

At the brief meeting after the church service, any questions can be answered, couples agreeing to participate can sign the informed consent form, and a brief information sheet can be completed by participating couples—providing (among other information) contact information so that I can notify them about date and time options for their participation.

If possible, it would be best if we could offer two or more date and time options where your couples could participate in the 50 minute session somewhere on your church campus. If this can not be scheduled around times when the campus is already open, I will be happy to bear any additional utility and/or monitoring staff expenses incurred.

I will be contacting you a few days after your receipt of this letter to inquire whether we might meet to answer any questions you may have—in hopes of securing your support. Thank you for your willingness to consider helping with this need.

Sincerely,

Stephen C. Figley, L.M.F.T., L.M.H.C.

APPENDIX C
SAMPLE CHURCH RECRUITMENT ANNOUNCEMENT
[FRONT]

Announcing a Couples' Research Study and a Free Couples' Seminar

In my practice as a marriage counselor, some client couples imagine that my *own* marital communication is never short of blissful. Sadly, there are times when my wife is distressed and wanting my empathy and support—and I miss my cue. Sometimes, I miss it by a lot!

At times, my failure is due to selfishness or being distracted. At other times, however, I *genuinely* want to support my wife in *her* distress, but my energies get used up regulating my *own* emotions. In my efforts to restore my *own* emotional equilibrium, my wife's need for empathy unfortunately goes unmet.

Why this phenomenon occurs—and what couples can do about this obstacle to supportive communication—is the focus of my Ph.D. research study.

A majority of the 120+ couples that I am recruiting for this study have already enrolled, and many have already completed the one-hour testing. It is my hope that about twenty couples from your church, ages 20-59, will join me in this research. I will be available after the service in the church foyer to answer any questions for couples who are interested in participating

As part of my ***THANK YOU*** for your participation, I am inviting you to attend at no cost a one-day seminar designed to teach and to model how to provide empathetic and validating responses to your spouse during times of distress. Seminar attendance is not required for participation in the study, but you are invited to attend all or part of whichever seminar you choose:

Nov 8 @ ***[Seminar at Name of Church Location]***
[9 AM – 4 PM] [UF Football – Away @ Vanderbilt]
(8:00 PM Kickoff)

Nov 22 @ ***[Seminar at Name of Church Location]***
[9 AM – 4 PM] [UF Football – Home vs The Citadel]
(1:30 PM Kickoff)

APPENDIX C (CONTINUED)
SAMPLE CHURCH RECRUITMENT ANNOUNCEMENT
[BACK]

Available Times for Couples Testing

October 6 Monday 7:00 PM
October 10 Friday 6:00 PM
October 10 Friday 7:30 PM
October 11 Saturday 10:30 AM
October 11 Saturday 1:30 PM
[Note: Oct 11 *UF/LSU* Home Kick-off is at 8:00 PM]

October 12 Sunday 2:00 PM
@ [Name-of-Church] Fellowship Hall

October 16 Thursday 7:00 PM
October 17 Friday 6:00 PM
October 17 Friday 7:30 PM
October 18 Saturday 10:30 AM
October 18 Saturday 1:30 PM
October 18 Saturday 3:00 PM
October 18 Saturday 4:30 PM
[Note: There is NO *UF* football game on October 18]

Testing at My Office Except Oct 12th

You may choose the on-site opportunity provided on October 12th or you may schedule any one of the other opportunities provided at my office [4001 Newberry Road, Suite C-4] for your one-hour participation. Multiple couples will be tested at one time. We reserve the right to reschedule a session with 72-hour advance notice to you if fewer than three couples have signed up for it.

APPENDIX D
INFORMED CONSENT FORM
[FRONT]

Dear Prospective Study Participants:

I am a graduate student in the Department of Counselor Education at the University of Florida, conducting research for my doctoral dissertation under the supervision of Dr. Harry Daniels. The purpose of this study is to examine how the availability of memories of relationships with parents and close others affects the way couples respond to one another during times of distress.

If you agree to participate in this study, we will use the contact information you provide to notify you of the times that the study is offered at your church. We estimate that your participation in the study session itself will require a little less than 60 minutes.

As part of the study, you will be asked to perform a series of memory exercises, including thinking about relationships from the past and remembering a time when your spouse needed your support. You will also be asked to respond to three surveys measuring how you experience relationships in general, and how you feel when your spouse needs your support.

There are no physical risks involved in your participation in the study. The memory exercises may result in some participants experiencing uncomfortable emotions for a time. But it is expected that such feelings will be reduced by the end of the study session. The person administering the study session has worked for more than twenty years in vocational church ministry settings. She will be available after the session to help you talk through any uncomfortable feelings that may remain.

You will not be asked to interact directly with your spouse as part of this study, but voluntary participation by both the husband and wife is essential to achieve the goals of the study. Neither you nor your spouse will be required to participate in any activity that you wish to omit, nor to answer any question that you wish to skip. Either or both of you are free to withdraw from the study at any time without consequence.

You will not receive any direct benefits by your participation in this study. But it is hoped that your participation will benefit those who seek ways to teach couples how to communicate more effectively. As a way of my thanking each couple who volunteers to participate, you will receive a free copy of a book that was written to help couples improve their communication, and you will be given the opportunity to attend at no cost to you a one-day marriage communication seminar that I will present after study completion.

Your identity will be protected by the assignment of a confidential identifier, and only I will have access to the master list linking names with participant identifiers. Once the data is analyzed, the master list will be destroyed. Your identity will be kept confidential to the extent provided by law, and your identity will not be revealed in the dissertation provided to the graduate school, in any later publication of results provided to research journals, or in any other context or setting. Neither your spouse nor any other participant will see your responses.

APPENDIX E
PARTICIPANT TASK #1 (ECR-R-AV)

Participant Task #1
Experiences in Close Relationships-Revised-Adapted Version

The following statements concern your experiences in close relationships. The majority of the questions will inquire about your experiences with your current marriage partner. Some of the others will ask about your various experiences in romantic relationships throughout adulthood. And the rest relate to your experiences in close relationships in general. Please respond to each statement by indicating how much you agree or disagree with it. Write the number in the space provided, using the following rating scale:

1	2	3	4	5	6	7
Disagree Strongly	Disagree	Disagree Slightly	Neutral/ Mixed	Agree Slightly	Agree	Agree Strongly

- ___ 1. My experience has been to feel uncomfortable opening up to romantic partners.
- ___ 2. I worry a lot about my relationships.
- ___ 3. I usually discuss my problems and concerns with my husband/wife.
- ___ 4. My experience has been to feel comfortable depending on romantic partners.
- ___ 5. I get uncomfortable when my wife/husband wants to be very close.
- ___ 6. I rarely worry about my husband/wife leaving me.
- ___ 7. My wife/husband makes me doubt myself.
- ___ 8. I worry that I won't measure up to other people.
- ___ 9. My experience has been to be very comfortable being close to romantic partners.
- ___ 10. I often worry that my husband/wife will not want to stay with me.
- ___ 11. My desire to be very close sometimes scares people away.
- ___ 12. I talk things over with my wife/husband.
- ___ 13. I'm afraid that I will lose my husband's/wife's love.
- ___ 14. My experience has been to prefer not to be too close to romantic partners.
- ___ 15. It helps to turn to my wife/husband in times of need.
- ___ 16. I prefer not to show my husband/wife how I feel deep down.
- ___ 17. My experience has been to find it difficult to let myself depend on romantic partners.
- ___ 18. I often worry that my wife/husband doesn't really love me.

Go On To Next Page >>>

APPENDIX E (CONTINUED)
PARTICIPANT TASK #1 (ECR-R-AV)

1	2	3	4	5	6	7
Disagree Strongly	Disagree	Disagree Slightly	Neutral/ Mixed	Agree Slightly	Agree	Agree Strongly

- ___ 19. I tell my husband/wife just about everything.
- ___ 20. My experience has been to become nervous when romantic partners have gotten too close to me.
- ___ 21. It's easy for me to be affectionate with my wife/husband.
- ___ 22. I do not often worry about being abandoned.
- ___ 23. My husband/wife only seems to notice me when I'm angry.
- ___ 24. My experience has been that when I show my feelings for romantic partners, I become afraid that they will not feel the same about me.
- ___ 25. It's not difficult for me to get close to my wife/husband.
- ___ 26. It makes me mad that I don't get the affection and support I need from my husband/wife.
- ___ 27. When my wife/husband is out of sight, I worry that she/he might become interested in someone else.
- ___ 28. My experience has been to be afraid that once a romantic partner gets to know me, he or she won't like who I really am.
- ___ 29. My husband/wife really understands me and my needs.
- ___ 30. I find it relatively easy to get close to my wife/husband.
- ___ 31. I often wish that my husband's/wife's feelings for me were as strong as my feelings for him/her.
- ___ 32. My experience has been to find it easy to depend on romantic partners.
- ___ 33. My experience has been that sometimes romantic partners have changed their feelings about me for no apparent reason.
- ___ 34. My experience has been to worry that romantic partners won't care about me as much as I care about them.
- ___ 35. I feel comfortable sharing my private thoughts and feelings with my wife/husband.
- ___ 36. My experience has been that my romantic partners have tended not to want to get as close as I would like.

APPENDIX F
PARTICIPANT TASK #2 (DISTRACTER TASK)

Participant Task #2 – Memory Warm-Up Exercises

The following questions are designed to help you begin to exercise your long-term memory, so that you can begin to practice this skill before you are called on to use it for later tasks. For each question below, please write your answer in the space to the right. Then, next to your answer, write the number (from the scale below) that reflects how sure you are of the answer you gave.

1	2	3	4	5
Just a Guess	I Think Maybe	Somewhat Sure	Pretty Sure	Absolutely Sure

Question	Answer	How Sure Are You?
What was the name of your first grade teacher?		
Who was the first person you remember having a “teenage crush” on?		
What was your hourly wage in your first job working for a regular business?		
Where were you when the clock struck midnight and Y2K arrived (01-01-00)?		
At what restaurant did you last order an entrée costing more than \$25?		

APPENDIX G
PARTICIPANT TASK #3 (MEMORY SELECTION TASK)

Participant Task #3 – Memory Selection Task

Box #1 Task Overview Stored within our memories are events where we have observed other people upset or in distress and needing someone to reach out to them with support. When we are not in close relationship with the one in distress, we may feel more freedom to choose whether or how to respond. If the one in distress is our spouse, however, the expectation that we respond in supportive ways is usually much higher.

One of the aims of this study is to better understand the feelings, thoughts, and wishes people experience when their marriage partner is upset or in distress and wanting their support. To help us accomplish this aim, we will be asking you to go back into your memory and bring up a time when you experienced this. You will *not* have to tell us what happened.

Box #2 Zeroing in on a Memory Times of distress are a normal part of living. So you can probably think of quite a few times when your spouse was in distress or really upset and wanted your support. Because we are interested in a certain type of event where this happened though, we ask you to use the following guidelines when you choose an event to focus on.

- (1) **Please choose an event where your spouse’s distress level was rather high—where your spouse was visibly upset or shaken or agitated** by something that had happened. It will be much easier to measure your responses to something that was **A BIG DEAL!**
- (2) **Please choose an event where you were not primarily to blame** for what had happened that caused your spouse’s distress. When we are directly to blame for the thing our spouse is upset about, we usually feel defensive and it is harder to respond in supportive ways.
- (3) **Please choose an event that did not impact you directly as much as it impacted your distressed spouse.** If your spouse lost his or her job, and your thoughts became too focused on financial worries to respond to your spouse’s distress, this would not be a good event to choose.
- (4) **Please choose an event that did not result in a grand once-and-for-all resolution.** We don’t want your triumphant memories of “being the hero” to get in the way of your memories of what you were feeling, thinking, and wishing as your spouse was in distress.
- (5) **Please choose an event that you could imagine happening again in the future.** Not that it could happen again the exact same way it happened before. But that it would not be completely surprising for your spouse to become distressed again over similar kinds of happenings.

Please take a few moments to sort through your memory to find an event that fits these five guidelines as closely as possible. When you feel that you have settled on a memory that fits the guidelines well, please write a brief phrase in the blank below that will serve to remind you of the memory you have chosen. **We will ask you to come back to this memory in later tasks.**

APPENDIX H
PARTICIPANT TASK #4 (GROUP 1)

Participant Task #4 – Relationship Memory Task (Group 1)

Box #1 Beginning Instructions In this task, we want you to take a few moments to think about a relationship you have had in which you found it relatively easy to be emotionally close to the other person. In this relationship, you felt comfortable depending on this person and having this person depend on you. In this relationship you didn't worry about being abandoned by this person or about this person wanting to be closer than you wanted her or him to be. In this relationship you didn't have to worry about being alone or about this person not accepting you.

It is important that the relationship you choose to think about be with someone who had (or has) a fairly significant role in your life. This person can be someone from your past or someone with whom you are currently in relationship. It can be a parent or parent-substitute, a grandparent or other relative, a teacher or coach, a close friend or confidante, or someone else who fits this description. If your spouse fits this description but you are able also to think of someone else who does, it is preferred for this assignment that you reflect on the other relationship.

Box #2 Zeroing in on a Person/Relationship to Think About As you narrow your choice to one relationship that best fits the description above, please use the blank line below to tell us briefly the kind of person/relationship you will be thinking about (such as "Mom" or "Dad" or "Grandpa" or "Grandma" or "Coach" or "College Roommate" or "Former Friend" or "Former Romantic Partner" or...???) _____

Box #3 Fully Entering the Memory Now take a few moments and try to get a visual image in your mind of this person. How are you doing at returning to that place in your memory? Think about a time when you were interacting with this person and experiencing the feelings described in Box #1. Notice this person's facial expressions and body language. What is it like being with this person? What would he or she do or say to you? What would you do or say in return? How do you feel when you are with this person? How would you feel if this person were here with you now? Stay with the memory of this person for a few moments longer.

Box #4 Relationship Memory Reflection Feedback Please write a sentence or two about what you were thinking and feeling about yourself in relation to the person you thought about:

How clear and vivid was your memory of being with this person? Please circle a number

1	2	3	4	5	6	7
Unable to Recall	Rather Faint	Mildly Clear	Fairly Clear	Rather Clear	Very Clear	It Was Like Reliving It

APPENDIX I
PARTICIPANT TASK #4 (GROUP 2)

Participant Task #4 – Relationship Memory Task (Group 2)

Box #1 Beginning Instructions In this task, we want you to take a few moments to think about a relationship you have had in which you felt somewhat uncomfortable being emotionally close to the other person. In this relationship you found it difficult to trust this person completely, or you felt it was very important to be independent and self-sufficient and not depend on this person or have this person depend on you. In this relationship you felt this person wanted to be closer than you did, and his or her efforts to get closer made you feel nervous.

It is important that the relationship you choose to think about be with someone who had (or has) a fairly significant role in your life. This person can be someone from your past or someone with whom you are currently in relationship. It can be a parent or parent-substitute, a grandparent or other relative, a teacher or coach, a former friend or romantic partner, or someone else who fits this description. If your spouse fits this description but you are able also to think of someone else who does, it is preferred for this assignment that you reflect on the other relationship.

Box #2 Zeroing in on a Person/Relationship to Think About As you narrow your choice to one relationship that best fits the description above, please use the blank line below to tell us briefly the kind of person/relationship you will be thinking about (such as “Mom” or “Dad” or “Grandpa” or “Grandma” or “Coach” or “College Roommate” or “Former Friend” or “Former Romantic Partner” or...???) _____

Box #3 Fully Entering the Memory Now take a few moments and try to get a visual image in your mind of this person. How are you doing at returning to that place in your memory? Think about a time when you were interacting with this person and experiencing the feelings described in Box #1. Notice this person’s facial expressions and body language. What is it like being with this person? What would he or she do or say to you? What would you do or say in return? How do you feel when you are with this person? How would you feel if this person were here with you now? Stay with the memory of this person for a few moments longer.

Box #4 Relationship Memory Reflection Feedback Please write a sentence or two about what you were thinking and feeling about yourself in relation to the person you thought about:

How clear and vivid was your memory of being with this person? Please circle a number

1	2	3	4	5	6	7
Unable to Recall	Rather Faint	Mildly Clear	Fairly Clear	Rather Clear	Very Clear	It Was Like Reliving It

APPENDIX J
PARTICIPANT TASK #4 (GROUP 3)

Participant Task #4 – Relationship Memory Task (Group 3)

Box #1 Beginning Instructions In this task, we want you to take a few moments to think about a relationship you have had in which you felt like the other person was reluctant to get as close as you would have liked. In this relationship you worried that the other person didn't really love you or value you as much as you did her or him, and you worried that he or she wouldn't want to stay with you. In this relationship, you wanted to get emotionally closer to this person, but you worried that if you tried to get closer you might scare this person away.

It is important that the relationship you choose to think about be with someone who had (or has) a fairly significant role in your life. This person can be someone from your past or someone with whom you are currently in relationship. It can be a parent or parent-substitute, a grandparent or other relative, a teacher or other mentor, a close friend or confidante, or someone else who fits this description. If your spouse fits this description but you are able also to think of someone else who does, it is preferred for this assignment that you reflect on the other relationship.

Box #2 Zeroing in on a Person/Relationship to Think About As you narrow your choice to one relationship that best fits the description above, please use the blank line below to tell us briefly the kind of person/relationship you will be thinking about (such as "Mom" or "Dad" or "Grandpa" or "Grandma" or "Coach" or "College Roommate" or "Former Friend" or "Former Romantic Partner" or...???) _____

Box #3 Fully Entering the Memory Now take a few moments and try to get a visual image in your mind of this person. How are you doing at returning to that place in your memory? Think about a time when you were interacting with this person and experiencing the feelings described in Box #1. Notice this person's facial expressions and body language. What is it like being with this person? What would he or she do or say to you? What would you do or say in return? How do you feel when you are with this person? How would you feel if this person were here with you now? Stay with the memory of this person for a few moments longer.

Box #4 Relationship Memory Reflection Feedback Please write a sentence or two about what you were thinking and feeling about yourself in relation to the person you thought about:

How clear and vivid was your memory of being with this person? Please circle a number

1	2	3	4	5	6	7
Unable to Recall	Rather Faint	Mildly Clear	Fairly Clear	Rather Clear	Very Clear	It Was Like Reliving It

APPENDIX K
PARTICIPANT TASK #4 (GROUP 4)

Participant Task #4 – Acquaintance Memory Task (Group 4)

Box #1 Beginning Instructions In this task, we want you to take a few moments to think about a casual acquaintance whom you have known or currently know, who is of above-average intelligence, shows good people-skills, appears to handle pressure well, and doesn't seem to mind being in the spotlight. The casual acquaintance that we want you to think about is one who you could imagine enjoying—and being successful at—being the mayor of a town or small city (5,000 to 25,000 people).

It is important that the acquaintance you choose to think about be someone you have observed enough to have an idea what she or he is like, but also someone you have not been particularly close to. This person should not be a relative or someone you have lived with. This person should not be someone you were ever romantically drawn to or someone you have been in serious conflict with. This person can be someone from your past or someone you currently know. He or she can be someone you knew or know from school, work, church, or community.

Box #2 Zeroing in on the Acquaintance to Think About As you think about people you know casually who you could imagine serving as mayor of a town or small city, try to narrow your choice to one acquaintance who you think best demonstrates the skills and qualities listed in Box #1 above. Then use the blank line below to tell us who you chose (for example: “former classmate” or “co-worker”): _____

Box #3 Fully Entering the Imagined Scenario Now take a few moments and try to get a visual image in your mind of this person serving in the role of mayor of a town or small city. Try to imagine this person planning and preparing the city's annual budget. Get a feel for her or him meeting with city workers to resolve grievances. Picture him or her fielding complaints from citizens who are upset about a broken water line or a pothole in their road. Imagine this person shaking hands and kissing babies while campaigning for re-election. How are you doing at returning to that place in your memory and imagining this scenario?

Box #4 Imagination Exercise Feedback Please write a sentence or two about what it was like to imagine this person in this role? How mentally-taxing was this exercise for you?

How clear and vivid was your imagination of this scenario? Please circle a number

1	2	3	4	5	6	7
Unable to Imagine	Rather Faint	Mildly Clear	Fairly Clear	Rather Clear	Very Clear	It Was Like Living It

APPENDIX L
PARTICIPANT TASK #5 (MEMORY REVISITING TASK)

Participant Task #5 – Memory Revisiting Task

Box #1 Returning to Event Memory Chosen in Task #3 In this exercise, we would like to test an aspect of memory that we refer to as relationship emotional memory. To do this, we need you to return to the memory you chose earlier about a time when your wife or husband was in distress and wanted your support. It is important that you be able to imagine yourself back in that situation so that you can emotionally tune in to what you were feeling, thinking, and wanting to do as it was happening.

Try to remember what things were like when your spouse was so upset. Think about the things that triggered his or her distress. Recall your partner’s facial expressions.....body language..... behaviors. Where were you? What was expected of you? What were you feeling...thinking ...wishing would happen or wanting to do? Stay with that memory for a few moments.

How vivid was your memory of the distressing event you recalled? (circle appropriate #)

1	2	3	4	5	6	7
Unable to Recall	Rather Faint	Somewhat Clear	Fairly Clear	Quite Clear	Very Vivid	It Was Like Reliving It

How severe was your partner’s distress in the episode you remembered? (circle appropriate #)

1	2	3	4	5	6	7
Unable to Recall	Fairly Mild	Starting to Rise	Moderately High	Quite High	Very High	Extremely High

Box #2 Imagining a Similar Event Happening Again The final memory function we would like to test is known as visualization or imagination. Visualization and imagination are actually memory-based activities that permit us to explore future possibilities based on our recollection of past events. This aspect of memory permits us to “try on for size” something happening and thinking about how we might respond or react—based on similar experiences we have had in the past.

To test this memory function, we would like you to imagine that the event you have been remembering (or something quite similar) is happening again. Take a few moments to see if you can imagine something similar occurring all over again. Try to observe every detail. Notice your spouse’s facial expressions, body language, and behaviors. Pay close attention to what you are feeling and thinking. Notice how you are wanting to respond to your mate. As challenging as this task is, see if you can stay with this picture and these feelings for a few moments.

How vivid was your imagined recurrence of the distressing event? (circle appropriate #)

1	2	3	4	5	6	7
Unable to Imagine	Rather Faint	Somewhat Clear	Fairly Clear	Quite Clear	Very Vivid	It Was Like Reliving It

APPENDIX M
PARTICIPANT TASK #6 (BEDI-AV)

Participant Task #6 – Participant Feedback Ratings Page One
--

We would like for you to continue to think about the distressing event with your husband or wife that you are imagining is happening again. As you continue focusing on this, we are interested in what you are feeling. For each of the sentences below, please place the number that best indicates how much you are feeling the emotion expressed. A rating of “1” means that you did not feel that emotion at all, and a rating of “7” means that you felt that emotion at an extremely high level.

1	2	3	4	5	6	7
Not at all	Slightly	Somewhat	A fair amount	Quite a bit	Very much	Extremely

As I continue to focus on the event I imagine is happening again...

- 1. I find myself feeling upset about what is happening.
- 2. I find myself feeling compassionate toward my husband or wife.
- 3. I find myself becoming disturbed.
- 4. I find myself feeling warm toward my wife or husband.
- 5. I find myself feeling alarmed by the situation.
- 6. I find myself becoming perturbed by the way my husband or wife is behaving.
- 7. I find myself feeling soft-hearted toward my wife or husband.
- 8. I find myself feeling troubled.
- 9. I find myself having tender feelings toward my husband or wife.
- 10. I find myself grieved by the whole situation.
- 11. I find myself feeling sympathetic toward my wife or husband.
- 12. I find myself becoming distressed by the whole thing.
- 13. I find myself becoming worried.
- 14. I find myself being moved by my husband’s or wife’s pain.

How are you doing at staying focused on the imagined recurrence of your spouse’s distress? Please circle the number below that shows how clear the scenario is now:

1	2	3	4	5	6	7
Unable to Experience	Rather Faint	Somewhat Clear	Fairly Clear	Quite Clear	Very Vivid	It is Like Reliving It

APPENDIX N
PARTICIPANT TASK #6 (PEI-SF-R)

Participant Task #6 – Participant Feedback Ratings Page Two
--

We know that this is no fun, but it is important that you continue to focus on the event you imagined, similar to the one experienced earlier. Can you still notice your spouse’s facial expressions and body language? Can you put yourself fully in that imagined event? As you try to stay in that place, please continue rating each item using the following scale.

1	2	3	4	5	6	7
Not at all	Slightly	Somewhat	A fair amount	Quite a bit	Very much	Extremely

As I continue to focus on the event I imagine is happening again...

- 1. I find myself feeling closeness and warmth for my wife or husband.
- 2. I find myself thinking that my husband or wife did not deserve for this to happen.
- 3. I find myself wanting to better understand what my wife or husband is feeling.
- 4. I find myself feeling helplessness about how to relieve his or her suffering.
- 5. I find myself wanting to hug and caress my wife or husband.
- 6. I find myself wanting to run away from the scene.
- 7. I find myself feeling anger at the people or circumstances that caused this situation.
- 8. I find myself wanting to forget about all this that is happening.
- 9. I find myself thinking about how to help my husband or wife to feel better.
- 10. I find myself wanting to give comfort to my wife or husband.
- 11. I find myself feeling ashamed that I don’t know how to fix this situation.
- 12. I find myself wishing that the situation would turn out to be a mistake.
- 13. I find myself having feelings of love for my husband or wife.
- 14. I find myself thinking to myself—why did this situation have to happen?
- 15. I find myself thinking about how to encourage my wife or husband.

How are you doing at staying focused on the remembered event of your spouse’s distress? Please circle the number below that shows how clear the scenario remains in your mind:

1	2	3	4	5	6	7
Unable to Experience	Rather Faint	Somewhat Clear	Fairly Clear	Quite Clear	Very Vivid	It is Like Reliving It

APPENDIX N (CONTINUED)
PARTICIPANT TASK #6 (PEI-SF-R)

Participant Task #6 – Participant Feedback Ratings Page Three
--

Thanks for staying with us so far—this is your last page of responses where it is necessary to stay focused on the event you imagined. Can you still picture this distressing scene? What is your spouse feeling, saying, and doing? As you try to stay in that place, please continue rating each item using the following scale.

1	2	3	4	5	6	7
Not at all	Slightly	Somewhat	A fair amount	Quite a bit	Very much	Extremely

As I continue to focus on the event I imagine is happening again...

- ___ 16. I find myself feeling sadness as I see what my husband or wife is having to go through.
- ___ 17. I find myself wishing a miracle would happen.
- ___ 18. I find myself afraid that I am going to get hurt as this situation unfolds.
- ___ 19. I find myself wanting to get close to my wife or husband.
- ___ 20. I find myself wishing I could turn back the clock.
- ___ 21. I find myself thinking to myself that I need to try to comfort my husband or wife.
- ___ 22. I find myself feeling concerned about the future.
- ___ 23. I find myself wanting to talk to my wife or husband about her or his distress.
- ___ 24. I find myself having feelings of despair about this situation.
- ___ 25. I find myself wanting to emotionally distance from the scene.
- ___ 26. I find myself thinking about ways to change the situation.
- ___ 27. I find myself sharing my husband’s or wife’s grief—feeling her or his pain.
- ___ 28. I find myself wanting to calm my wife or husband.
- ___ 29. I find myself feeling guilty about not being able to help my husband or wife.
- ___ 30. I find myself wanting to encourage my wife or husband and to cheer up him or her.

How did you do at staying focused on the remembered event of your spouse’s distress? Please circle the number below that shows how clear the scenario remained in your mind:

1	2	3	4	5	6	7
Unable to Experience	Rather Faint	Somewhat Clear	Fairly Clear	Quite Clear	Very Vivid	It is Like Reliving It

APPENDIX O
PARTICIPANT TASK #7 (RCHS)

Participant Task #7
Relationship Communication History Survey

Instructions: Thank you for staying with us until this—the final task. Telling us something about your experiences communicating with your spouse—as well as with earlier romantic relationship partners—will add to the benefit of our findings.

The questions on the front of this page relate to how well you and your marriage partner respond to one another at those times when one of you is upset and needing the other’s support.

The questions on the back of this page are exploring the same topic—but are inquiring about significant relationships you may have experienced before your current marriage. In responding to the questions on the back of this page, if you had more than three earlier romantic relationships (marriages or exclusive relationships of a year or longer), choose the three that had the biggest impact on you. If you had fewer than three, leave the excess boxes blank.

Remember that your responses will be kept confidential

For each question below, please circle the number (1 – 7) to the right that best represents your experiences with your current husband or wife

How often do you find yourself upset or distressed and wanting/needing your spouse to calm, sooth, comfort, or in some other way support you?	1	2	3	4	5	6	7
	Hardly Ever		On Occasion		Quite a Bit		Almost Daily
How effective is your spouse at responding in the ways that you want or need during such times?	1	2	3	4	5	6	7
	Not at All		Making an Effort		Often Helpful		Right on Target
How often does it seem that your spouse is upset or distressed and wanting/needing you to calm, sooth, comfort or in some other way support him or her?	1	2	3	4	5	6	7
	Hardly Ever		On Occasion		Quite a Bit		Almost Daily
How effective do you feel like you are at responding in the ways that your spouse wants and needs during such times?	1	2	3	4	5	6	7
	Not at All		Making an Effort		Often Helpful		Right on Target

Go On To Next Page >>>

APPENDIX O (CONTINUED)
PARTICIPANT TASK #7 (RCHS)

Instructions: For each box below—please tell us the type of relationship and its length in years. Please circle the number at the right of each question that best reflects your experience.

Most significant earlier partner relationship / we were together for _____ years.							
____ married ____ living together but not married ____ exclusive dating relationship							
In this relationship, how effective was your partner at responding in the ways that you wanted or needed when you were upset or distressed?	1	2	3	4	5	6	7
	Not at All		Making an Effort		Often Helpful		Right on Target
In this relationship, how effective do you feel like you were at responding in the ways that your partner wanted or needed when he or she was upset or distressed?	1	2	3	4	5	6	7
	Not at All		Making an Effort		Often Helpful		Right on Target

Next most significant earlier partner relationship / we were together for _____ years.							
____ married ____ living together but not married ____ exclusive dating relationship							
In this relationship, how effective was your partner at responding in the ways that you wanted or needed when you were upset or distressed?	1	2	3	4	5	6	7
	Not at All		Making an Effort		Often Helpful		Right on Target
In this relationship, how effective do you feel like you were at responding in the ways that your partner wanted or needed when he or she was upset or distressed?	1	2	3	4	5	6	7
	Not at All		Making an Effort		Often Helpful		Right on Target

Next most significant earlier partner relationship / we were together for _____ years.							
____ married ____ living together but not married ____ exclusive dating relationship							
In this relationship, how effective was your partner at responding in the ways that you wanted or needed when you were upset or distressed?	1	2	3	4	5	6	7
	Not at All		Making an Effort		Often Helpful		Right on Target
In this relationship, how effective do you feel like you were at responding in the ways that your partner wanted or needed when he or she was upset or distressed?	1	2	3	4	5	6	7
	Not at All		Making an Effort		Often Helpful		Right on Target

APPENDIX P
EXPERIMENTAL PROTOCOL ADMINISTRATOR SCRIPT [7 PAGES]

Note: Instructions in regular font are intended to guide the administrator's behaviors and statements in directing the participant group session. Instructions in ***bold italics*** are intended to be read to the participant group *verbatim*.

Before the Session

- ✓ Configure chairs in a manner that ensures adequate personal space [Note: Participants will be seated in chairs and using clipboards as the writing surface]
- ✓ Greet participants as they arrive—providing each with the test packet bearing her or his name, a clipboard, and a pen
- ✓ Advise participants not to open packets until instructed; share that they may sit together until it is time to begin—after which you will be required to separate them
- ✓ Accommodate unscheduled participants who have earlier enrolled, by retrieving their packets grouped by church [Note: Among the make-up session options for those who have missed their own church's on-site testing time(s) is for them to join participants of other churches at their on-site testing; to facilitate this, the packets of all enrollees absent from their own church's on-site testing are taken to each subsequent testing opportunity—whether such enrollees confirmed attendance at that testing session or not]
- ✓ Complete any Informed Consent matters not already resolved [For Example: One spouse not available for sign-up during recruitment; couple learned of the study through someone else in their church, were sent an e-mail copy of the informed consent, and need to execute the document itself prior to testing]
- ✓ Shortly before beginning the testing procedure itself, guide participants in selecting seating that precludes tactile contact with spouse and limits visual contact

Beginning the Session

- ✓ Begin the session when all scheduled participants have arrived and are seated, and the announced starting time has arrived; if awaiting later arrivers, closely monitor participant restlessness before permitting a start-time delay; in any event, do not permit a start-time delay of more than ten minutes
- ✓ Begin the session by reading the following, *verbatim*: ***Pardon the formality, but I am required to begin the session by reading to you the following script:***

Welcome! Thank you for the sacrifice of time you have made to participate in this study. We apologize that we found it necessary to seat you separate from your husband or wife. One of the assignments during this hour requires that you retrieve a memory of a time of interacting with your spouse, and we thought it might be easier to focus on that memory if you were sitting alone.

APPENDIX P (CONTINUED) [PAGE 2 OF 7]

In a moment, I am going to ask you to open the envelope bearing your name, and to remove a packet of worksheets. From your completion of these worksheets, we hope to learn something about your experiences in close relationships—including your relationship with your wife or husband. The more open and honest you can be in your responses, the more valuable your participation will be to our study.

After you have finished your participation today, feel free to share with your spouse whatever you want of your responses. But please know that your spouse will not see the responses on your worksheets, I will not see your responses, and by the time anyone reviews your responses, your worksheets will be identified only by a code and not by your name. So you are safe in being completely honest.

Make certain the envelope in front of you bears your name on the outside. You may now open your envelope and remove the packet of worksheets—placing it face down on your clipboard.

Task #1

- ✓ Introduce this task by reading the following script: *Items on the first two pages inquire about what you tend to feel or experience in close relationships. These relationships include—but are not limited to—your relationship with your spouse. After reading the instructions, you will be asked to rate your level of agreement with each of 36 statements. Do not labor very long over any one item. Most people have been able to complete these items in about 7-8 minutes. After you have completed the first page, move on to the second page. Feel free to raise your hand if you are confused about anything you are asked to do. You may now turn your packet over and begin Task #1.*
- ✓ At the 4-minute mark, provide the following prompt: *If you are not on the second page by now, you might consider not lingering so long over each item.*
- ✓ At the 6-minute mark, provide the following prompt: *A couple more minutes.*
- ✓ At the 7-minute mark, provide the following prompt: *One more minute—if you need it.*
- ✓ If everyone is done before the 8-minute mark, you may end this task. If people are still working, continue until the 8-minute mark—and then announce: *If you were unable to complete every item, the responses you provided will still be tabulated in our study. At this time, I'm going to ask you to turn your packet face down and give me your attention before going on to the next task.*

Task #2

- ✓ Introduce this task by reading the following script: *This next task is a brief one, and is designed to help you begin to exercise your long-term memory. Please read the instructions and very quickly provide your best recollection to the five questions below—rating how confident you are of your memory. You will be given 3-4 minutes for this task. You may now begin Task #2.*
- ✓ At the 3-minute mark, if anyone appears still to be writing, provide the following prompt: *If you are not finished, take another half-minute or so.*
- ✓ At the 4-minute mark, provide the following prompt: *At this time, I'm going to ask you to turn your packet face down, and then turn your attention to me as I introduce the next task.*

Task #3

- ✓ Introduce this task by reading the following script: *In the next task, you will be asked to retrieve a more personal memory—a time when your wife or husband was upset and looking to you for support. After reading the overview of the assignment, pay particular attention to the guidelines that help you to choose one specific memory that will be most relevant to our research. We will take 6-7 minutes for this task. You may now begin work on Task #3.*
- ✓ At the 4-minute mark, provide the following prompt: *By this time, you should be mulling over episodes in your memory that might fit the descriptions provided. It is OK if you cannot retrieve a memory that completely fits every guideline provided. It is very important, however, that the memory you select be one where the distress level of your husband or wife was quite high—and your support was wanted or needed.*
- ✓ At the 6-minute mark, provide the following prompt: *If you haven't done so already, I need to ask you to take the next half-minute or so to finalize your choice of one specific memory, and to write a phrase on the line at the bottom that will remind you of the memory you have chosen. You will be asked to come back to that memory in a later task.*
- ✓ At the 7-minute mark, provide the following prompt: *At this time, I'm going to ask you to turn your packet face down, and then turn your attention to me as I introduce the next task.*

Task #4

- ✓ Introduce this task by reading the following script: *In a moment, I am going to ask you to turn to the next page, where you will be asked to exercise your memory in yet another way. Because different ones of you have been assigned different versions of Task #4, I will be limited in how specific I can be in my verbal instructions as you work through this task. So carefully follow the instructions in each of the boxes and feel free to raise your hand if any part of the assignment confuses you. You will have about 6-7 minutes to complete this task. You may now turn your packet over and begin Task #4.*
- ✓ At the 4-minute mark, provide the following prompt: *A couple more minutes.*
- ✓ At the 6-minute mark, provide the following prompt: *If you haven't done so already, it is important that you move on to the last box and provide the two areas of feedback about your experience in this task.*
- ✓ At the 7-minute mark, ask the following question: *Is there anyone who has not yet circled a number on the scale at the bottom of the page?* When you are confident that everyone has provided this item of feedback, make the following statement: *Again I'm going to ask you to turn your packet face down, and then turn your attention to me as I introduce the next task.*

Task #5

- ✓ Introduce Task #5 with the following script: *The next task requires that you return to the earlier memory when your spouse was upset and needed your support. We ask that you read the instructions and then follow the prompts designed to help you vividly recall that memory. When you are done with the first box, move on to the second one. Although this may be an unpleasant task, your putting yourself fully into this memory will be of real benefit to the study results. We have allotted about 7-8 minutes for this portion of the study. You may now turn your packet over and begin Task #5.*
- ✓ At the 4-minute mark, provide the following prompt: *We're a little past the half-way point of our time.*
- ✓ At the 7-minute mark, provide the following prompt: *We're about out of time, now. If you have not yet completed all of the three scales, please take a moment to finish up and give us this feedback. When you are completed, please put your pen down and look up at me.*

Task #6

- ✓ When everyone has looked up—indicating that all are done—Introduce Task #6 with the following script: *In the next part of our study, we want you to report on your experience in the memory task you just completed. For your feedback to be effective, it is important that you maintain your focus on the episode you have been thinking about. To remind you of this, each of the feedback pages ends by asking you to report on how well you are maintaining that focus. Spend only a few seconds on each item—or about three minutes per page. You may now turn to Task #6, read the instructions, and begin rating the items on the three pages.*
- ✓ At the 3-minute mark, provide the following prompt: *You should be finishing up with the first page by now—make sure that you complete the focus scale at the bottom and move on to the next page.*
- ✓ At the 6-minute mark, provide the following prompt: *You should be finishing up with the second page by now—make sure that you complete the focus scale at the bottom and move on to the next page.*
- ✓ At the 9-minute mark, provide the following prompt: *You should be finishing up with the third page by now—make sure that you complete the focus scale at the bottom when you are done.*
- ✓ At the 10-minute mark, provide the following prompt: *Even if you were unable to complete all of the items, please take a moment to respond to the focus scale on the bottom of the third page—then set your pen down and look up at me.*

Task #7

- ✓ When everyone has looked up—indicating that all are done—Introduce Task #7 with the following script: *We're almost done—thanks for staying with us to the end! The last task is a two-page survey. On the first page, we ask you for brief feedback about an aspect of your communication with your wife or husband. On the second page, we ask for similar feedback on communication patterns in any previous significant romantic relationships you may have had before your current marriage. This brief survey should take only 5-6 minutes. If anything is confusing to you, please raise your hand. You may now turn to Task #7 and complete the two pages.*
- ✓ At the 3-minute mark, provide the following prompt: *About three more minutes.*
- ✓ At the 5-minute mark, provide the following prompt: *When you're finished, please set your pen down and look up. We will give just a moment for any who may not be finished.*

- ✓ At the 6-minute mark, provide the following prompt: *At this time, please return your packet to the envelope bearing your name. When you have done so, please give me your attention for some closing instructions.*

Emotional Equilibrium Restoring Activity

The following script should be read: *For some of you, this may have been a rather unpleasant experience of having to focus on difficult memories. To help ensure that these memories are less likely to intrude upon your thoughts as you leave here, we want to take a couple moments to shift our focus to something more comforting.*

I'd like to read to you some passages from the Psalms that have become meaningful to me when I am feeling distressed—and need to shift my focus to God and the comfort he gives:

.....

“The Lord is close to the brokenhearted and saves those who are crushed in spirit. A righteous [person] may have many troubles, but the LORD delivers [them] from them all.”
[Psalms 34:18,19]

“I waited patiently for the LORD; he turned to me and heard my cry. He lifted me out of the slimy pit, out of the mud and mire; he set my feet on a rock; and gave me a firm place to stand.” [Psalms 40:1, 2]

“My soul finds rest in God alone; my salvation comes from him. He alone is my rock and my salvation; he is my fortress, I will never be shaken. Trust in him at all times, O people; pour out your hearts to him, for God is our refuge.” [Psalms 62:1, 2, 8]

“Though you have made me see troubles, many and bitter, you will restore my life again; from the depths of the earth you will again bring me up. You will increase my honor and comfort me once again.” [Psalms 71:20, 21]

“Then they cried out to the Lord in their trouble, and he brought them out of their distress. He stilled the storm to a whisper; the waves of the sea were hushed. They were glad when it grew calm, and he guided them to their desired haven.” [Psalms 107:28-30]

.....

If you continue to feel distressed about what you have thought about in this session, and it would help you to stay behind and debrief with me—or to have me pray with you—I would welcome you to do that. If this experience has surfaced issues that are troubling to you and you would like my feedback in helping you to find a pastoral or professional counselor—or a class where you might explore these issues further—I will be happy to assist you in this way.

APPENDIX P (CONTINUED) [PAGE 7 OF 7]

Please remember to select your free book—one per couple—before you leave. Amazon reviews are available for your perusal, and I am happy to provide you feedback about my opinion of each book. We encourage you to let us know by e-mail whether you plan to attend the free seminar, and whether you anticipate attending the one November 8th at The Family Church, or the one November 22nd at Grace at Fort Clarke. We ask that you avoid talking about this session with couples who have not yet participated.

THANK YOU...and...God Bless You!

After the Session

- ✓ Participant packet envelopes will be collected by the session administrator as participants are leaving
- ✓ The session administrator will make herself available for approach by any participants who may want additional help as offered at the close of the *emotional equilibrium restoring activity*
- ✓ The session administrator will ensure that all materials are retrieved and organized for departure
- ✓ The session administrator will deliver the packets and other materials to the principal investigator, along with verbal and written feedback concerning any unique happenings in the testing session itself that may affect participant data

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BIOGRAPHICAL SKETCH

Stephen Carroll Figley was born in Marion, Ohio, in 1953. After graduating from West Liberty-Salem High School in rural west-central Ohio, he attended Grace College, later transferring to Florida Bible College, where he received a bachelor's degree in Pastoral Studies in 1975. Steve served in pastoral roles in the years subsequent to graduation, often concurrent with other employment. After seven years working as a municipal government administrator, he served seven years as a Christian school headmaster in Okeechobee, Florida. During that tenure, he and his family spent four summers in Winona Lake, Indiana, where he was enrolled in a graduate program hosted by Grace Theological Seminary, utilizing visiting education professors. Steve earned a Master of Arts degree in Christian School Administration from that program in 1992, receiving the outstanding graduate student award and strong encouragement to pursue his doctorate. Steve subsequently enrolled in the University of Florida College of Education's Instruction and Curriculum doctoral program in 1993, transferring soon thereafter to the Counselor Education's Marriage and Family doctoral program, which he recognized as much more in tune with his passion and calling.

En route to earning this change-of-direction doctorate, Steve was awarded the Master of Education and Specialist in Education degrees in marriage and family counseling from the University of Florida in 1996. After his supervised experiences, he established his own private practice in 1998. Steve is both a Licensed Marriage and Family Therapist and a Licensed Mental Health Counselor. He specializes in couples' counseling, and the integration of counseling with the Christian faith. Many of his referrals come from pastors and previous clients whose receptivity to counseling is enhanced by such integration.

Steve's change of educational and career direction resulted in a more circuitous route to achieving his original goal of earning a doctorate. Emerging priorities included a battle with cancer to overcome, teenage children to launch, and a private practice to build so that life could be sustained in the process. Several benefits arose, however, from this sometimes burdensome adventure of a later-in-life doctoral process: Steve's study design was very much informed and refined by his clinical practice focus of couples' counseling. Reciprocally, his clinical approaches were significantly influenced by the adult-attachment-themed literature informing his research study. And his established presence in the community facilitated his ready recruitment of a large number of couples willing to serve as his study subjects.

Steve is married to Joanna, who is the founder and executive director of Grace Encouragement Ministries. Under the umbrella of this not-for-profit corporation, Steve and his wife conduct marriage seminars and retreats. They are in the process of developing a marriage curriculum designed to translate well across diverse cultures, and recently piloted that curriculum with a group of 35 African couples during a one-month visit to Botswana. Steve and his wife have two adult children, one grandchild, and another soon-to-be born. Steve looks forward to training for a marathon and perhaps someday fulfilling the dream of qualifying for and running at Boston. He is buoyed by the anticipation of family adventures unencumbered by dissertation deadlines, and after a season of unwinding, looks forward to vision-casting with his wife about shared ventures of ministry to couples—both in the U.S. and overseas.