EARNED SECURITY WITHIN AN ATTACHMENT INTERVENTION: A NEW THREE-DIMENSIONAL ATTACHMENT FRAMEWORK

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ABSTRACT OF THE DISSERTATION

Earned Security within an Attachment Intervention:

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Bowlby's theorized "internal working model" (IWM) is an unconscious schema based largely on the way in which people are treated by important caretakers during the first years of life and comprised of views of self and other in relationship. Although the IWM is changeable, existing research cannot explain *how* the IWM is changed. An implicit measure of the view of self was developed in Study 1 which was demonstrated to relate inversely to attachment anxiety. In Study 2, participants high in attachment anxiety received a 6-week psychoeducational intervention using attachment as pedagogy and demonstrated several attachment-related improvements, including a trend toward a significant difference on change in implicit security between the Attachment Group and two control groups, with every participant receiving the intervention increasing in implicit security. Study 3, an exploratory semester-long intervention in Educational Opportunity Fund (EOF) students, reconceptualized attachment insecurity as self-focus, and demonstrated several significant findings among those receiving the intervention compared to those in a non-intervention control group. Study 4 demonstrated a significant effect in EOF freshmen receiving the attachment intervention on increasing

implicit security from pre-test to follow-up compared to those in a control condition. Although no significant effect of condition on change in attachment anxiety was demonstrated, anxiety moderated several outcomes, e.g., common humanity, personal distress, and empathy at post-test, reflective function at post-test and follow-up, and effect of need for cognition on outcomes including changes in self-view and empathy at post-test. Attachment avoidance moderated the significant effect of condition on the decrease in avoidance at post-test among experimental participants high in avoidance. Findings suggest IWM change first occurs unconsciously after improvement in related constructs including emotional intelligence. A new three-dimensional attachment framework is proposed, based on prior research and theory. Unlike the existing hierarchical attachment network (Collins & Read, 1994), the proposed framework models attachment change by reorienting one's focus from self to other. This new theoretical framework is supported by several findings, including a significant effect of condition on empathy among participants high in attachment anxiety preceding the significant increase in implicit security at follow-up. Implications for educational policy are discussed.

DEDICATION

Dedicated to the walking wounded

and their unborn

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Brief Overview of Attachment Etiology and Development

Attachment theory, based on several other established fields, including ethology and evolutionary biology, maintains that human infants have an inborn need to be cared for, and engage in instinctive attachment-related behaviors including crying, calling, following, and clinging (Bowlby, 1969/1982), in order to satisfy the motivation to feel cared for and safe. Both the motivation and the behaviors it prompts are adaptive for the safety and survival of the young. Once the inborn need for safety, which later came to be otherwise known as "felt security," (Sroufe and Waters, 1977) has been met, other behavioral systems can be activated, which allow for exploration(Hazan & Shaver, 1994). Conversely, if this inborn need for felt security is not satisfied, other behavioral systems cannot be activated. Therefore, those without felt security (the insecurely attached) are not as able as those who do have felt security (the securely attached) either to be empathic towards others or to engage in other pursuits, such as work and romantic involvement, in a healthy balanced manner (Hazan & Shaver, 1990).

According to attachment theory, a person will develop an attachment style based on an underlying type of schema, or an "internal working model (IWM)," a cognitive-behavioral motivational style of interacting with others based largely on the way in which important caretakers treated the person during the first years of life (Bowlby, 1980).A person treated sensitively and responsively by caretakers—or attachment figures (AFs) – would develop a secure attachment style in which he views himself as a person worthy of care and regard, and views others as trustworthy and dependable. Those not treated sensitively and responsively overall develop one of three insecure attachment styles: preoccupied, dismissive, or fearful (Bartholomew & Horowitz, 1991). These insecurely

attached people hold, respectively: negative views of themselves, others, or both themselves and others. Alternatively, attachment may also be measured by two continuous variables: anxiety and avoidance. Within this paradigm, the insecurely attached have higher levels of attachment-related anxiety and/or attachment-related avoidance (Fraley, Waller, & Brennan, 2000) (Figure 1).

Supporting Bowlby's (1969/1982,1973,1980) extensively developed theory, the categories of attachment were originally discovered and related to the way in which children were treated by their primary caretakers in an extensive longitudinal study (including the "Strange Situation") conducted by Ainsworth and colleagues (Ainsworth, Blehar, Waters, & Wall (1978), as cited in Main, 1996), in which the behavior of one-year old children was observed when they were with their primary caretakers in a novel room of toys; when a stranger entered the room; when the caretakers left them alone with the stranger; and when the caretakers returned. The behavior of these children was related to the way in which their primary caretakers had responded to them in several prior in-home observations: those children whose primary caretakers had responded consistently and sensitively to their needs were classified as secure, and were able to explore in the presence of the primary caretaker, using her as a secure base with some wariness of the stranger; demonstrated some distress at being separated, but were comforted at reunion with the caretaker. However, those children whose caretakers were intrusive and intermittently responsive, selfishly based not on the infant's communications but on their own moods, were classified as insecure ambivalent because of their ambivalent response to their caretakers: while they were clingy, not freely exploring when alone with the caretaker, they were very wary of the stranger, and very distressed at separation. Upon

reunion they were both happy to seek out but also to remain upset with their primary caretakers and might stiffen to prevent being cuddled. On the other hand, those children whose caretakers expressed limited affection towards and physical contact with their children, but appeared resentful, angry, and uncomfortable with the expressed needs of their infants, were classified as insecure avoidant, and these children were unresponsive to the caretaker when alone, not visibly distressed at separation (although higher cortisol levels were demonstrated in subsequent studies), displayed little or no wariness of the stranger, and ignored and avoided their caretakers upon their return to the room.

As a person ages, their caretakers, while not supplanted as attachment figures, have less primacy than peers as attachment figures (Hazan & Shaver, 1994). In adulthood, a person's significant other serves as their attachment figure (Simpson, Rholes & Nelligan, 1992). Further, behavioral patterns identifying different attachment styles in childhood continue to be evident in relationships a person has as an adult, with securely attached children growing into adults able to balance love and work, whereas the insecurely attached children grow into adults less able to find balance: ambivalent children grow into preoccupied adults, less able to achieve, with interpersonal issues intruding into their work, and avoidant children grow into dismissive adults, so uncomfortable with intimacy that they take refuge in work (Hazan & Shaver, 1990).

A fourth attachment style was discovered (Main & Solomon, 1986, cited in Main, Kaplan, & Cassidy, 1985) and defined as insecure-disorganized/disoriented. These children were different from the other three types, and thus could not be classified within the existing three categories: for example, they displayed conflicting approach/avoidance behavior upon reunion with the parent, similar to the behavior of children who had been

abused, and most of the caretakers of these children had experienced traumatic attachment histories (Main, Kaplan, & Cassidy, 1985). These disorganized children as adults are referred to as fearfully attached, within the four category model of attachment developed by Bartholomew & Horowitz (1991), which differentiates attachment by the underlying IWM of self and other along two axes, one representing model of self or the extent to which a person is dependent on acceptance from others, and the other axis representing model of other, or the extent to which a person is avoidant of intimacy (see Figure 1), with the securely attached being low on both dimensions, and having a positive view of both self and other; the fearfully attached being high on both dimensions, and having a negative view of both self and other; the preoccupied being high on dependence and low on avoidance, with a corresponding negative view of self and positive view of other; and the dismissing being low on dependence and high on avoidance, with corresponding positive view of self and negative view of other.

Relevance of Attachment for Inter- and Intra- personal Outcomes

Numerous demonstrated interpersonal and intrapersonal benefits are associated with secure attachment. Most basically, happiness is associated with secure attachment as assessed by the Relationship Styles Questionnaire (RSQ) (Mukherjee & Basu, 2008). The securely attached, as well as those in relationships with them, have more relationship satisfaction (Collins & Read, 1990), and enjoy better communication (Mikulincer & Nachshon, 1991; for a discussion, see Feeney & Noller, 1996). Additionally, when stressed, the securely attached are more able to seek support than the insecurely attached (Simpson et al, 1992).

Secure attachment correlates with lower levels of pain severity, depression, pain catastrophizing, and anxiety (Tremblay & Sullivan, 2009), while insecure attachment not only correlates with greater chronic pain-related disability and significantly predicts episodic pain related disability (Rossi, Di Lorenzo, Malpezzi, Di Lorenzo, Cesarino, Faroni, Siracusano, & Troisi, 2005), but also insecure attachment, specifically attachment anxiety, predicts lower pain threshold and lower perceptions of both pain control as well as ability to lessen pain, but *greater* stress, depression, and catastrophizing, whereas secure attachment predicts less depression and

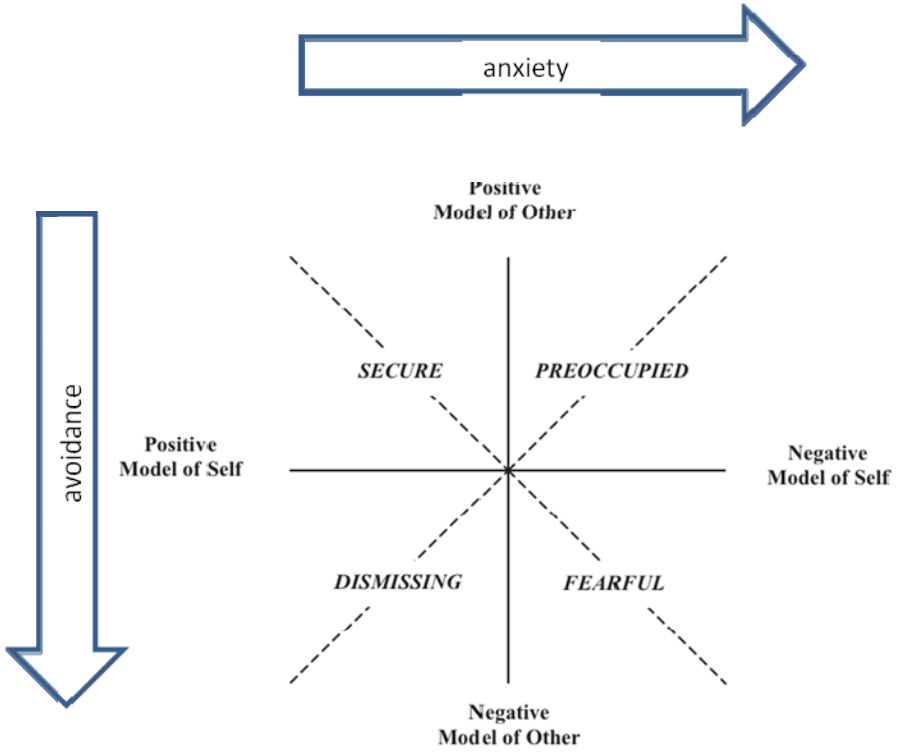

Figure 1.Four category model of IWM (adapted from Bartholomew & Horowitz, 1991), with anxiety and avoidance dimensions added.

catastrophizing as well as greater perceptions of pain control (Meredith, Strong, & Feeney, 2006). Insecure attachment is associated with substance abuse disorders (Francis, Kaiser, & Deaver, 2003) and eating disorders (Ramacciotti, Sorbello, Pazzagli, Vismara, Mancone, & Pallanti, 2001; Broberg, Hjalmers, & Nevonen, 2001). Insecure attachment may be associated with substance abuse and eating disorders since insecure attachment is associated with emotion dysregulation (Lopez & Gormley, 2002), and the insecurely attached might impulsively engage in behaviors to feel better, as suggested by Tice, Bratslavsky, & Baumeister (2001). In fact, attachment can be reconceptualized as a theory of affect regulation (Schore, 2000; 2001), of which the securely attached are capable, while attachment anxiety is characterized by hyper-emoting and attachment avoidance by hypo-emoting (Sroufe, 1996 as cited in Fonagy, 2001) (see Figure 2).

In their meta analysis of over 200 adult attachment studies, Bakermans-Kranenburg & van Ijzendoorn (2009) discovered that participants who had a DSM diagnosis were more likely to be insecurely attached than non-clinical participants. Specifically, attachment anxiety is associated with borderline personality disorder (Fonagy, Target, & Gergely, 2000; for a review, see Agrawal, Gunderson, Holmes, & Lyons-Ruth, 2004), a DSM Axis II personality disorder, while attachment avoidance is associated with schizophrenia (Ponizovsky, Nechamkin, & Rosca, 2007), a DSM Axis I disorder. Attachment insecurity, along with other variables, may contribute towards psychopathology.

Formation, Function, and Stability of the IWM

The IWM forms early in life; in fact, attachment style in 12-month olds was demonstrated to be predicted prenatally by the attachment style of mothers during their gestation (Fonagy, Steele, & Steele, 1991). This mental representation of the self in relation to others is unconscious and automatic (Bowlby, 1979); since it functions like a cognitive schema (Collins, Guichard, Ford, & Feeney, 2004; Hazan, Gur-Yaish, & Campa, 2004), similar to a stereotype, and subject to the same biases and distortions, the IWM, which theoretically is able to change is resistant to change.

First, the IWM is responsible for selective attention: that which confirms previously held expectancies will be noticed, whereas that which disconfirms such expectancies will not be noticed (Collins & Read, 1994), thus interfering with change in the IWM. Indeed, the environment can only effect change to the extent that it is noticed (Davila & Cobb, 2004).

Second, the IWM influences memory, causing a person not only to remember and recall information that supports previously held expectancies, but also forget disconfirming information (Collins & Read, 1994). Third, ambiguous information is interpreted such that previously held expectancies are confirmed (Collins & Read, 1994).

However, the IWM cannot be reduced merely to a cognitive schema as some have suggested (viz., Baldwin, 1995) because not only is it motivational in nature, but it is also formed in the context of emotional experiences with the AF and focused on the fulfillment of emotional needs (Collins et al, 2004). For those high in attachment anxiety, the motivation for felt security was unmet: their AFs responded inconsistently; thus the need for security is more chronic (Collins & Read, 1994), causing anxiety, while for

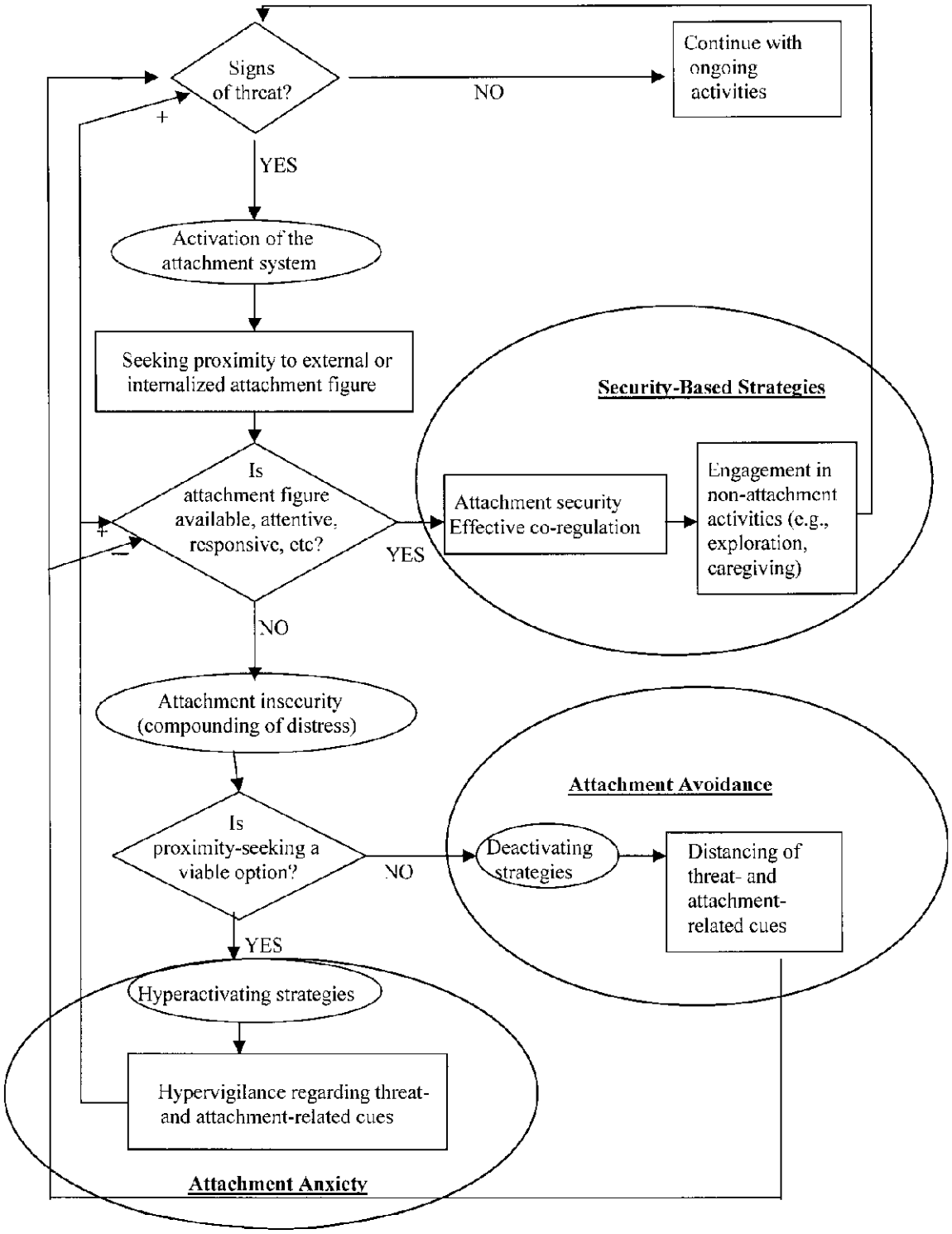

Figure 2.A model of attachment system activation (Shaver & Mikulincer, 2002, as presented in Mikulincer, Shaver, & Pereg, 2003).

those high in attachment avoidance, the motivation for security is defended against, and thus inaccessible to awareness. Also, the IWM causes a person to choose and create social environments that are self-perpetuating (Collins & Read, 1994), thus maintaining the IWM despite environmental change. For example, anxious women who feared abandonment actually caused their partners to like them less and not want to marry them (Collins & Read, 1990).

Further, because a person with already well-developed expectations is not as interested in resolving inconsistency (Stangor & McMillan, 1992), a disconfirming environment is less likely to modify an IWM that has been reinforced over time. Thus, the primary IWM that forms during infancy is more likely to assimilate than accommodate experiences over the course of development, and generalizes to relationships with other people (Shaver, Collins & Clark, 1996), including romantic partners (Hazan & Shaver 1987). Not only that, but the IWM self-perpetuates by eliciting reactions from others that reinforce previously held expectancies (Feeney & Noller, 1996). Moreover, according to cognitive dissonance theory, an insecurely attached person who has consistently thought of themselves and others in a certain way and behaved in a way that reflects that thinking, is unlikely to *want* to change, and is likely to continue seeing themselves and others in the same way (Jussim, 1992).

Given the self-perpetuating mechanisms by which the IWM operates, it would seem that for a person who is no longer a child to achieve change in the IWM would be quite difficult, if not impossible. Indeed, while Bowlby (1979) theorizes that the IWM remains relatively stable throughout adulthood and becomes resistant to dramatic change (Bowlby, 1973); nonetheless, it can change with experience (Bowlby, 1988). In fact, during the formation or loss of an adult attachment relationship, the IWM must be

changed to incorporate new information about the self and other, or "updated" (Bowlby, 1981). Failure to update the IWM to reflect a new social reality is maladaptive and associated with psychopathology (Bowlby, 1977).

Change in the IWM: Measurement, Accessibility, or Actual Change?

While many studies demonstrate a 30% rate of change in attachment style (for a review, see Baldwin & Fehr, 1995), with change demonstrated both longitudinally (Cozzarelli, Karafa, Collins & Tagler, 2003) as well as in priming studies assessing short-term change (i.e., Baldwin, Keelan, Fehr, Enns, & Koh-Ranjaragoo, 1996; Carnelley & Rowe, 2007), questions remain. Does the demonstrated attachment change reflect real change in the underlying IWM? Is this change lasting or transient? What is the mechanism by which change occurs?

Earned security, or change in the IWM from insecure to secure, is defined by an adult's responding on the Adult Attachment Interview (AAI; Main et al, 1985) with metacognitive monitoring as well as refraining from violating Grice's four maxims of conversation (Grice, 1975, as cited in Main, 1996). Such an adult speaks like a securely attached person, although their history reveals insensitive and unresponsive treatment. However, since the inception of attachment theory with attachment style defined and assessed by the AAI in relation to parental AFs, research has extended theory to include attachment to peers as well as romantic attachment, and it is noteworthy that the instruments used to assess parental and romantic attachment may not be measuring the same construct.

In a meta-analytic study of experiments that measured attachment with both the AAI and either the Hazan & Shaver (1987) 3-category self-report or Bartholomew & Horowitz (1991) 4-category self-report Relationship Questionnaire measure (RQ), the AAI and attachment style dimensions were almost unrelated: self-reported anxiety did not differentiate preoccupied and dismissing categories on the AAI, though the AAI unresolved category was very weakly correlated with both self-reported anxiety and fearfulness, and negatively correlated with security (Roisman, Holland, Fortuna, Fraley, Clausell, & Clarke 2007, Study 1). A second study did not find strong correlations between the Relationship Scales Questionnaire (RSQ) (Griffin & Bartholomew, 1994a), and the AAI; moreover, the RSQ and AAI were more strongly correlated to Big Five personality variables (Costa & McCrae, 1992, as cited in Roisman et al., 2007) than to each other, but to different Big Five personality traits. Additionally, the AAI and RSQ predicted different relationship outcomes (Roisman et al. 2007, Study 3). Moreover, in assessing young couples' attachment styles over eight months using multiple measures administered simultaneously, Scharfe & Bartholomew (1994) demonstrated that the interview measure (Bartholomew & Horowitz, 1991) yielded greater stability than the RQ and the RSQ, indicating that instability may be due to measurement unreliability.

The measures used in examining attachment stability have assessed attachment explicitly by self-report, and not implicitly. Therefore, it is not known if attachment changes consciously or unconsciously. It is possible that unconscious change has occurred which is not yet acknowledged by self-report.

Also relevant to the question of whether change is possible is the fact that any one person's "attachment style" includes several different IWMs (Bartholomew & Horowitz,

1991; Baldwin et al., 1996). Thus, it is argued that the commonly found 30% instability rates again demonstrated in several longitudinal studies ranging from 1 to 52 weeks reflects neither unreliability of measurement nor security change, but variability in attachment style due to the particular IWM activated at the time of testing (Baldwin & Fehr, 1995). Indeed, the IWM that is most accessible, either by being recently primed or by being chronically accessible by frequent activation, will determine a person's current attachment style (Collins et al., 2004), as several priming studies have demonstrated (e.g., Baldwin et al., 1996; Carnelley & Rowe, 2007; Mikulincer, Gillath, Halevy, Avihou, Avidan, & Eshkoli, 2001). Importantly, Carnelley & Rowe (2007) demonstrated a decrease in attachment anxiety two days after three daily primings of secure attachment, suggesting that priming can have longer-term effects; perhaps the repeated priming increased the accessibility of a secure IWM.

When and how the IWM is most likely to Change

According to Bowlby, IWM change is most easily achieved up until the age of five, and then to a lesser extent throughout adolescence (Bowlby, 1969/1982,1973,1980) because of the nature of developmental epigenesis central to attachment theory, which is based analogously on developmental embryology (Waddington, 1957): just as a cell embarking on any course at the beginning of development can be redirected by environmental influences on the epigenetic landscape becomes canalized with time, or more impervious to being thrown off course, so too with the IWM.

Security is theorized to be changeable in response to stressful events (Bowlby 1969/1982), as well as disconfirming life experience (Bowlby, 1988). Indeed, change in

the IWM is most likely during major life transitions (Caspi & Bem, 1990). However, while security has been demonstrated to covary with change in the caretaking environment for children (e.g., Waters, Merrick, Treboux, Crowell, & Albersheim, 2000), a similar relationship has not been consistently demonstrated among adults, perhaps because for disconfirming experiences to have an impact, they must first be noticed (Davila & Cobb, 2004). This might explain why life-changing experiences such as major change in relationship status including marriage or dissolution (i.e., Scharfe & Bartholomew, 1994) were not demonstrated to effect change in attachment security, although the authors may be correct in surmising that perhaps more time is needed to internalize change such that security would change. However, Scharfe & Cole (2006) demonstrated that relationship status *did* moderate attachment stability among university graduates as measured before and after graduation: those staying in the same relationship or changing relationships were more stable. Perhaps contradictory results regarding impact of relationship status change on instability were obtained in these two studies because life transition is mediating the relationship between relationship status change and security.

Indeed, change in thinking is one way in which change in the IWM can be effected. For example, increases in security over two years were demonstrated to be associated with changes in perception of both self and others, specifically increases in both self-esteem and perceived social support, as well as perceived decrease of social conflict (Cozzarelli et al, 2003). Similarly, change in IWM can be effected by coming to a new understanding of the behavior of AFs, including forgiving them for their shortcomings (Main et al, 1985). Further, Main et al (1995, citing Piaget, 1967), explains

that IWM change becomes possible with the advent of metacognitive monitoring, which develops after the stage of formal operations when a person has the ability to examine their own thinking and envision the operation of entire systems.

The Question of Motivation

Because the IWM is motivational in nature, involving both an inborn need for responses from another for purposes of survival, as well as motivation to satisfy those needs, perhaps change might also occur through a change in one's motivational structure. Indeed, it has been argued that motivation must be considered in attachment research (Collins et al, 2004).A person may develop a different focus which motivates him, rather than being motivated by the need for felt security as those characterized by attachment anxiety, or motivated by the need for autonomy, as those characterized by attachment avoidance. Specifically, instead of being self-focused as is typical of those with insecure attachment, a person may choose to be other-focused, as those with secure attachment are capable. In fact, being other-focused, or having an "ecosystem motivation," is more adaptive than the more self-focused "egosystem motivation" (Crocker, 2008). Cultivating such an other-focus using the Japanese practice of *Naikan,* or "inner-looking," in which a person reviews their life from the perspective of those important to them, including their attachment figures, has been demonstrated to be intrapersonally beneficial not only emotionally, but also physically (Ozawa-de Silva & Ozawa de-Silva, 2010).

Such conceptual change from self- to other- focus is illustrated in Wertheimer's (1945) story of two boys playing badminton. When seeing himself in relation to the younger player as a competitor, the older boy was not having any satisfaction, since he

was beating his opponent and the younger boy did not want to play. However, once the older boy considered the feelings of the younger, changing his focus from self to other, changing his orientation from competition to cooperation, changing the aim of the game to keep the ball in the air for as long as possible between the two of them, then the younger boy wanted to play, and the older boy achieved his goal. This idea is similarly illustrated by the Robber's Cave experiment (Sherif, Harvey, White, Hood, & Sherif, 1961), which demonstrates that recategorization and focusing on common goals can change prejudice: once the campers had to work together to solve a problem that affected all of them, the animosity of the Eagles and the Rattlers towards each other attenuated. Recategorization involved shifting the boundaries from distinguishing between the in-group and the out-group so that those previously in the out-group became part of the in-group, creating one group with a uniting superordinate goal. Perhaps a person can express change in the IWM, decreasing in attachment anxiety and improving the view of self by becoming aware of attachment and by changing their motivational orientation from focusing on themselves to focusing on the effect their attachment-related behavior has on others.

Given that there is continuity of attachment from infancy through adulthood, with the attachment of children covarying with their caretaking environments (Waters, Weinfield, & Hamilton, 2000; Waters, Hamilton, & Weinfield, 2000), the insecurely attached are on a trajectory for a lifetime of suboptimal functioning and suffering for themselves as well as those with whom they are in relationships. However, because attachment is theoretically changeable, as illustrated by the Internal *Working* Model (Bowlby, 1988) as has been demonstrated in several studies which will be discussed, it

would be beneficial for insecurely attached adults to be able to become more securely attached. However, it is not known how a person becomes more securely attached, or how improvement in the expression of the self-model of the IWM comes about.

If a short-term psychoeducational intervention can effect change in attachment style such that participants demonstrate more attachment security as well as less attachment anxiety, then sub-optimal functioning associated with this insecure attachment may be preventable, or at least attenuated. A more likely population to undergo such an intervention would be incoming college freshmen, for several reasons. First, change is theoretically possible once metacognitive awareness is attained, which does not occur until adolescence. Second, change is more likely to occur during times of transition, such as experienced by adolescents beginning university, who may think that others perceive of them differently, causing them to perceive themselves differently, as predicted by internalization theory (Tice, 1992). Third, change is more likely with the formation of new attachment bonds, which might be encouraged during this time, when this population may be likely to move away from primary caretakers and form bonds with others. Fourth, most incoming college freshmen have not yet begun their own families, and have thus not yet transmitted their attachments to the next generation.

A relatively inexpensive and innocuous method of prevention might be achievable and may be implemented on a large scale as a course for students entering university. Further, possibly increasing security among young adults would not only affect the participants themselves, but might have repercussions for future generations insofar as participants may be more likely to transmit secure attachment to their own children. At the least, what is learned may inform their future relationships and parenting

choices. Regardless of whether or not change in attachment is demonstrated, the skills and information taught in such a psychoeducational intervention could be beneficial to participants, and may improve life satisfaction and interpersonal relationships, which might then result in increased attachment security over time.

Prior Interventions

While there are certainly pre-existing established and researched interventions for improving interpersonal relationships in clinical as well as non-clinical populations, such as time limited dynamic psychotherapy (Strupp & Binder, 1984, as cited in Travis, Bliwise, Binder, & Horne-Moyer, 2001), dialectical behavior therapy (Linehan, 1993), psychodynamic supportive therapy (Appelbaum, 2005, as cited in Levy, Meehan, Reynoso, Weber, Clarkin, & Kernberg, 2006), transference focused psychotherapy, cognitive therapy (i.e., Blackburn, Bishop, Glen, Whalley, & Christie, 1981), and MST (Schaeffer & Borduin, 2005), few of these studies examine the effect of treatment on attachment style. Further, many studies examining efficacy of different treatment modalities are focused on clinical populations, including those with schizophrenia (Bach & Hayes, 2002), borderline personality disorder (Levy et al, 2006), or binge-eating disorder (Tasca, Balfour, Ritchie, & Bissada, 2007).

One study demonstrated attachment change in response to an intervention, although not a specifically attachment related intervention, and not with undergraduates: participants diagnosed with at least one Axis I or Axis II disorder who engaged in time-limited dynamic psychotherapy (TLDP) demonstrated increased security as measured by applying Bartholomew & Horowitz (1991) rating scales to videotaped interviews (Travis

et al, 2001). From pre-testing, with 0 secure participants, 11 ambivalent, 16 fearful, and 2 avoidant, only 10 participants maintained their attachment style, while 7 became secure as assessed at post-testing. While there was a significant increase in secure themes and a significant decrease in fearful themes, preoccupied themes disturbingly (although not surprisingly) remained unchanged, suggesting perhaps security did not change enough and providing evidence that preoccupied attachment may be particularly difficult to change.

Nonetheless, while it cannot be stated definitively that the therapy effected the change, it is noteworthy that a 66% instability rate was obtained, more than double the instability rate typically found in longitudinal studies. It is also noteworthy that those who became secure began therapy with fewer symptoms than those who did not become secure. One limitation of this study is that there was no control group; perhaps a control group would have demonstrated the same amount of variance. Further, change in anxiety was not assessed. Finally, the results are not generalizable due to the homogeneity of participants in the study; participants were mostly white college-educated females with previous experience being in therapy.

A study on attachment change without intervention among undergraduates during their first year in college (Lopez & Gormley, 2002), replicated the typical rate of stability: 57% of the students maintained their attachment style. Categorizing participants according to whether or not they exhibited change in attachment and in which direction, these authors demonstrated that participants who maintained their insecurity demonstrated greater suppressive coping (defined by the authors to include avoidance, denial, escapism, confusion, and lack of persistence) from pre- to post-test. That no

participants classified as having preoccupied attachment maintained their classification, but a large number of dismissively and fearfully attached participants did, suggests that fearful attachment, but predominantly attachment avoidance, is causing these results, which makes sense given the defense mechanisms of those with attachment avoidance. These results also indicate that attachment avoidance may be particularly resistant to improvement, as suggested as well by Kilmann, Laughlin, Carranza, Downer, Major, & Parnell (1999); it may be that their control group did not demonstrate change, not because they did not receive the intervention, but because overall, more avoidance was found among the control group.

Conversely, anxious attachment may be particularly likely to change, as evidenced by Baldwin & Fehr (1995) and suggested by Davila, Burge, & Hammen (1997); however, such change may not reflect real change in the IWM, since increased attachment security did not covary with increased self-confidence (Lopez & Gormley, 2002). Notably, stable secures scored higher than any other group on self-confidence, characterized by confidence in three areas: physical appearance, romantic relationships, and social skills, all of which are based on interpersonal relating, and would be expected to characterize the securely attached, with their positive models of self and other.

That decreases in security covaried with increases in reactive coping and changing from insecure to secure was associated with less distress over time (Lopez & Gormley, 2002) provides evidence that emotional dysregulation is involved with attachment insecurity, providing support for conceptualizing attachment as a theory of affect regulation, suggested by Schore (2000; 2001), who discusses the impact of attachment on brain function, specifically the orbitofrontal cortex, bidirectionally

connected with the limbic system. Therefore, perhaps it is possible for those with attachment anxiety to gain attachment security by increasing emotional self-control by making less chronically accessible the motivation to achieve felt security by altering views of oneself and others and become otherwise motivated by decreasing self-focus and increasing other-focus.

Only Kilmann and colleagues (Kilmann, Laughlin, Carranza, Downer, Major, & Parnell, 1999; Kilmann, Urbaniak, & Parnell, 2006) have investigated the effects of an attachment-related intervention on insecurely attached undergraduates in two studies. However, the goal of their research program was not explicitly to increase attachment security, but rather to decrease maladaptive interpersonal relating among insecurely attached participants.

In their first study, the goals of the intervention were to increase self-awareness among insecurely attached female undergraduates as well as teach relationship skills, realistic relationship expectations, and relationship interaction patterns. Participants were randomly assigned to either receive the intervention or not, and were post-tested immediately after the 17 hour intervention, which was conducted over a three-day weekend, as well as 6 months later. Attachment was the particular focus during 10 of the hours of the intervention, which involved introducing participants to attachment principles after which participants discussed the ways in which conflict and anger were dealt with in their families growing up, as well as how intimacy and affection were expressed. Then, after sharing their dating experiences, participants were encouraged to recognize residual negative feelings associated with these experiences, as well as “forgive and forget.” Finally, metaphors and fables featuring relationship and attachment issues

were discussed in an effort to help participants not feel determined by their past experiences, or doomed to repeat the problematic ways of relating that were learned from their families of origin.

This study demonstrated that only those receiving the intervention were less fearful and significantly more secure at the post-test 6 months later in comparison to those who did not receive the intervention, but were merely pre-tested and post-tested at the same times as those receiving the intervention. However, contrary to expectations, there was no significant change in self esteem (Kilmann et al., 1999) among those receiving the intervention. It is noteworthy that at the first post-test, the increase in security was not significant, but attained significance at the second post-test.

That the increased security in the attachment awareness group in the earlier study only became significant at the 6 month post-test indicates that post-intervention change in attachment style might not be immediately apparent, as suggested by Scharfe & Bartholomew (1994). It might be the case that what subjects learned takes time to effect change in their lives, ultimately leading to more secure attachment. However, because attachment was not assessed implicitly, it is not known whether unconscious change in the IWM preceded attachment change, or whether what was learned effected change in behavior and interpersonal relating, which in turn effected change in attachment.

Also, it is noteworthy that ANOVAs were performed to assess between group differences on groups with very different attachment compositions, despite randomization: five fearful, three avoidant, and 1 fearful-preoccupied subject received the attachment awareness intervention, whereas 1 fearful, 4 avoidant, and 1 fearful-dismissive subject did not. Overall, more attachment anxiety was represented in the

experimental group, which may be why that group demonstrated change relative to the control group. Perhaps the demonstrated change in the intervention group would not be evident if they examined change within each group relative to the other. Further, the small number of subjects in this study as well as the limitation to females precludes generalization.

The second study conducted by Kilmann and colleagues (Kilmann et al, 2006) included males as well as females who were randomly assigned to one of three conditions: a control condition in which no intervention was administered as well as intervention conditions which differ in that during 12 out of the 17 hours, one focused on attachment awareness with no mention of relationship skills, while the other focused on relationship skills, with no mention of attachment within the family of origin. Participants were post-tested after the weekend as well as 15-18 months later, and although the authors state that the attachment of participants was assessed at post-test, there are no data given on whether or not there was any demonstrated change in attachment. However, participants receiving the attachment awareness intervention demonstrated a significant increase in self-esteem in contrast to those in the other two conditions, although this increase was not apparent at the second post-test, when none of the groups demonstrated change.

It is noteworthy that in contrast to the attachment intervention in the earlier study, the attachment intervention in this later study did not include modeling and role play of effective relating as well as active listening instruction. However, these components were part of the relationship skills intervention in the later study, and participants in this condition demonstrated a significant decrease in interpersonal problems at the first post-

test, as assessed by the Inventory of Interpersonal Problems (IIP) (Horowitz, Rosenberg, Baer, Ureno, & Villasenor, 1988). Because interpersonal problems as assessed by the IIP have been demonstrated to significantly correlate with different attachment styles (Horowitz, Rosenberg, Bartholomew, 1993; Haggerty, Hilsenroth, & Vala-Stewart, 2009) and dimensions (Chen & Mallinckrodt, 2002; Haggerty et al, 2009), the attenuation in interpersonal problems likely indicates an attenuation in attachment insecurity as well. Kilmann et al (2006) do not detail which IIP subscales demonstrated change, but only report a significant decrease on the total score.

Since the focus of Kilmann and colleagues was on decreasing relationship distress, they examined other constructs known to have an impact on relationship functioning, such as anger and anger control, and Kilmann et al (2006) found that those in the attachment group but not in either of the other two groups demonstrated less anger and greater anger control at the first post-test than at the second. While the authors surmise that those in the attachment awareness condition decreased anger and increased self-esteem and increased anger control because participants acknowledged and expressed past and present angry feelings as a way to increase self-esteem, it may be that self-esteem increased because these participants had more control. Prior research (Lopez & Gormley, 2002), has suggested that emotional regulation problems are associated with those who are insecurely attached, and perhaps the lack of emotional control is *causing* the low self-esteem. Despite these improvements, those in the attachment awareness condition did not demonstrate a decrease in interpersonal problems.

Current studies

The goal of the present program of research was to explore whether it is possible to decrease attachment anxiety and improve the self-view of the IWM among incoming college freshmen, among whom change is most likely, for several reasons: these students are not only experiencing a change in identity from high school graduates to university students; they are potentially further separating from their families; they are capable of metacognitive awareness, which has already developed.

Study 1 involved the creation of a measure of implicit security of the self-view of the IWM; Study 2 was a six week pilot study using attachment as pedagogy, aiming to increase security among those with attachment anxiety; Study 3 was an exploratory semester long study aiming to increase security with the inclusion of an attachment avoidance module and empathic listening workshop; and Study 4 was an intervention targeting attachment as well as models of self and other, using attachment as pedagogy. To assess if security change is lasting or transient due to priming or measurement unreliability, security assessment at pre- and post-testing was co-administered with other instruments measuring constructs expected to covary with security (cf. Park, Crocker, & Mickelson, 2004). Attachment was assessed implicitly to help elucidate the mechanism by which the IWM might change.

The research that comprises this dissertation addresses several limitations of Kilmann's earlier studies. Firstly, attachment is assessed with the ECR-r, which has been demonstrated to be more reliable than the RSQ (Fraley et al., 2000). Secondly, research of the dissertation considers not only security assessed by self-report, but also implicitly assessed security. Thirdly, Kilmann's later study had removed empathic listening,

modeling and role play from the attachment intervention in their earlier study; the present study includes all the components in the attachment intervention. Fourthly, participants in prior studies, while undergraduates, were older: the average age in the earlier study was 21 and in the later study, mean ages ranged from 19.8 years in the relationships skills condition to 20.6 years in the attachment awareness condition. The present study targets incoming freshmen, who are just transitioning to university and their new identities as undergraduates, and thus might be more likely to change. Fifthly, the current study extends over the course of a semester in the form of a class, making it more amenable than a weekend intervention with small groups—the earlier study had 13 participants in the intervention and 10 controls, while the later study had no more than 9 participants in each group—to wide-scale and more convenient application.

Finally, while prior studies emphasized how others affect the self, as well as examining dysfunctional vs. functional relationship beliefs in general, the current attachment intervention emphasizes how *those who are insecurely attached negatively affect their relationships* (and conversely, how the securely attached positively impact relationships) because of their attachment related behavior, motivation, and cognition. The current intervention explicitly recategorizes attachment security vs. insecurity along the dimension of focus, although the nature of self-focus differs by type of attachment insecurity.

Specifically, those high in attachment anxiety are motivated by the need for felt security, and are busy with attempts at securing demonstrations of love, affection, and attention from others without regard or awareness of how their behaviors and focus on meeting their needs affects others, while those high in attachment avoidance are

motivated by the need for autonomy and avoidance of closeness, and are defending against awareness of their own vulnerabilities and feelings, without regard to the impact their dismissiveness has on the feelings of others. On the other hand, the securely attached demonstrate low levels of both anxiety and avoidance, and do not need to be self-focused in meeting their own needs. They can thus be more aware of others, and have a greater "other-focus." Accordingly, because their attachment systems are not aroused, their exploring (Bowlby, 1969) and caretaking systems (Mikulincer et al, 2001) are able to be employed. Presenting attachment in this way is a unique contribution, although prior work (Garcia & Crocker, 2008; Crocker & Garcia, 2009) differentiating an "ego–systems" orientation (self-focus) from an "eco-systems" orientation (other-focus), suggests that the former is more adaptive, both intra-and interpersonally. Indeed, it has been argued by attachment researchers that motivation must be considered in attachment research (Collins et al, 2004). Perhaps a person may become secure by developing the motivation to be other-focused.

Reconceptualizing attachment security in this way allows for a psychoeducational approach that can target all attachment types, and not isolate one insecure type from another, thus reducing defense mechanisms of the dismissively attached (Mikulincer & Shaver, 2007c; Mikulincer, Shaver, Cassidy, & Berant, 2009) as well as inferiority complexes of the anxiously attached (Mikulincer & Shaver, 2007c; Mikulincer et al, 2009). While the securely attached might not benefit or need an intervention to become more secure, they might learn how to protect their secure state of mind by learning how those with insecurely attached styles present, since involvement in relationship with insecurely attached may make one more insecure over the long term (Davidovitz,

Mikulincer, Shaver, Ijzak, and Popper, 2007). Further, in class discussion and exercises, those who are insecurely attached benefit from interacting with those who are securely attached. These considerations justify another difference between this intervention and prior attachment interventions: prior studies prescreened participants for insecure attachment, thus limiting subject inclusion, whereas the intervention resulting from the present work does not preselect based on attachment style, for the reasons discussed.

Finally, the goal of prior attachment interventions differs from the work of this dissertation: whereas the goal of prior attachment interventions was to decrease relationship distress and maladaptive interpersonal relating, the goal of this dissertation is to increase attachment security and shed light on how that might occur. Given that the IWM is theoretically and empirically related to several other constructs, these constructs which differentiate attachment security from attachment insecurity are assessed as well.

It is hypothesized that incoming college freshmen who participate in a semester-long psychosocial intervention using attachment as pedagogy will demonstrate an increase in attachment security by attenuated attachment anxiety and avoidance. Further, it is hypothesized that students participating in the intervention will concomitantly demonstrate changes in related constructs, as discussed further in detail in Studies 2, 3, and 4.

Earning Security through Intervention: *Motivational Transformation*

It is theorized that attachment constructs including the self-view among highly attachment-anxious individuals would change through intervention by *motivational transformation*, or teaching participants to reorient their focus from meeting their own attachment-related needs and considering how others affect them, to noticing how *they* affect *others* by their attachment-related behaviors.

Firstly, as mentioned in the introduction, IWM change may occur by coming to a new understanding of the behavior of AFs, including forgiving them for their inadequacies (Main et al, 1985). An intervention might facilitate this by not blaming parents, but rather understanding the intergenerational transmission of attachment by focusing on the perspective of one's parents as children of insecurely attached parents themselves. This would help participants reframe their relationship to their parents, facilitating the attenuation of attachment preoccupation.

Further, as discussed in the introduction, prior research demonstrates that secure attachment facilitates empathic responding – perhaps the relationship could work in reverse; that is, teaching empathic responding could facilitate secure attachment.

That those with more altruistic volunteering motivations also had less loneliness and interpersonal problems as assessed by the IIP (Gillath et al, 2005) provides support for the theory that attachment security increases with an increase in other focus. It is of interest that this relationship between altruistic volunteering motives and attenuation of intra- and inter-personal problems was demonstrated among all participants, not just those high in anxiety, whereas among those high in anxiety, less interpersonal problems

was associated with more volunteering. These findings indicate that a greater focus on others may facilitate attachment security.

The Importance of Relating with Others

Facilitating such motivational transformation through intervention would include various components, based on prior research and theory. For instance, an intervention designed to increase attachment security would necessarily involve dyadic activities: after all, attachment is formed in relation with others, and therefore change in attachment would necessarily involve relating with others differently. Merely learning about attachment would be insufficient. Participants would need to experience self-in-relationship-with-other in novel ways, disconfirming their prior IWMs, as suggested by differential findings of the earlier and later studies of Kilmann et al (1999, 2006).

The attachment intervention in the earlier study (Kilmann et al, 1999) led to increased security, but no increase in security was reported as a result of the attachment intervention in the later study (Kilmann et al, 2006), although those in the relationship control group in this study demonstrated better scores on the IIP (Horowitz et al, 1988), suggesting greater attachment security. It is noteworthy that the attachment intervention in the earlier study incorporated three components that were missing from the attachment intervention in the later study, although the relationship control group did include these three components: empathic listening instruction and modeling of appropriate relationship behavior as well as role playing such behavior. All three of these components involve self-with-other: either interacting with others or learning how to interact with others. These differences between the studies associated with significantly differential

results suggest that increased security would involve a) facilitating more adaptive interaction with others as well as b) practice interacting with others more adaptively.

Along these lines, forming a new relationship with a dyadic partner after engaging in an interpersonal closeness generating exercise (Aron et al, 1997) should help facilitate greater attachment security: partners are welcomed into the classroom only after their partners arrive, and after becoming closer through the exercise engage in role plays and exercises together, creating shared experiences and facilitating attachment security through fostering support in the relationship with partner.

Unconscious Change Occurs First

Findings of Kilmann et al (1999) suggest that perhaps other changes precede the demonstrated increase in attachment security at follow up. Might these changes include unconscious security? Certainly, originally attachment develops unconsciously first, with preverbal infants internalizing models of self and other. Attachment is only made conscious through therapy (Colin, 1996). It would make sense, therefore, that change in attachment, such as increased security, might occur first on an unconscious level. Further, as discussed in the introduction, prior research on attachment change is inconsistent. Had implicit security been assessed in studies demonstrating no increase in attachment security, it is possible that an increase in implicit security would have been demonstrated.

Further, *only* an unconscious increase and not a conscious increase in security of the self-model may be evident, again due to focus: not only due to various reasons discussed in the introduction is a person is vested in maintaining their insecure IWM, but also due to the *totalitarian ego* (Greenwald, 1980). Consciously realizing one's security

essentially means that up until that point, a person was quite incorrect in their thinking about themselves (and others). Because such an admission is painful and threatening to the self, it is preferable to consciously maintain the insecure IWM. However, this way of thinking, again, is self-, rather than other-, focused. Such ego-centric thinking, indeed, only serves to maintain conscious insecurity.

How the Program of Study Tests the Motivational Transformation Theory of Change

First, the development of an implicit measure of attachment is required to test the theory that implicit security is increased by motivational transformation, and this measure is developed in Study 1. It is hypothesized that the implicit measure of attachment security will correlate negatively with attachment anxiety and positively with attachment security, indicating that this measure assesses the implicit self-model of the IWM.

Study 2 contrasts the effects of those receiving an attachment-related intervention (Attachment Group) with those in one of two control groups, one of which controls for the substance of the intervention by participants learning about attachment by reading about it (Reading Group), and the other of which controls for the form of the intervention by participants engaging in exercises which parallel those of the intervention (Prejudice Group). Thus, it can be determined if merely learning about attachment is beneficial, or if it is the focus and exercises which cause improvement.

In both the Attachment and Prejudice Groups, participants not only engage in the same exercises with a partner, with the exception being that the former condition involves attachment-related exercises whereas the latter involves prejudice-related exercises, but also the focus in both groups is similar. In both conditions, not only are participants

encouraged to see beyond the external, focusing on intrinsic value and meaning, with those in the Attachment Group taught to develop more internal contingences of self-worth and those in the Prejudice Group taught to not judge others based on external appearances but rather notice what internal hidden factors (such as feelings and needs) make all people similar internally rather than different, but also that interpersonal and intrapersonal benefits are associated with being other-focused, rather than self-focused.

It is hypothesized in Study 2 that the Reading Group will be the stronger control group, and fewer differences will be demonstrated between those in the Attachment and Prejudice Groups than between those in the Attachment and Reading Groups. This is because those in the Reading Group a) do not have the benefit of learning about attachment reconceptualized along the dimension of focus, but are merely left to their own devices to interpret what they learn; and b) do not engage in interpersonal exercises theoretically designed to decrease attachment anxiety.

Because differences between the Attachment and Reading Groups may be due to iatrogenic effects of the Reading Group rather than beneficial effects of the Attachment Group, Study 3 tests the effects of an intervention using attachment as pedagogy, reconceptualized along the dimension of focus without the contrast of a control group. Rather than merely teach attachment anxiety and avoidance, which differ from one another in many ways as discussed in the last chapter, both are presented as being characterized by self-focus, in contrast to secure attachment, which is presented as being characterized by other focus. This emphasis occurs throughout the intervention, including through an empathic listening module in which participants are not only taught how self-focus characterizes the communication of both those with attachment anxiety as well as

those with attachment avoidance, but also how to listen empathically as do the securely attached. Similarly, this emphasis on reconceptualizing attachment along the dimension of focus is present in class discussions of the motives, behavior, and resulting interpersonal consequences of insecurely and securely attached protagonists, as well as in discussions and exercises among participants themselves, as was true of Study 2. It is hypothesized that those in the experimental condition receiving the intervention will demonstrate improvements in dependent variables relative to those not receiving any intervention.

While Studies 2 and 3 test the theory of attachment change through study design and content, Study 4 tests the theory of attachment change by the choice of outcome measures targeted by the intervention itself. Specifically, not only is narcissism assessed, but also empathy and reflective function are assessed, all constructs which differentiate self- from other-focus. It is hypothesized that not only will those receiving the intervention increase in implicit security, but also in empathy and reflective function. It would strongly support the theorized mechanism of change—that is, that motivational transformation can increase implicit security among highly attachment-anxious participants— if increases in empathy and reflective function precede an increase in implicit security among those in the experimental condition.

Further, Study 4 features a control group in which participants engage in reflective writing, as do those in the experimental condition. However, those in the control group are not taught about self vs. other focus, and are not engaged in motivational transformation, unlike those in the experimental condition. That both those receiving the intervention as well as those in the control group engage in reflective

writing is important insofar as significant between-groups differences could not be attributed solely to reflective writing.

Certainly, this leaves open the question as to whether it is the exercises or the change in focus which is responsible for any change. However, if all hypotheses are supported by the findings, taken together the results would indicate that it is the change in *attachment-related focus,* or *motivational transformation,* rather than the exercises which are responsible for the improvements, provided that the participants in both the Prejudice and Attachment Groups, which engage in similar exercises, do not significantly differ on outcome measures.

Study 1
Attachment IAT Pilot Study

As discussed in the introduction, it is not known if demonstrated change in attachment is due to actual change in the underlying IWM or due to other factors, such as measurement (i.e., Scharfe & Bartholomew, 1994; Fraley & Waller, 1998) or mere priming by increasing accessibility of a particular IWM at any given time (i.e., Baldwin & Fehr, 1995). Further, while the AAI has been demonstrated to be unaffected by social desirability (Bakermans-Kranenburg & van IJzendoorn, 1993; Crowell, Waters, Treboux, O'Connor et al., 1996), self-report measures can be biased by social desirability (i.e., van Bussel, Spitz, & Demyttenaere, 2010a; van Bussel, Spitz, Demyttenaere, 2010b, Sjogren, Edman, Widstrom, Mathiesen, & Uvnas-Moberg, 2004). Finally, it is not known *how* attachment changes. Could a person's attachment network rearrange beyond awareness, only after which a person becomes aware, or does a person change consciously and unconsciously simultaneously?

Therefore, an implicit measure was created in the form of an Implicit Association Test (IAT) (Greenwald, McGhee, & Schwartz, 1988). The IAT is a timed forced-choice task, a widely used instrument that assesses individual differences in implicit cognition, and may either be computerized or completed by hand. Words are presented either sequentially on a computer screen or listed in the middle of a sheet of paper. The task is to classify each word into one of four categories, two of which belong to the same class. One category from each class is paired with another category from a second class as expected, and the pairings are reversed and presented in an unexpected manner.

For example, words including daffodil, daisy, tulip, bugs, mosquito, roach, terrible, horrible, nasty, excellent, wonderful, and joyful are presented. The four categories into which these exemplars must be assigned are flowers, insects, good, and bad. It is common to associate flowers with good and insects with bad, but not to associate flowers with bad and insects with good. For the paper and pencil IAT, the strength of the implicit bias towards associating flowers with good and insects with bad is determined by subtracting the total number of items correctly classified when categories are unexpectedly paired from the total number of items correctly classified when categories are expectedly paired (Schwartz, Chambliss, Brownell, Blair, & Billington, 2003; Teachman & Brownell, 2001).

While the IAT has demonstrated construct validity for assessing the strengths of automatic associations (Greenwald, Nosek, Banaji, & Klauer, 2005), its predictive validity for behavioral outcomes is not sufficiently demonstrated (for a discussion, see Fazio & Olson, 2003). Nonetheless, the IAT is widely used to measure various constructs, such as implicit self-esteem (Greenwald & Farnham, 2000), unconscious bias against overweight people (Schwartz et al, 2003; Teachman & Brownell, 2001), and implicit anxiety (Egloff & Schmukle, 2002).

To assess implicit attachment security, several exemplars belonging to the categories “accepted,” “rejected,” “self,” and “other” were presented, following the format presented in the Schwartz et al (2003) study, alternating among exemplars belonging to the four category words. While words belonging to the categories “accepted” and “rejected” were universal for all participants (loved, respected, liked, unworthy, unloved, abandoned), words belonging to the categories “self” and “other”

were specific to each participant, and were obtained from responses provided to open-ended demographic questions asking for responses that are defining of the self in some way, such as ethnicity, religion, or gender (see Appendix A) a week prior to administration of the AIAT. The AIAT is scored by subtracting total number of words correctly classified when self is paired with rejected from total number of words correctly classified when self is paired with accepted. Higher scores indicate greater implicit security in the model of self.

The goals of this study are twofold: to create an implicit measure of attachment security that can be used in further research as a measure of convergent validity for attachment change by using this measure concurrently with explicit measures of attachment security in subsequent interventions designed to increase attachment security in the self-model (or decrease attachment anxiety), and also to help elucidate the developmental process by which a person demonstrates IWM change, that is whether change occurs implicitly first, only after which a person identifies as more secure on a self-report measure; or whether the reverse occurs, with people claiming they are more secure before they implicitly identify as more secure; or whether change occurs concomitantly for both implicit and explicit security. It is hypothesized that the implicit measure of attachment security will correlate with explicit measures of security. It is hypothesized that gender may moderate this correlation such that the zero order correlation between explicit and implicit security will be weaker than the partial correlation partialling out the effects of gender, because there are commonly demonstrated gender differences regarding attachment, with females more prone to being preoccupied (Bartholomew & Horowitz, 1991) and males more prone to being dismissive

(Brown, 1991, as cited in Schmitt, 2008; Bartholomew & Horowitz, 1991, although see Schmitt et al, 2003). Therefore, controlling for gender effects on the relationship between implicit and explicit security in a partial correlation should yield a stronger correlation between the two variables.

Most importantly, developing an implicit measure of attachment would bypass conscious awareness, allowing for a more veridical assessment of attachment security. Using this measure concurrently with explicit measures of attachment would permit differentiation of conscious and unconscious change in attachment, shedding light on the process of IWM change in response to intervention.

Methods

Participants

Participants were undergraduate students recruited from three classes at Rutgers University in Newark, New Jersey. Of the 67 students who agreed to participate in the two-part study, 43 completed the study. Of these, 16 identified as male (37.2%) and 27 as female (62.8%). The sample was quite diverse, as evidenced by their responses to open-ended questions which allowed for freedom of expression, and made for more individualized IATs. In response to the question, “What is your religion?”11 identified as Catholic; 7 as Christian; 4 each as “none,” Hindu, and Islamic; 3 each as Coptic Christian Orthodox and Roman Catholic; 2 each as Atheist and Jewish, and 1 each as Seventh-day Adventist, Episcopal, and “spiritual not religious.” The average anxiety score of this sample (n = 33) was 2.55, (SD = 1.11, min = 1, max= 5). The mean attachment avoidance in this sample (n = 33) was 2.9 (SD= 1.04, min = 1.22, max= 5.11)

In response to the question “Do you consider yourself religious?” 20 responded yes; 17 responded no; 1 not really; 2 somewhat, 1 sometimes yes, 1 semi, and 1 a little bit. For the purposes of analyses, “No” and “Not really” were collapsed into “No,” and the last four responses were collapsed into “Somewhat,” yielding 20 who considered themselves religious; 18 who did not, and 5 who considered themselves somewhat religious.

In response to the open-ended question, “What is your ethnicity?” 7 identifying as Hispanic, 1 as Cuban/Hispanic, 1 as Dominican, and 1 as Hispanic-Latino were collapsed into a Hispanic group comprising 10 participants; 7 identified as White or Caucasian; 5 identified as African American or Black; 3 identified as Egyptian; 2 each identified as Asian, Pakistani, and Indian; and 1 each identified as: Chinese; Polish; white Italian; Asian-Indian; Muslim; Irish; Portuguese; West Indian (Guyanese); American; “Spain”; Afro West Indian; and Eastern European.

Materials

Participants completed two measures of explicit attachment, answered several demographic questions which were used to create individualized IATs, and completed the attachment IAT (see Appendix B).

Demographic Questions. These questions elicited responses that are self-defining for a particular participant, such as gender, nationality, or whether a person is a fan of a particular sports team (See Appendix A) which were used as individual exemplars of “self,” while responses not given were used as individual exemplars of “other” for that particular participant.

Explicit Attachment. Two instruments were used to assess attachment (see Appendix C & D). The Relationship Questionnaire (RQ), developed by Bartholomew & Horowitz (1991), is commonly used to assess attachment style, both categorically as well as dimensionally. This instrument is based on Bartholomew's (1990) division of the original dismissive category into dismissive and fearful categories, differentiated by the extent to which attachment anxiety is absent (in the former case) or present (in the latter case). A forced choice is made between four paragraphs describing the four prototypical types of attachment (secure, preoccupied, fearful, and dismissive) based on underlying views of oneself and others as either positive or negative. Additionally, each paragraph is then rated on a seven-point Likert scale, yielding scores for security, fearfulness, preoccupation, and dismissiveness. Using an exemplar approach such as this one is the most appropriate way to assess attachment, since no person perfectly exemplifies one attachment type, but most people demonstrate at least two attachment patterns, and variability can be assessed over time (Griffin & Bartholomew, 1994b). However, subsequent work suggests that attachment does not fit into a simplistic categorical taxonomy with defined boundaries (Meehl, 1995), and therefore the continuous dimensional assessment of attachment is more accurate, as demonstrated by Fraley & Waller (1998), who used Meehl's (1995) taxometric approach to examine the assumptions underlying taxonic divisions within attachment.

The Revised Experiences in Close Relationships (ECR-r), a 36-item self-report scale, with each item rated along a 7-point Likert scale, assesses two underlying dimensions of attachment as continuous variables, with 18 items assessing attachment avoidance and 18 items assessing attachment anxiety (Fraley et al, 2000). This instrument

has been demonstrated to be more reliable than several other measures, including both the RSQ (Fraley et al., 2000) and the RQ (Sibley, Fischer, & Liu, 2005). To not overburden participants, half of the scale was administrated by preselecting 9 out of 18 items assessing avoidance and 9 out of 18 items assessing anxiety and interspersing them.

Procedure

All 67 participants completed packets including the demographic questions and the explicit attachment measures at the end of their classes, identifying themselves only by a four digit number of their own choosing. One week later in the same manner, 43 participants completed the individualized paper and pencil IAT that had been created for each of them from their responses to the demographics questions.

For this 20-second per page timed, forced-choice task, participants were instructed to work as quickly and accurately as they could, indicating where each exemplar on a list belonged by checking the appropriate column headed by two target words, one from each of two categories (see Appendix E for instructions). Because the IAT has been demonstrated to be susceptible to order effects, with the order presented first being favored (Greenwald et al, 1988), AIATs were counterbalanced to control for order effects by alternating the order in which the target word from one category was paired with the target word from the other category. Specifically, in one order, “self” was paired with “accepted” and “other” was paired with “rejected,” after which “self” was paired with “rejected” and “other” was paired with “accepted.” In the second order, the order of presentation was reversed: first “self” was paired with “rejected” and “other” was paired with “accepted,” after which “self” was paired with “accepted” and “other” was paired with “rejected.”

Because the AIAT is scored by subtracting total number correctly classified when exemplars are mismatched from total number correctly classified when they are matched, the strength of the association is greater when the differential between the two is greater, and a person demonstrates greater implicit security as evidenced by having more exemplars correctly classified when self is paired with accepted and other is paired with rejected than when self is paired with rejected and other is paired with accepted. Therefore, it is expected that the AIAT would correlate positively with the secure paragraph of the RQ, which explicitly assesses on a Likert 7-point scale the extent to which the self is viewed in an accepting way, with higher scores indicating greater attachment security. It is also expected that the AIAT would correlate negatively with explicit measures of attachment insecurity which view self in a rejecting way, specifically the preoccupied paragraph of the RQ and attachment anxiety as assessed by the ECR-r. No predictions were made about the relationship between attachment avoidance and the dismissiveness paragraph of the RQ, both of which express a defensively positive view of the self. Further, no predictions were made about the relationship between attachment avoidance and the fearful paragraph of the RQ, since although those with fearful attachment are not only high in anxiety, with a negative view of self, they are also high in avoidance, with a negative distrusting view of others. With regard to both groups, it may not be possible to implicitly assess negative self-views due to the defense mechanisms of those with these attachment styles. Although the hypothesized relationship between the variables is direction-specific, the standard and more conservative two-tailed results are reported.

Correlating implicit and explicit security among the same participants should facilitate the assessment of unconscious attachment.

Results

Pearson Product Moment Correlations were performed controlling for order effects and gender (see Table 1; for descriptive statistics of dependent variables, see Table 2). Order effects were controlled for by creating a dummy variable indicating which of two orders was presented first ("self" paired with "accepted" and "other" paired with "rejected" or "self" paired with "rejected" and "other" paired with "accepted"). As hypothesized, there was a significant positive correlation between the AIAT and security as assessed by the secure paragraph of the RQ, rated on a 7-point Likert scale ($r = .48$, $n = 29$, $p = .006$). There was a strong trend toward a significant correlation between the AIAT and fearfulness as assessed by the fearful paragraph of the RQ, rated on a 7-point Likert scale ($r = -.35$, $n = 29$, $p = .056$). There was a strong trend toward a significant correlation between the AIAT and preoccupied attachment as assessed by the RQ preoccupied paragraph, rated on a 7-point Likert scale ($r = -.34$, $n = 29$, $p = .059$). The relationship between the AIAT and dismissiveness as assessed by the RQ dismissive paragraph, rated on a 7-point Likert scale was not significant ($r = -.07$, $n = 29$, $p = .69$). There was a significant negative correlation between the IAT and both anxiety ($r = -.55$, $n = 29$, $p = .001$) and avoidance ($r = -.36$, $n = 29$, $p = .05$) as assessed by the ECR-r. A partial correlation was performed to examine whether order effects may be moderating the correlation between the AIAT and measures of explicit attachment, comparing partial

order correlations with zero order effects. Partial correlations are reported first, after which zero order effects are reported.

Table 1

Intercorrelations among Dependent Variables[a,b] *(Study 1)*

	Construct	1	2	3	4	5	6	7
1.	Implicit Security	—	.48**	-.35	-.34	-.07	-.55**	-.36*
2.	Attachment Security		—	-.63**	-.20	-.12	-.47**	-.65**
3.	Fearful Attachment			—	.17	-.08	.41*	.40*
4.	Preoccupied Attachment				—	-.22	.57**	.10
5.	Dismissive Attachment					—	.11	.41*
6.	Attachment Anxiety						—	.44*
7.	Attachment Avoidance							—

[a]controlling for both gender and IAT order effects; [b]n=29
* indicates a significant correlation at the 0.05 level; ** indicates a significant correlation at the 0.01 level

As evidenced by differences in both orders of magnitude as well as levels of significance, it was suggested that order effects may moderate the correlation between the AIAT and security as assessed by the RQ on a 7-point Likert scale (r =.48, n = 30, *p* =.005, two tailed vs. r =.47, n = 31, *p* = .006); fearfulness as assessed by the RQ on a 7-point Likert scale (r = - .33, n = 30, *p* =.064 vs. r = - .30, n = 31, *p* = .086); preoccupied attachment as assessed by the RQ on a 7-point Likert scale (r = - .35, n = 30, *p* =.053 vs. r = - .33, n =

31, *p* = .061); dismissiveness as assessed by the RQ on a 7-point Likert scale (r = - .06, n = 30, *p* =.75 vs. r = - .05, n = 31, *p* = .76); anxiety as assessed by the ECR-r (r = - .54, n = 30, *p* =.001 vs. r = - .52, n = 31, *p* = .002); and avoidance as assessed by the ECR-r (r = - .343, n = 30, *p* =.055 vs. r = - .344, n = 31, *p* = .050). That the zero order effects are demonstrated to be not identical to the results of the partial correlation suggests that it is important to statistically control for order effects of the AIAT in future studies comparing implicit and explicit attachment.

Similarly, partial correlations controlling for gender (reported first) compared with the zero order correlations (reported second) suggest that gender may moderate the correlation between implicit and explicit attachment on every explicit attachment measure: attachment security (r = .47, n = 30, *p* =.007 vs. r = .47, n = 31, *p* = .006); fearfulness (r = - .32, n = 30, *p* =.072 vs. r = - .30, n = 31, *p* = .086); preoccupied attachment (r = - .329, n = 30, *p* =.066 vs. r = - .330, n = 31, *p* = .061); dismissiveness (r = - .07, n = 30, *p* =.70 vs. r = - .05, n = 31, *p* = .76); anxiety (r = - .516, n = 30, *p* =.003 vs. r = - .517, n = 31, *p* = .002); and avoidance (r = - .36, n = 30, *p* =.045 vs. r = - .34, n = 31, *p* = .05).

Exploratory partial correlations controlling for gender and order effects were conducted to investigate the possible connection between the demographics forced choice question whether a person considered himself religious on a 3-point scale (1= yes, 2= somewhat, 3=no) and implicit attachment. Controlling for gender, exploratory partial correlations were conducted between religiousness and explicit attachment. Religiousness was not significantly correlated with any attachment measure, with the exception of anxiety (r = .42, n = 30, *p* =.017), such that the higher attachment anxiety, the less

Table 2

Means, Standard Deviations, and Minimum and Maximum Scores for Dependent Variables (Study 1)

	Implicit Security[a]	Attachment Security[b]	Fearful Attachment[b]	Preoccupied Attachment[b]	Dismissive Attachment[b]	Attachment Anxiety[c]	Attachment Avoidance[c]
M	11.57	4.58	4.26	3.28	3.28	2.55	2.90
SD	(4.50)	(1.59)	(1.87)	(1.75)	(1.76)	(1.11)	(1.04)
Min	2.00	2.00	1.00	1.00	1.00	1.00	1.22
Max	19.00	7.00	7.00	7.00	7.00	5.00	5.11

[a] data are available for 42 participants; [b] data are available for 43 participants; [c] data are available for 33 participants

religious a person identifies as being.

Discussion

The AIAT appears to assess implicit attachment security: as predicted, the AIAT correlates significantly positively with attachment security, and negatively with attachment anxiety. The correlation with preoccupied attachment was in the expected direction, and perhaps with a greater number of subjects, this relationship would attain significance. It is noteworthy that a similar Attachment IAT was developed in Europe by Dewitte, De Houwer, & Buysse (2008), whose Self IAT correlated significantly with preoccupied attachment as assessed by the RQ as well as attachment anxiety, as assessed by the ECR-R. Further, in a regression analysis, these authors demonstrated that beyond the self-report attachment measures, the IAT was predictive of attachment-related cognitive-emotional responses.

Unexpectedly, the AIAT correlated negatively and significantly with attachment avoidance, suggesting the power of implicit assessment of attachment to bypass defense mechanisms inherent in those with this attachment type. That there was no significant correlation between explicit dismissiveness and implicit security may be due to the fact that attachment avoidance as assessed by the ECR-r and dismissiveness as assessed by the RQ may not be measuring the same construct. Indeed, a dimensional, rather than a categorical, assessment of attachment is more veridical (Fraley & Waller, 1998). On the other hand, this relationship between implicit security and dismissiveness, while not significant, is in the expected direction, and perhaps with more subjects, the correlation would attain significance.

That there was a strong trend toward a significant correlation between the AIAT and fearfulness suggests perhaps that either implicitly, the negative model of self is more salient for those falling into this classification or that the more avoidant defense mechanisms are bypassed by assessing attachment implicitly, as suggested by the significant correlation between the AIAT and avoidance.

Given the confirmatory differences between zero order effects and partial correlations, as hypothesized, both gender and order of presentation (whether first pairing self with accepted and other with rejected or first pairing self with rejected and other with accepted) may moderate the correlations of attachment assessed explicitly and implicitly. Therefore, it is suggested to not only counterbalance the presentation of the target word pairings, but also control for order effects with a dummy variable representing counterbalanced order, since order effects may moderate the correlation between the AIAT and attachment as assessed by the RQ and the ECR-r.

That the AIAT was significantly correlated with avoidance but not dismissiveness suggests two things: 1) avoidance and dismissiveness are assessing slightly different constructs (Fraley & Waller, 1998; Sibley et al, 2005), and 2) despite the defense mechanisms of those high in attachment avoidance, who have a consciously defensively positive self-view (Mikulincer & Shaver, 2007c), the AIAT is able to assess the more veridical unconscious negative self-view of those belonging to this group. Similarly, that the AIAT demonstrated such a strong trend toward a significant negative correlation with fearfulness, suggests either that the AIAT bypasses conscious defense mechanisms in fearfulness, or that the negative self-view associated with attachment anxiety among the

fearfully attached trumps the defense mechanisms associated with their attachment avoidance.

The significant positive correlation between self-identified religiousness and attachment anxiety suggests such that the less religious a person claims to be, the more explicit attachment anxiety they have. This correlation is supportive of the findings of Park et al (2004) that the securely attached may base their contingencies of self worth on relationship with deity, and suggests that relationship with deity might be linked to the view of self comprising the IWM, rather than the view of other. However, it is noteworthy that there was no significant connection between level of religiousness and either explicit security as assessed by the RQ secure paragraph or implicit security as assessed by the AIAT, indicating perhaps that religiousness does not contribute towards implicit attachment security, or holds only for some individuals, although certainly no definitive conclusions can be drawn from the correlational nature of the data as well as the very small sample. Furthermore, although insignificant, the direction was as would be expected, based on findings of Park et al (2004). Finally, in examining the relationship between religiousness and attachment, it may not be enough to assess religiousness in and of itself, but it may also be necessary to examine the views an individual has of how accepting or rejecting his deity is. More detailed research is required to parse the way in which a person perceives their deity, as well as their relationship to their deity, whether self-focused, (extrinsic), or other focused (intrinsic) as assessed, for example, by the IRMS, which differentiates between self-serving and self-defining religiosity (Hoge, 1972). Indeed, Kirkpatrick & Shaver (1990) have demonstrated a significant correlation

between attachment security and intrinsic religiosity as assessed by the Intrinsic and Extrinsic Religious Orientation scales (Allport & Ross, 1967).

While typically, studies examining change in the IWM have not included both explicit and implicit measures of attachment, researchers have begun to use the two types of measures concurrently (e.g., Zayas & Shoda, 2005; Banse & Kowalick, 2007; Dewitte & De Houwer, 2008; Dewitte et al, 2008) and the Rorschach Ink Blot test (Berant, Mikulincer, Shaver, Segal, 2005).

Limitations

While the scale demonstrates construct and convergent validity, follow-up assessments were not performed to assess test-retest reliability. Another limitation of this study was that the implicit and explicit measures of attachment were not administered at the same time. Because attachment is known to be not only trait-like, but state-like as well, it is possible that explicit attachment assessed at the second session would not have been identical to that assessed at the first, and therefore the implicit attachment assessed during the second session cannot be said to definitively correlate with explicit attachment during the second session. Another problem with this study is that the 9 items assessing anxiety and the 9 items assessing avoidance were not randomly selected and randomly arranged. Further, the AIAT was tested on a very small sample.

Finally, the IAT assesses cognition only, and the IWM involves not just cognitions, but associated motivations. It is an assumption that attachment related motivations would differ along with changes in cognition. An instrument assessing attachment motivation has not yet been developed, and is suggested. Such an instrument

might assess the extent to which a person engages in defensive exclusion of attachment related matters, signifying attachment avoidance, as well as the extent to which a person engages in behaviors designed to keep an attachment figure near, or ingratiate oneself to an attachment figure, signifying attachment anxiety.

Study 2

Six Week Intervention Pilot Study

Given the debate in the literature discussed in Chapter 1 about whether or not actual attenuation of attachment anxiety is achievable or due to other reasons such as stable instability, accessibility, or measurement issues, the first objective of this study is to determine if undergraduate students with preoccupied attachment (those holding negative views of themselves but positive views of others) can, after experiencing an intervention of six weekly meetings using attachment as pedagogy, achieve greater security by demonstrating less attachment anxiety. The dependent variables that are examined in this study are explicit and implicit attachment, prejudice, self-esteem, narcissism, emotional intelligence, self-compassion, and spirituality. The relationship of each of these variables to attachment is discussed briefly below, providing the rationale for its inclusion.

Attachment and Prejudice

The relationship between prejudice and attachment is well established. Specifically, not only does negative reaction to out-group members increase in direct relation to attachment anxiety— and conversely, the securely attached are less prejudiced towards out-group members—but also priming secure attachment decreases negative reaction to out-group members, regardless of attachment style (Mikulincer & Shaver, 2001). Because the securely attached are less prejudiced towards out-group members than are the insecurely attached, a measure of prejudice is included as convergent validity.

Also, given that a college level course on race and gender reduced prejudice towards black people (Mallott & Hogan, 2003), a secondary goal of this study was to determine if prejudice would decrease among participants involved in prejudice-related exercises.

Attachment and need for cognition

Relevant to the current study, prejudice decreased among participants who rated high on need for cognition (Mallott & Hogan, 2003), or the extent to which a person enjoys thinking, or is motivated to engage in thinking (Cacioppo & Petty, 1982). Therefore, need for cognition was included to control for this individual difference. Since learning involves thinking, it is expected that among participants, those who have a higher need for cognition might be more likely to demonstrate change in attachment style as a result of the intervention because they would be more intellectually engaged with the material.

This relationship between the attachment and exploratory systems is supported with several studies, beginning with the Strange Situation study, which provided evidence of the inability of infants high in attachment anxiety to explore in the absence of their primary caretakers (Ainsworth et al (1978), as cited in Main, 1996). Among adults, those who are securely attached are able to productively engage in work in a balanced way, not allowing work to impinge upon other aspects of their lives while those who are anxiously attached cannot fully engage in work, distracted by relationship issues (Hazan & Shaver, 1990).

When understood as a type of exploratory activity, need for cognition is also related to attachment, as demonstrated by Martin (2006), who examined the influence of

current relationship on exploration, using the Need for Cognition Scale (Cacioppo, Petty, & Kao, 1984) as an assessment for intellectual exploration, finding a significant inverse relationship between NCS and attachment anxiety, but no significant relationship between NCS and avoidance. Those high in attachment anxiety would theoretically be expected to have less need for cognition, since only once the attachment system is deactivated and attachment needs are met, can a person engage in exploratory and caregiving behaviors (Bowlby, 1969/1982). However, the attachment needs of those with high attachment anxiety are inconsistently met, causing hyperactivated attachment arousal (Shaver & Mikulincer, 2002), and therefore less ability to engage in exploration.

A fall 2008 online prescreening of Rutgers-Newark students (n = 694) confirmed a relationship between NCS and both attachment dimensions, demonstrating a significant negative correlation between need for cognition and both anxiety and avoidance, as well as negative correlations with preoccupied and fearful attachment assessed by the RQ, but a positive correlation between attachment security as assessed by the RQ and need for cognition. Differential findings with regards to attachment avoidance may be because Martin (2006) assessed attachment using the ECR (Brennan et al, 1998), while attachment was assessed by the ECR-r (Fraley et al, 2000) during the Rutgers-Newark online prescreening.

Attachment and Self-Esteem

Several studies demonstrate a connection between self-esteem and attachment (for a review, see Mikulincer & Shaver, 2007c). Attachment security correlated with high self-esteem whereas attachment anxiety correlated with low self-esteem(Kidd & Shahar,

2008); as assessed by the RQ, secure or dismissive attachment correlated with high self-esteem while preoccupied and fearful attachment correlated with low self-esteem (Park et al, 2004). Moreover, based on the results of his six part study on attachment style and structure of the self, Mikulincer (1995) theorizes that while those high in attachment avoidance appear to have high self-esteem, they were actually defending against awareness of self-inadequacy. In the online prescreening done at Rutgers-Newark in fall of 2008 (n = 694), the relationship between self-esteem and attachment as assessed by the ECR-r was confirmed: self-esteem as assessed by the Rosenberg Self Esteem Scale (Rosenberg, 1965) was demonstrated to be significantly negatively correlated with attachment anxiety and avoidance, as well as positively correlated with the secure paragraph of the RQ and negatively correlated with the preoccupied and fearful paragraphs of the RQ.

Attachment and Narcissism

Narcissism is theoretically expected to be related to attachment, since those who were insecurely attached and have not had their attachment needs met either have the chronically accessible goal of meeting their attachment needs, as in the case of those high in attachment anxiety, or engage in devaluing others, as in the case of those high in attachment avoidance. In fact, Kohut's conceptualization of narcissism (Kohut, 1971, as cited in Banai, Mikulincer, & Shaver, 2005) suggests that narcissism is a result of being treated in a way that promotes insecure attachment, as supported by findings of Otway & Vignoles (2006). Indeed, insecure attachment is associated with pathological narcissism (Wagner & Tangney, 1991, as cited in Mikulincer, Florian, & Weller, 1993).

Dickinson & Pincus (2003) found a relationship among a sample of 90 undergraduates between attachment as assessed by the Relationship Questionnaire (RQ; Bartholomew & Horowitz, 1991) and two different types of narcissism, using Emmon's (1984, 1987) four-structure conceptualization of the NPI (leadership/authority, self-absorption/self-admiration, superiority/arrogance, and entitlement/exploitation): "grandiose narcissism" is represented by higher ratings on both the maladaptive entitlement/exploitation construct as well as the other constructs, whereas "vulnerable narcissism" is represented by higher ratings on the entitlement/exploitation dimension only. While those who rated low in entitlement/exploitation and in the middle of the other more adaptive constructs replicated the typical attachment breakdown demonstrated in normative populations), the attachment breakdown reflected greater insecurity among both the vulnerable narcissists and the grandiose narcissists. Similarly, using the ECR, Otway & Vignoles (2006) demonstrated a relationship between attachment anxiety and "covert" (or vulnerable) narcissism.

Attachment and Emotional Intelligence

The range subscale of the Range and Differentiation of Emotional Experience Scale (RDEES) was demonstrated to correlate with emotional intensity (Kang & Shaver, 2004, Study 1) as well as mood variability (Kang & Shaver, 2004, Study 2), both often characteristic of those high in attachment anxiety, while conversely, emotional complexity as assessed by the RDEES scale was demonstrated to correlate positively with empathy as well as interpersonal adaptability (Kang & Shaver, 2004), characteristics associated with secure attachment. Indeed, Lopez, Gover, Leskela, Sauer, Schirmer, &

Wyssmann, (1997, as cited in Kang & Shaver, 2004) demonstrated that securely attached participants demonstrated more differentiation of emotions (although in their study, the RDEES scale itself was not used).

However, an online prescreening of psychology undergraduate students at Rutgers-Newark done in the fall of 2010 (n = 867) did not yield the expected results, although it is noteworthy that the ECR, not the ECR-r, was used to assess attachment: the range subscale of the RDEES was neither significantly correlated with attachment anxiety, nor was it significantly correlated with attachment avoidance, controlling for gender. The differentiation subscale of the RDEES was neither significantly correlated with attachment anxiety nor significantly correlated with attachment avoidance, controlling for gender. However, the fearful paragraph of the RQ was significantly positively correlated with both the range and the differentiation subscales of the RDEES (controlling for gender), although neither the range nor the differentiation subscales of the RDEES were significantly correlated with any of the other paragraphs of the RQ. Using the RDEES with the ECR-r in the present study extends the research on attachment and emotional intelligence.

Fouladi, McCarthy & Moller (2002) demonstrate a significant positive correlation between all three subscales of the trait meta-mood scale (TMMS) with attachment to mother and father as assessed by the Inventory of Parent and Peer Attachment scale (IPPA). Furthermore, participants higher in attachment to mother as assessed by the IPPA scored higher in TMMS attention and repair subscales, while those higher in attachment to father as assessed by the IPPA scored higher in all three subscales of the TMMS

(McCarthy1998).[1] Those higher in attachment security as assessed by the Adult Attachment Questionnaire (AAQ) (Simpson, 1990) based on the 3-category attachment prototype of Hazan & Shaver (1987; 1990) also scored higher in emotional intelligence as assessed by the TMMS (Kim, 2005). To date, however, the TMMS scale has not been examined in relation to the ECR-r and the RQ, so again, the present study extends the research on attachment and emotional intelligence.

Attachment and Self Compassion

Attachment security as assessed by the RQ is significantly correlated with self-compassion, while preoccupied and fearful attachment (both involving high attachment anxiety) are both significantly inversely correlated with self-compassion (Neff & McGeHee, 2010), as would be expected theoretically and from a psychodynamic perspective: a person treats themselves the way they were treated by important caretakers, as suggested by Irons, Gilbert, Baldwin, Baccus, & Palmer (2006): self-reassurance was positively correlated with attachment security as assessed by the RQ, and negatively correlated with fearfulness. Because self-compassion can be viewed as an emotional regulation strategy (for a discussion, see Neff, 2003a) as attachment has been reconceptualized (Sroufe & Waters, 1977), those high in attachment anxiety, who tend to hyperemote and be emotionally dysregulated, should score low in the Over-identified and Mindfulness subscales. In fact, Leary, Tate, Adams, Batts, & Hancock (2007) demonstrated that those who were higher in self-compassion demonstrated attenuated negative reactions and emotionality in response to various negative stimuli, such as

[1]McCarthy (1998) also demonstrated significant gender effects: females scored significantly higher than males on the attention subscale of the TMMS.

potential negative feedback. Additionally, the motivational structure of the anxiously attached (to attain felt security) would make them more self-absorbed, and therefore less likely to see themselves as part of a community of others who, like them, suffer, and they would score lower on Common Humanity. Conversely, Leary, Adams & Tate (2005) demonstrated that participants high in self-compassion responded with less distress to adverse events, as would be expected of those low in attachment anxiety.

Indeed, a 2008 online prescreening of Rutgers-Newark students (n = 694) demonstrated significant negative correlations between the self-kind subscale of the SCS and both anxiety and avoidance There were significant negative correlations between the common humanity subscale of the SCS and both anxiety and avoidance. Curiously, while avoidance was negatively correlated with self-kind and common humanity, the RQ dismissive paragraph was positively correlated with these variables. These differences suggest, again, that the avoidance dimension of the ECR-r and the dismissive category of the RQ measure different underlying constructs.

However, as expected, as with the anxiety dimension, the other two insecure attachment styles as assessed by the RQ, preoccupied and fearful, were both negatively correlated with self-kind and common humanity, while conversely, the secure category of the RQ was significantly positively correlated with self-kind and common humanity. Interestingly but as might be expected, the Self Compassion Scale was correlated significantly with each of the three subscales of the TMMS: Attention, Clarity, and Repair (Neff, 2003b). In addition to females being overall less self-compassionate than males, there are also significant gender differences among several of the subscales: relative to males, females are significantly more self-judgmental, over-identifying, and

isolated, whereas they are significantly less mindful than males (Neff, 2003b). Overall, self-compassion, emotional intelligence, and attachment are interrelated in theoretically expected ways.

Because self-compassion is an emotional regulation strategy (Neff, 2003a), those high in attachment anxiety, who tend to hyperemote and have emotional dysregulation, should score low on the Over-identified and Mindfulness subscales. It is hypothesized that an increase in attachment security and decrease in anxiety should be accompanied by concomitant changes in these subscales as well such that self-kindness, common humanity, and mindfulness increase while self-judgment, isolation, and over-identified decrease.

Attachment and spirituality

While there are numerous ways of assessing spirituality, the intrinsic/extrinsic distinction which assesses the extent to which a person is either motivated by their religion or uses their religion to further their own ends (Hoge, 1972; Allport & Ross, 1967), is most appropriate for research in attachment for several reasons. Motivation assessed in this way is central not only to spirituality, but also to attachment (Gillath, Shaver, Mikulincer, Nitzberg, Erez, & Van Ijzendoorn, 2005). Mental health is associated with secure attachment, while mental illness is associated with insecure attachment just as mental health is associated with intrinsic spirituality while mental illness, such as depression (Watson, Morris, & Hood, 1988, as cited by Masters & Bergin, 1992) and anxiety (Watson, Morris, & Hood 1988b; Baker and Gorsuch, 1982; Bergin, Masters, & Richards, 1987) is associated with extrinsic spirituality.

As discussed above, narcissism is associated with insecure attachment, while empathy is associated with secure attachment (Mikulincer et al., 2001), just as narcissism is associated with extrinsic spirituality while empathy is associated with intrinsic spirituality (Watson, Hood, Morris, & Hall, 1984; Wiebe & Fleck, 1980) and inversely correlated with extrinsic spirituality (Watson et al, 1984). Self-esteem is associated with both intrinsic rather than extrinsic spirituality (Pargament et al, 1979) as well as secure attachment (Mikulincer & Shaver, 2007c). Moreover, intrinsicness positively correlates with tolerance and self-control (Bergin et al,1987), whereas extrinsicness inversely correlates with tolerance (Bergin et al, 1987).

Overall, attachment security seems to be related to intrinsic spirituality, whereas attachment insecurity seems to be related to extrinsic spirituality. Therefore, one who is securely attached would find comfort and reassurance when turning to his deity when his attachment system is aroused and would not be narcissistically motivated in relation to his deity, whereas one who is high in attachment anxiety would not be reassured by his relationship with his deity, but would engage in the same hyperactivating attachment strategies as he does with human attachment figures, and would be more narcissistic in relation to his deity, using his deity for his own purposes. Indeed, the insecurely attached seem to be more extrinsic in their orientation, using the relationship with their deity for purposes of affect regulation and becoming less religious when not in emotional turmoil (for a discussion, see Granqvist, Mikulincer, & Shaver, 2010).

It was hypothesized that at post testing, participants in the Attachment Group would demonstrate a decrease in preoccupied attachment and attachment anxiety and an increase in attachment security, as well as increases in self-compassion, emotional

intelligence, self-esteem, and adaptive narcissism (self-sufficiency and authority subscales), intrinsic religiosity, and decreases in maladaptive narcissism (exploitative and entitlement subscales). It was further hypothesized that the Attachment Group would perform less similarly to the Reading Group than to the Prejudice Group.

Administering an attachment intervention with two control groups – one controlling for the delivery of the intervention, and one controlling for the substance of the intervention – would allow for a closer examination of whether the substance or form of the intervention is responsible for any demonstrated changes due to the intervention.

Methods

Participants

Participants were selected from the Rutgers-Newark online subject pool comprised of students enrolled in psychology classes, based on their prescreen results: having chosen the preoccupied paragraph in the forced-choice RQ, as well as self-rating of at least a 5 on the preoccupied paragraph of the RQ; their rating on the preoccupied paragraph was not less than their rating on any other paragraph of the RQ; and they had had experience being in a romantic relationship. Of the qualifying participants who were contacted by phone and email, fifteen consented to participate, and twelve completed the first pilot experiment, while eight consented and six completed a repetition of the study in an effort to get more participants, for which the inclusion criteria were relaxed by not requiring that participants choose preoccupied on the forced-choice RQ, and not have to rate at least a 5 on the preoccupied paragraph of the RQ, and their rating on the RQ did not have to be at least equal to their ratings on the three other attachment paragraphs.

There were no significant demographic differences between the two groups by independent samples t-tests at pretesting, with the exception of a trend towards significant difference on the ratings of the preoccupied paragraph of the RQ ($t = 1.83$, $p = .085$, 2-tailed), with participants in the first sample scoring higher *(M* = 6.42, SD = 0.67) than participants in the second sample *(M* = 5.17, SD= 2.23). Every participant in the first sample identified as preoccupied, whereas four in the second sample identified as preoccupied, while one identified as fearful, and one as avoidant.

The samples together were comprised of participants from diverse ethnicities: Hispanic (6 participants); Asian (3 participants), Middle Eastern (2 participants), and one as White (Not Hispanic), while 4 identified as other and two did not identify any ethnicity. More than half (61.1%) or 11 were female, while 7 (38.9%) were male. The mean age was 19.03 years, with a standard deviation of 0.63. While none were married, three participants were romantically involved at the onset for an average of 8 months. Six participants (33.3%) were aware of attachment theory, three from a class, and one from the movie *Good Will Hunting,* one from talking to people, and one from other means. The average scores on the RQ paragraphs were as follows: secure *(M* = 3.44, SD= 1.65); fearful *(M* = 4.11, SD= 1.37); preoccupied *(M* = 6.00, SD= 1.46); dismissive *(M* = 2.22, SD= 1.31). The average anxiety of both samples together (n = 18) was 3.98 (SD= 1.23, min = 1, max= 5.56), while the average avoidance of both samples together (n = 18) was 3.02 (SD= .78, min = 1.67, max= 4.11).

Of all participants, 12 (66.7%) believed there is a Deity, 5 (27.8%) were not sure, and one (5.6%) believed there is not. The average scores on a 7-point Likert scale for Deity being least to most punishing were 3.31, SD = 1.797; on a 7-point Likert scale

rating not loving to very loving, most said their Deity was loving, with everyone rating their Deity at least a 4 on a scale from least to most loving *(M* = 6.38; SD= 1.044); on a 7-point Likert scale rating a continuum from rejecting to accepting, everyone rated their Deity at least a 4 indicating more accepting than rejecting *(M* = 6.31, SD= 1.11).

Procedure

Participants provided demographic information in the online prescreening which provided information which was used to create their idiographic AIATs; completed half of the 36 item ECR-r; and completed the RQ. Participants received 1 R-point for completing the prescreening towards their required research participation for the semester in this research institution, and completion of the intervention fulfilled the entire R- point requirement for the semester (5 additional R-points) as well as a chance to win a 25$ gift certificate, which was supplanted with a chance to win one of two $50prizes for the second sample. Qualifying students were contacted using email addresses and/or phone numbers provided during the prescreening, and invited to set up a time to complete the pre-testing.

Participants individually completed pretests including the AIAT, during which time they provided periods when they would be regularly available to participate in the experiment. Based on their scheduling availability, qualifying participants were randomly assigned to one of the three conditions. Participants in the Prejudice Group engaged in exercises that paralleled those of the Attachment Group, but in the domain of prejudice and discrimination, rather than attachment. The Prejudice Group served as a control for any effect of the exercises alone on the dependent variables. Participants in the Reading

Group did not engage in any exercises, but rather read about attachment theory every week, and summarized what they had read. The Reading Group served as a control for any effect of attachment-related learning alone on the dependent variables. All participants met for 90 minutes each week for six consecutive weeks, after which they were post tested by group during their regular session time (Figure 3). The possibility that attachment anxiety can decrease would be supported by any change in dependent variables demonstrated: a) among participants in the Attachment Group, but not among those of either of the other two control groups, and b) concomitantly with change in other dependent variables which are related to attachment security. Below is a brief description of the procedure for each condition. More detail regarding the rationale for the exercises is provided in Study 3.

Attachment Condition. The second session of this condition consisted of a college-like class on attachment theory. During the third session, participants in the Attachment condition participated in an attachment workshop involving discussion of P. D. Eastman's book *Are You My Mother?,* read in class as an illustration of preoccupied attachment in which the main character searches for security by seeking the ever-elusive mother. During the fourth session, participants in the Attachment Group were paired into dyads and participated in Aron's self-disclosure exercise (Aron, Melinat, Aron, Vallone, & Bator, 1997), after which they were instructed to wait for their partner to arrive to enter

Prescreening			
subjects randomly assigned to one of three groups based on availability to meet	Prejudice Group	Attachment Group	Reading Group

session 1	pre-testing and consent forms administered subjects assigned to next sessions		
session 2	group stereotype/prejudice information session	group attachment information session	Each session, subjects read from Bowlby's *A Secure Base* and outline what they've read.
session 3	stereotype workshop; read and discuss	attachment anxiety workshop; read and discuss	
session 4	subjects paired into dyads; do discrimination disclosures	self disclosure exercise (Aron et al)	subjects paired into dyads
For the rest of the experiment, participant waits for partner before entering experiment room.			
session 5	introduce partner to group; view and discuss *CRASH* movie clips	introduce partner to group; view and discuss clips from movies *What about Bob* and *Antwone Fisher*	continue reading and summarizing *A Secure Base*
session 6	in class prejudice writing exercise; shared with partner, then group	in class attachment writing exercise; shared with partner, then group	
session 7	role play prejudice; discuss feelings of generator and recipient	role play attachment security and anxiety; discuss feelings of generator and recipient	
session 8	Post testing		

Figure 3.Procedure of 6 week experiment.

the experimental room together as a dyad for rest of the sessions of the experiment. During the fifth session, participants introduced their partners to the group and viewed and discussed clips from movies *What about Bob* and *Antwone Fisher*. During the sixth session, participants in the Attachment Group wrote about examples of anxiously attached behavior, either they had witnessed or enacted, after which, together with their partner, they rewrote the experience in the first person with the perspective of one who is securely attached. With permission of the disclosing partner, each participant shared their partners' writing with the group. During the seventh session, partners role-played preoccupied and secure behavior, choosing one scenario from among several experimenter-generated scenarios (see Appendix F & G) and then performing it for the group, which discussed the scenarios, focusing on impressions preoccupied and secure behaviors made on others as well as thoughts and feelings actors had as both generators and receivers of preoccupied and secure behavior. Post-testing occurred during the eighth and last session.

Throughout the intervention, it was emphasized that focusing on the external rather than the internal as evidenced by looking exclusively to others for answers is maladaptive and potentially dangerous, (see Appendix H, *Are You my Mother* handout, and Appendix I *What About Bob* handout*)*. Focusing on the external rather than the internal by looking to others for approval and self-worth is emasculating (see *Antwone Fisher* handout, Appendix J); placing one's value contingent upon one's own control is contrasted with placing one's value on the opinions of others which are beyond one's control (see Appendix J). Further, it was emphasized during discussion of *What about Bob?* to see a person for who they are, respecting their needs rather than merely

considering one's own needs and projections, and both focusing on others as well as on what is within one's control such as developing oneself or behaving in ways that increase

one's self respect, was encouraged as a means towards increased security, (see Appendix H & Appendix I).

Prejudice Condition. The second session consisted of a college-like class on prejudice and discrimination. The third session involved discussion of Dr. Seuss' book *Sneetches,* read in class as an illustration of both the behavioral expression and cognitive underpinnings of prejudice manifested by ostracizing the out-group, and the changing of the prejudiced behavior. During the fourth session, participants were paired into dyads, and participated in a disclosure exercise during which they shared with their partner incidents of discrimination that their friends or family members experienced. Participants were instructed to wait for the remaining sessions of the experiment for their assigned dyad to arrive prior to entering the experimental room. During the fifth session, participants viewed and discussed clips from the movie *CRASH.* During the sixth session, participants wrote in class about instances of prejudice or discrimination they or someone they knew had experienced, and then together with their partners, rewrote the experiences in the first person from a non-prejudiced perspective. With permission of the disclosing partner, each participant shared their partners' writing with the group. During the seventh session, partners role-played prejudice and discrimination, choosing one scenario from among several experimenter-generated scenarios (see Appendix K) and then acting it out for the group, which discussed the scenes, focusing on impressions prejudiced actors

made on others and on the thoughts and feelings actors had as both generators and receivers of discriminatory behavior.

Throughout the intervention, it was emphasized how focusing on the external rather than the internal leads to perpetuation of stereotypes, as for example in the Prejudice Scenarios written for this condition (see Appendix K): the thoughts and motivations of each of two characters which participants are to take turns role playing is described, highlighting the negative intra and interpersonal effects of focusing on the external rather than the internal, and allowing participants to see and experience the views of one who is prejudiced as well as one who experiences the prejudice.

Similarly, characters discussed during the intervention are used to analyze and understand the motivations of those who are on the giving and receiving end of prejudiced behavior. For example, during the discussion of *Sneetches,* the prejudiced Star-Belly Sneetches denigrate the Plain Belly Sneetches because the latter do not have stars on their bellies, thus defining themselves by something on their outside, rather than by who they are. At the same time, it is emphasized that the Star-Belly Sneetches experiencing prejudice "buy into" the vesting of the star on the belly as indicative of worth. It is discussed how Fix-it-Up Chappies can exploit the insecurities of both groups for their own lucrative ends (see Appendix L). Further, during the discussion of *CRASH* ways of reducing prejudice are discussed, and include self-monitoring, giving the benefit of the doubt, and not projecting one's preconceptions onto another, but seeing the other for who they are as an individual (see Appendix M).

Reading Condition. During the weeks between the pre and posttest, participants in the Reading condition read and summarized chapters from a standard attachment text, John Bowlby's *A Secure Base.* Participants were told to read carefully, that speed is not as important as comprehension, and were given a paper at the beginning of each session which stated: "Please list below 3 or 4 major points of what you have just read today, no more than 1 sentence each." (see Appendix N).

Materials

Attachment. Attachment was assessed both implicitly with the AIAT (see Study 1, Chapter 3) as well as explicitly, with two measures. The Revised Experiences in Close Relationships (ECR-R) is a 36-item self-report scale that assesses attachment along two continuous variables (Fraley et al, 2000) and has been demonstrated to be more reliable than several other measures, including both the RSQ (Fraley et al., 2000) and the RQ (Sibley et al, 2005). Half of this scale that assesses attachment along the two dimensions of anxiety and avoidance, as measured on a seven-point Likert scale (Fraley et al, 2000) was administered at pretesting, while the other half was administered at post testing. Scores range from 1-7, with greater scores reflecting greater attachment insecurity. The Relationship Questionnaire (RQ), developed by Bartholomew & Horowitz (1991), is commonly used to assess attachment style, both categorically as well as dimensionally. A forced choice is made among four paragraphs describing the four prototypical types of attachment (secure, preoccupied, fearful, and dismissive) based on underlying views of oneself and others as either positive or negative. Additionally, each paragraph is then rated on a seven-point Likert scale. Using an exemplar approach such as this one is

thought to be the most appropriate way to assess attachment, since no person perfectly exemplifies one attachment exemplar, but most people demonstrate at least two attachment patterns, and variability in exemplars can be assessed over time (Griffin & Bartholomew, 1994b), although the dimensional ECR-r has been demonstrated to be more accurate than the categorical RQ (Fraley & Waller, 1998). The fall 2008 Rutgers-Newark prescreening (n = 694) demonstrated that while the dismissive paragraph of the RQ and avoidance assessed by the ECR-r do not seem to be assessing similar constructs, because the RQ and the ECR-r both seem to be assessing attachment anxiety, both attachment measures were included for purposes of convergent validity in determining any change in attachment anxiety, the primary dependent variable in this study.

*Modern Racism Scale (MRS).*This seven item, five-point Likert scale assesses the extent to which a person holds racist beliefs (McConahay, 1986). Scores range from 7 to 35, with higher scores reflecting greater prejudice.

Narcissistic Personality Inventory (NPI). This forty item forced choice instrument, theoretically based upon the DSM-III description of narcissistic personality disorder (American Psychiatric Association, 1980), assesses the extent to which those in non-clinical populations are narcissistic overall, as well as by seven subscales, as obtained by a principal components analysis: vanity, superiority, exploitation, entitlement, exhibitionism, authority, and self-sufficiency (Raskin & Terry, 1988). Each subscale is comprised of between three to eight items, with higher scores representing greater values for that scale.

*Rosenberg Self Esteem Scale (RSE).*This ten item scale is assessed along a four point Likert scale; possible scores range from 10-40, with higher scores reflecting greater self-esteem (Rosenberg, 1965). This scale is included because it is most widely used in studies that assess self-esteem, and serves as a measure of convergent validity, since those high in attachment security are also high in self-esteem, and those high in attachment anxiety are low in self-esteem(Kidd & Shahar, 2008; for a review, see Mikulincer & Shaver, 2007c).

*Self Compassion Scale (SCS).*Overall, this scale measures the extent to which a person has compassion for themselves, in addition to assessing six subscales, which comprise three constructs and their opposites: Self-Kindness-Self-Judgment; Common Humanity- Isolation; and Mindfulness- Over-identified (Neff, 2003b). Each of the six subscales of this 26-item scale are assessed with a five-point Likert scale, with scores on each subscale ranging from 1 to 5 with higher scores representing greater self-compassion for the self-kindness, common humanity, and mindfulness subscales, and higher scores represent lower self-compassion for the self-judgment, isolation, and over-identified subscales. The overall self-compassion score is calculated adding the means of the subscales after reverse coding items in the self-judgment, isolation, and over-Identification subscales. Internal consistency for the 26-item SCS is .92 (Neff, 2003b).

Demographics. For a list of demographics questions, please see Appendix O. These questions were used to inform the creation of individually designed AIAT measures for each participant.

Emotional Intelligence. This construct was assessed by two scales, the Range and Differentiation of Emotions Scale *(RDEES)* and the *Trait Meta Mood Scale (TMMS).* The RDEES assesses emotional complexity along two dimensions: range and differentiation of emotions, with each of its 14 items assessed on a 5-point Likert scale. Scores for each dimension range from 7-35, with higher numbers indicating more emotional complexity. The TMMS is a thirty item scale comprised of three subscales, each of which measures a different aspect of emotional intelligence (Salovey et al, 1995). Agreement or disagreement with each item is assessed by a five point Likert scale. The Attention subscale assesses the extent to which a person is able to attend to their moods and emotions, with scores ranging from a possible 13-65; the Clarity subscale assesses the extent to which a person is able to differentiate between different feelings, with possible scores ranging from 11-55; the Repair subscale assess the extent to which a person is able to regulate their feelings, with possible scores ranging from 6-30. For each subscale, higher scores reflect greater abilities in these areas.

Intrinsic Religious Motivation Scale (IRMS). This widely used 10-item scale assesses the extent to which a person is motivated intrinsically (I) or extrinsically (E) by their religion (Hoge, 1972). Each item is assessed by a four-point Likert scale. A person is considered to be extrinsically religious if their religion is serving their needs and if their religion does not inform their decisions, whereas a person is considered to be intrinsically motivated if their religious beliefs inform their decisions and is central in their life. This instrument consists of two subscales, one providing an intrinsic religiosity score, and the other providing an extrinsic religiosity score. An overall intrinsic score is

obtained by reversing the extrinsic items, with higher scores indicating greater intrinsic religiosity.

Need for Cognition Scale (NCS). Scores for this eighteen item, five-point Likert scale range from 18-90, with higher scores reflecting a greater need for cognition (Cacioppo, Petty, & Kao,1984), or the extent to which a person is motivated "to engage in and enjoy thinking" (Cacioppo & Petty, 1982, p. 116). Need for cognition appears to be a stable trait (Sadowski & Gulgoz, 1992).

Results

Primary Analyses

A Kruskall-Wallis test was performed for each dependent variable comparing all three groups on change from pretest to posttest. Additionally, Wilcoxon rank sum tests were performed examining differences between the Attachment Group and each of the control groups. Several significant differences were demonstrated. (see Table 3; for detailed statistical analyses, see Appendix P).

Attachment and Spirituality: Confirmatory Analyses

A confirmatory partial correlation was performed between intrinsic religiosity and attachment security as assessed by the RQ, ECR-r, and AIAT assessed at pretesting, controlling for gender and need for cognition. A trend towards a significant correlation was demonstrated between the IRMS and attachment security as assessed by the secure paragraph of the RQ ($r = .47$, $n = 13$, $p = .078$), and a significant correlation was demonstrated between the intrinsic subscale of the IRMS and attachment security as

assessed by the RQ (r = .53, n = 13, *p* = .04), but not the extrinsic subscale of the IRMS and attachment security as assessed by the RQ (r = -.09, n = 13, *p* = .74).

A partial correlation was performed to examine whether gender may be moderating these correlations, comparing partial order correlations with zero order effects. Partial correlations are reported first, after which zero order effects are reported. As evidenced by differences in both orders of magnitude as well as levels of significance, it was demonstrated that gender may moderate the correlation between the IRMS and security as assessed by the RQ (r = .48, n = 14, *p* = .058 vs. r = .50, n = 15, *p* = .041) and the correlation between the intrinsic subscale of the IRMS and attachment security as assessed by the RQ (r = .528, n = 14, *p* = .036 vs. r = .529, n = 15, *p* = .029). That the zero order effects are demonstrated to be not identical to the results of the partial correlation suggests that it is important to statistically control for gender in future studies comparing intrinsic religiosity and attachment security.

Similarly, partial correlations controlling for need for cognition (reported first) compared with the zero order correlations (reported second) suggest that need for cognition may moderate the correlation between intrinsic religiosity and attachment security, for both intrinsic religiosity as assessed by the IRMS (r = .49, n = 14, *p* = .05 vs. r = .50, n = 15, *p* = .04) as well as the intrinsic subscale of the IRMS (r = .54, n = 14, *p* = .03 vs. r = .53, n = 15, *p* = .029). That the zero order effects are demonstrated to be not identical to the results of the partial correlation suggests that it is important to statistically control for need for cognition in future studies comparing intrinsic religiosity and attachment security.

A median split was performed on anxiety as assessed by the ECR-r, and a partial correlation between intrinsic religiosity as assessed by the IRMS and attachment security as assessed by the RQ, ECR-r, and AIAT was performed for participants in the upper

Table 3: Effect of Group on Change in Dependent Variable[a] (Study 2)

Change in dependent variable	Kruskall-Wallis first sample	Wilcoxon rank sum Attachment vs. Prejudice (first sample only)	Wilcoxon rank sum Attachment vs. Reading (first sample only)	Kruskall-Wallis including second sample	Wilcoxon rank sum Attachment vs. Prejudice (both samples together)	Wilcoxon rank sum Attachment vs. Reading (both samples together)
Self esteem	↑Attachment ↑Prejudice ↓**Reading**[b]	NS	* ↑Attachment ↓**Reading**[b]	NS ↑Attachment ↑Prejudice ↓**Reading**[b]	NS	*↑Attachment ↓**Reading**[b]
Implicit security	↑**Attachment**[b] ↓**Prejudice**[b] ↓Reading	*↑**Attachment**[b] ↓**Prejudice**[b]	↑**Attachment**[b] ↓Reading	NS ↑Attachment ↓Prejudice ↓Reading	NS	NS
Dismissiveness	NS	NS	NS	↑Attachment ↑Prejudice ↓Reading	NS	↑Attachment ↓Reading
Avoidance	NS	NS	↑Attachment ↓**Reading**[b]	↑Attachment ↓Prejudice	*↑Attachment ↓Prejudice	↑Attachment ↓**Reading**[b]

↓Reading

Table 3 *(continued).*

Range	NS	NS	*↑Attachment ↓**Reading**[b]	↑Attachment ↑Prejudice ↓**Reading**[b]	NS	*↑Attachment ↓**Reading**[b]
Extrinsic IRMS subscale	NS	NS	↑Attachment ↓Reading	*↑Attachment ↑Prejudice ↓Reading	NS	*↑Attachment ↓Reading
Entitlement	NS	NS	NS	↑Prejudice ↓Attachment ↓Reading	NS ↓Attachment ↑ Prejudice	NS
Clarity	NS		NS	NS		↑Attachment ↓**Reading**[b]
Over-identification	NS		↑Attachment ↓Reading	NS		↑Attachment ↓Reading

[a]Trends indicated.
[b]Every participant responded the same way.
* p<.05.

50% of attachment anxiety, controlling for gender and need for cognition. A significant correlation between the extrinsic subscale of the IRMS and implicit security as assessed by the AIAT was demonstrated (r =-.88, n = 5, *p* = .009), although there was no significant correlation between the extrinsic subscale of the IRMS and explicit attachment security as assessed by the RQ (r = -.24, n = 5, *p* = .61). A significant correlation was demonstrated between the IRMS and attachment security as assessed by the RQ (r = .82, n = 5, *p* = .025) as well as the intrinsic subscale of the IRMS and attachment security as assessed by the RQ (r = .83, n = 5, *p* = .02).

Partial correlations between intrinsic religiosity and attachment considering participants in the upper 50th percentile of attachment avoidance controlling for need for cognition [2] demonstrated a trend towards a significant correlation between avoidance and the extrinsic subscale of the IRMS (r = .71, n = 5, *p* = .07), and a significant correlation between extrinsic subscale of the IRMS and implicit security(r = -.77, n = 5, *p* = .04).

Discussion

Interpersonal Interaction Exacerbates Avoidance

That there was a significant difference when comparing the three groups on change in avoidance, with those in the Attachment and Prejudice Groups demonstrating an increase and those in the Reading Group demonstrating a decrease might suggest that the avoidant defense mechanisms (Mikulincer et al, 2009) were activated by either the exercises or the subject matter. Comparing the Attachment Group to each of the control groups individually suggests that it is not merely the subject matter of attachment that is

[2]Gender was not controlled for in this partial correlation since only females fell into the upper 50th percentile of attachment avoidance.

driving the increase in avoidance, but possibly the interactive exercises, because the difference between the Attachment Group and the Reading Group was not significant, whereas the difference between the Attachment Group and the Prejudice Group was significant. With regard to attachment avoidance, this makes sense because merely learning about attachment would not be as threatening as interacting with others while learning about attachment. Alternatively, those in the Prejudice Group may be decreasing in avoidance because they feel less rejected by others, given the role plays and discussion about how a prejudiced person might feel and how they might feel differently when changing their focus, resulting in less prejudice. Such discussions and role play may serve to help participants be less egocentric and thus less hurt by apparent slights or prejudices of others.

Similarly, when comparing the three groups on change in dismissiveness, a trend towards a significant difference was demonstrated, with those in both the Attachment and Prejudice Groups showing an increase, while those in the Reading Group showed a decrease. That those in the Prejudice Group trended towards an increase, with some decreasing and some increasing in dismissiveness, while all those in the Reading Group decreased in dismissiveness again suggests that the defense mechanisms are not aroused when merely reading without interpersonal interaction. Further, those in the Prejudice Group may have increased in dismissiveness to bolster their own self-image in reaction to exposure to the material of the intervention, which emphasized that people are more similar than different, and the internal of a person matters more than the external of a person, as discussion about the intrinsic value of people may have been too threatening. Alternatively, the trend towards a significant increase in dismissiveness among those in

the Prejudice Group may be due to defending against attachment concerns due to feeling threatened by prejudice, and therefore defensively bolstering the self and denigrating the other, as is defining of dismissiveness. However, it is noteworthy that not all participants in this group decreased. It would be curious to further explore what might make some increase in dismissiveness in response to engaging in prejudice-reducing exercises while others decrease. Regardless, this difference in change in dismissiveness did not reach significance, and therefore conclusions are speculative.

Nonetheless, these results concerning an increase in dismissiveness and avoidance support empirical evidence that attachment avoidance is difficult to change (Mikulincer & Shaver, 2007c), and illustrate the process by which avoidant attachment insecurity may be defensively maintained: interpersonal interaction only serves to increase avoidance, which may partially help to explain why those high in attachment avoidance immerse themselves in work and "interacting" with things, rather than people.

Here it is also suggested why and how therapy does not work for those high in attachment avoidance: examining personal issues and interacting with the therapist is threatening, arousing the avoidant defense mechanisms (Mikulincer et al, 2009), despite the fact that the person high in attachment avoidance benefits from such an interaction, and may even want it, as suggested by Carvallo & Gabriel (2006). It is thus that the line between dismissiveness and fearfulness is blurred: everyone has the need to belong and benefits from belonging (Baumeister & Leary, 1995) including those high in attachment avoidance (Carvallo & Gabriel, 2006), although those high in attachment avoidance are afraid of closeness, with those high in anxiety aware of the fear, while those low in anxiety block awareness of the fear. This may yet be another reason why assessing

attachment along dimensions rather than categorically is more accurate and less artificial as Fraley & Waller (1998) have suggested. Indeed, this study demonstrates that attachment representing an IWM with putatively positive view of self and negative view of other assessed dimensionally (avoidance) and categorically (dismissiveness) do not behave similarly, as discussed previously.

Emotional Intelligence

The trend toward a significant difference among the three groups when comparing change in range of emotions only emerged with the inclusion of the second sample. This finding is encouraging. Those in both the Prejudice and Attachment Groups demonstrated an increase, whereas those in the Reading Group decreased. No significant difference is demonstrated between the Attachment Group and the Prejudice Group, but a significant difference was demonstrated between the Attachment and Reading Groups, with all participants in the Reading Group demonstrating a decrease. That the difference in change in range of emotions is significant between the Reading and Attachment Group, but not the Prejudice and Attachment Group again suggests that it is the interactive aspect of the attachment intervention, rather than the subject material itself of attachment that is driving a change in range of emotions. This makes sense insofar as experiencing a range of emotions is an interactive process rather than a cerebral solitary process: people need people, beginning in infancy when a child's feelings are mirrored by the caretaker.

However, it is not only range of emotions that is significantly impacted by interacting with others, but also clarity of emotions, as suggested by the finding of a trend towards a significant difference in a change in clarity between the Attachment and

Reading Groups, with those in the Attachment Group increasing in clarity, and those in the Reading Group decreasing. The universal need to belong (Baumeister & Leary, 1995) may be due in part to the beneficial effect others have on our emotional intelligence, and this does not exclude those high in attachment avoidance (Carvallo & Gabriel, 2006).

Self-Compassion and Self-Regulation

Similarly, there was a trend towards significance when comparing the Attachment Group to the Reading Group on change in the Over-identification subscale of the Self-Compassion Scale such that every participant in the Reading Group became less over-identified with their emotions, while most of those in the Attachment Group increased overall. This finding, while not significant, suggests that there may be something about the interactive aspect of the Attachment Group. In light of attachment theory, this is not surprising: for those high in attachment anxiety, their needs were inconsistently met by attachment figures. Therefore, in interacting with others, they may hyperemote, becoming more involved with their own feelings, and not benefiting from the presence of others, while those in the Reading Group were not interacting with others, and therefore were not triggered to hyperemote. The fact that those interacting with others while learning about attachment theory became over-identified with their emotions also illustrates how those high in attachment anxiety become emotionally dysregulated in interaction with others, and are not able to be mindful, but become overwhelmed with their feelings.

As Neff (2003b) said: “The process of self-compassion…requires that one engage in metacognitive activity that allows for recognition of the related experiences of self and other.” (p224). And this is something that a person high in attachment anxiety is unable

to do very well, due to the self-regulatory deficits that developed in the prefrontal cortex (Schore, 2001) during repeated interactions with an intermittently responsive caretaker. Although this increase in over-identification is not statistically significant, taken together with a trend towards a significant increase in clarity of feelings, it may be problematic for those high in attachment anxiety without a concomitant increase in repair of feelings, and suggests an iatrogenic effect of the intervention, and that perhaps self-soothing skills need to be taught as well. It must be emphasized, however, that it is not just the intervention that is upsetting for participants high in attachment anxiety; any interaction with others could have the same effect.

This trend towards a significant increase in over-identification of emotions comparing the Attachment and Reading Groups may illustrate how the insecure model of self of the IWM is maintained in interaction with others, with interpersonal interaction exacerbating insecurity.

Possible Mechanism of IWM change

Learning about attachment alone without interacting with others may be detrimental: a weak trend suggests that those in the Attachment Group decreased in exploitative narcissism, while those in the Reading Group increased. Perhaps with more participants, a greater effect of the intervention on exploitative narcissism would be demonstrated. It is not surprising that the intervention may have decreased exploitative narcissism: due to the nature of the intervention, which discusses attachment anxiety and involves discussing feelings involved in role playing attachment anxiety and security, a participant sees that other participants, like himself, are vulnerable. Due to this awareness

of the vulnerability of others, perhaps less of a transference of the IWM (see Brumbaugh & Fraley, 2006; 2007) from former attachment figures onto fellow participants is occurring, resulting in a participant being less likely to exploit others, using others to meet their own needs. Indeed, really seeing another for who he is, rather than seeing one's projections activated by transference of who one expects him to be (being other-focused rather than being self-focused), may constitute the beginnings of change. More research is needed to explore the relationship between group participation in such an intervention and the mechanisms by which interpersonal interactions effect change in the way in which a person perceives himself and others.

That an increase in avoidance is demonstrated concurrently with increases in clarity, range of emotions among those in the Attachment Group compared to those in the Reading Group is not contradictory: there are benefits to being with others, although it may be painful and defended against. This suggests that while attachment avoidance significantly increased as a result of the intervention, the intervention is nonetheless beneficial in terms of emotional intelligence. The co-occurring significant increase in self-esteem with the increase in avoidance supports Mikulincer's (1995) theorizing based on the results of his six part study on attachment style and structure of the self that while those high in attachment avoidance appear to have high self-esteem, they are actually defending against awareness of self-inadequacy: the intervention brought up issues of dependence and vulnerability, perhaps making those with attachment avoidance reactively more avoidant and simultaneously defensively driving up their self-esteem.

Taken together, these results also suggest that when examining change in attachment, other related variables need to be considered as well, because it may be that

changes are occurring that might otherwise not be detected, leading to incorrect or spurious conclusions. The results suggest that change in attachment may covary with other related constructs as occurred with increases in both avoidance and extrinsic religiosity, and as occurred with both implicit security and range of emotions considering the first sample only.

Entitlement

One unexpected finding when comparing all three groups trended towards a significant difference in change in entitlement considering both samples together, with those in the Prejudice Group increasing, while those in both the reading and Attachment Groups decreased. At first glance, this may seem to be anomalous since the focus of the Prejudice Group was to emphasize that externals are not as defining as internals. However, it may be that the participants, who were predominantly minority members, may begin to defensively feel more entitled in an intervention run by a white person. Running the experiment again with a non-minority leader conducting one group and a minority member conducting another, might help to shed some light on this possibility. Another possibility is that education which emphasizes diversity or discourages prejudice among minority members might cause the participants to become more narcissistic, feeling more entitled, since they are members of a minority group.

It might be that learning about attachment—whether interacting with others or alone—has the effect of decreasing entitlement: insecurely attached participants may be becoming aware of their deficits, which may be a painful and humbling experience: while they have unfortunately not always gotten what they want or need from their attachment

figures, this deficit does not translate into their being entitled to have their needs met by others. Something to consider for future interventions is to encourage the anxiously attached to meet their *own* needs when possible. Of course this would entail that they believe that they are *capable* of doing so, which would involve a change in the model of self.

Spirituality and Attachment

It is not clear why extrinsic religiosity increased among those in the Attachment Group, as compared to those in the Reading Group, since extrinsic religiosity was not demonstrated to correlate with attachment security. However, given that extrinsic religiosity is correlated with attachment avoidance among those high in avoidance, and there was a higher representation of avoidance including the second sample when increase in extrinsic religiosity became significant and increase in avoidance become more significant, suggests that extrinsic religiosity is covarying with attachment avoidance. That this increase in extrinsic religiosity is associated with an increase in attachment avoidance is suggested by the fact that for both constructs, significance increased with the addition of the second sample, with its greater representation of attachment avoidance, providing support for the correspondence hypothesis which suggests that one's attachment generalizes towards the relationship one has with one's deity (Kirkpatrick, 1998; 1999). (Further support for the correspondence hypothesis is that attachment security was demonstrated to be significantly correlated with intrinsic religiosity.) That an increase in extrinsic religiosity covaries with an increase in avoidance also provides convergent validity for increased attachment avoidance in the

intervention group, given the findings of Park et al, (2004), who demonstrated that attachment avoidance is negatively associated with basing one's self-worth on feeling loved by Gọd. That the intrinsic subscale but not the extrinsic subscale of the IRMS was significantly positively correlated with attachment security as assessed by the RQ suggests that attachment security is related to being motivated by one's religion, although more research is needed to elucidate the theoretically based relationship between attachment and intrinsic spirituality (see also Granqvist et al, 2010.)

It's the exercises, not the subject matter

In a number of cases, those in the Prejudice Group responded similarly to those in the Attachment Group, and it is noteworthy that every significant and near significant difference between groups was between the Attachment and Reading Group. This may be due to the emphasis of the intervention, which was similar in both conditions: to emphasize the benefits of focusing on one's internal attributes which are within one's control, over focusing on one's external attributes, which are often not within a person's control. For example, during the discussion of *Sneetches* in the Prejudice condition, it was emphasized that whether or not a person looks a certain way or possesses certain objects is not as important as who a person is on the inside. Similarly, in the Attachment condition when discussing *Antwone Fischer*, the various ways in which Antwone asserts himself are contrasted: he maladaptively fights with others to prove himself and he proactively betters himself, joining the Navy and learning Japanese. Essentially, the emphasis in both conditions was not only on changing one's focus from placing more importance on who one is rather than on what others think of them, but also on

emphasizing that a person ultimately chooses how to value themselves: through the eyes of others, or by their own standards. Not only that, but that it is risky to value oneself through the eyes of others, as it essentially places control of one's value outside oneself, which one is essentially helpless to control, rather than locating it internally, which is within the control of the individual himself.

Tangentially, that both the Attachment and Prejudice Groups behaved similarly may also suggest that there is no comparison between experiential learning and book learning, and has implications for educational policy, corroborating findings that project based learning in which learners are stakeholders in the outcomes is much more motivating and challenging, at least for gifted students (Van Tassel-Baska, 2009), and that lack of involvement in learning promotes underachievement (Schultz, 2002). Findings of this study suggest that lack of involvement in learning (in the present study by merely reading about attachment rather than by interacting with others and discussing the subject material) may decrease self-esteem and emotional intelligence. However, these findings may only apply to book learning about interpersonal topics such as attachment, rather than book learning about other topics such as chemistry or physics. When a person learns about personal painfully relevant subjects such as when an anxiously attached person learns about their insecure attachment, how it arose, and the ramifications of it in their life presently, it may bolster their self-esteem to share with others, and conversely reduce their self-esteem to learn in isolation, with no one with whom to discuss the ideas, causing one to feel alone and inferior compared to others.

However, in one instance considering the first sample alone, the Attachment and Prejudice Groups behaved significantly differently: every participant in the Attachment

Group increased in implicit security, while every participant in the Prejudice Group decreased in implicit security. This differential may be due to the fact that for participants in the Prejudice Group who are largely minority members, their minority status and associated issues of prejudice and discrimination are being made salient by discussion of prejudice, resulting in a decrease in implicit security. Further, the intervention may be increasing implicit attachment security.

It is noteworthy that with the inclusion of the second sample with its less representation of preoccupied attachment, the significant and near significant effects on implicit security were lost. This suggests that the intervention may have a beneficial effect on implicit attachment security for those who have a negative model of self. This would make sense insofar as the focus of the intervention was on decreasing attachment anxiety, not attachment avoidance. Further support that the intervention may be improving negative model of self is that self-esteem significantly increased when comparing those in the Attachment Group with those in the Reading Group. However, not all participants in the Attachment Group increased in self-esteem, whereas all participants in the Reading Group decreased in self-esteem, suggesting an iatrogenic effect of the Reading Group. Also, this differential between every participant in the Attachment Group increasing in implicit security, whereas not every participant increased in self-esteem suggests that an increase in implicit security may not lead to an increase in self-esteem.

That the maladaptive over-identification subscale of the self-compassion scale demonstrated a trend towards a significant increase among those in the Attachment Group compared to the Reading Group while self-esteem significantly increased lends

support to the idea that self-esteem and self-compassion are different constructs (Leary et al, 2007; Neff , 2003a).

It is noteworthy that with regards to change in five dependent variables (dismissiveness, avoidance, range subscale of DE, entitlement, extrinsic religiosity), no significant difference between the groups was demonstrated, but with the addition of the second sample, significance and near significance was attained, while with regards to two dependent variables (self-esteem and implicit security), Kruskall-Wallis tests demonstrated strong trends which were lost with the addition of the second sample. Both of these phenomena may be due to the greater representation of attachment avoidance in the second sample: attachment avoidance is more impervious to change (Mikulincer & Shaver, 2007c), and it would not be surprising that those with attachment avoidance would defensively exclude awareness of attachment-arousing stimuli (Mikulincer et al, 2009), becoming reactively more dismissive.

Limitations and Future Directions

While these results suggest that the intervention had effects, these two studies were limited in that the number of participants was very small; not only was it difficult to obtain statistically significant results, but also, the results are not generalizable. Additionally, preoccupied attachment is only one of four attachment styles, and even after relaxing the inclusion criteria, it was difficult to recruit and retain participants. Further, it is not known if these results were sustained over time. Also, perhaps anxiety would decrease if attachment avoidance, not only attachment anxiety, were taught in a psychoeducational intervention. Finally, the significant increase in avoidance as a result

of the intervention targeting anxiety raised an interesting secondary question: would avoidance increase in an intervention *targeting avoidance,* that is, if participants were made aware of the deleterious inter and intrapersonal sequelae of attachment avoidance?

To address these issues, it was decided both to not restrict the intervention to those with preoccupied attachment and also not to target attachment anxiety only, but rather to administer an intervention to participants regardless of attachment style in a format that would easily facilitate participation of more subjects at one time: a semester long psychoeducational intervention that would meet weekly. A change in approach of the intervention – to include those of all attachment types and all levels of attachment anxiety and avoidance in a semester long psychoeducational intervention – necessitated an overhaul of the design of the intervention, involving expanding the existing module which focused on decreasing attachment anxiety, and including an avoidant module.

Study 3:

Exploratory Semester-long Attachment Awareness Psycho-educational Intervention

The findings of the pilot studies warranted further research into the possibility that an intervention could effect change in attachment and related constructs. The goal of this study was to explore if similar results would be obtained as those of Study 2, with a large classroom-sized group rather than small groups, and with the inclusion of an attachment avoidance module, again using a humanistic-oriented psychoeducational intervention that teaches young adults that 1) the response of their caretakers when they are young affects them as adults; 2) they can negatively affect others' feelings and their relationships; 3) nonetheless they are capable of changing.

The avoidant module is included for two reasons. Firstly, some participants may not need to decrease anxiety (and may even be securely attached) but can still benefit from learning about attachment: involvement with one who is insecurely attached may deteriorate the mental health of even a securely attached relationship partner, as suggested by Davidovitz et al (2007).Thus, forewarned is forearmed. Secondly, perhaps attachment avoidance will decrease in response to psychosocial intervention.

Towards these ends, both attachment avoidance and attachment anxiety were reconceptualized as being self focused in contrast to attachment security, which was reconceptualized as being other focused. This differential in focus was similar across both the Prejudice and Attachment Groups in Study 2, and may be one reason that these two groups behaved similarly with regards to the outcome variables.

Another possibility for the differential between the Attachment and Prejudice Groups compared to the Reading Group demonstrated in Study 2 may be that those in the Reading Group demonstrated negative effects from learning about attachment alone, by reading. This is suggested, for example, by the fact that every participant in the Reading Group demonstrated a decrease in self esteem, considering both the first sample as well as both samples together.

To address the possibility that unintended effects of the Reading Group are responsible for some of the differential results between this group and the Attachment Group, Study 3 did not have a control group involving an intervention. In this way it was hoped to isolate any effects of the intervention itself. Additionally, it is also not known if changes obtained during Study 2 were maintained over time, so a follow-up test was administered as well.

Based on the demonstrated efficacy of cognitive therapy (Blackburn et al, 1981) there is a strong cognitive component to the intervention: participants are taught that their thoughts affect both their feelings and behaviors, and that they can change their thinking as well as their behaviors. Overall, the aim of the intervention was to increase attachment security and decrease attachment insecurity by three methods: 1) increasing awareness of insecure as well as secure attachment behaviors and their interpersonal ramifications; 2) decreasing self-focus by increasing other-focus; and 3) creating an awareness of the intrinsic worth and value of each participant, independent of external factors.

Impact of Gender

While it was not possible to control for gender in Study 2 due to the small number of participants, in this study gender may be controlled for given the findings of Kobak & Sceery (1988) as well as the finding of the 2006 online prescreening of Rutgers-Newark students (n= 547) that females scored significantly higher than males on both range of emotions and differentiation of emotions.

As with the first study, the same dependent variables were included for purposes of convergent validity, with the addition of the Locus of Control Scale as well as several subscales of the Contingencies of Self Worth Scale.

Attachment and Locus of Control

Rotter's social learning theory (Rotter, 1954, as cited in Rotter, 1960) maintains that the probability that a person will perform a certain behavior in a particular situation is a function both of that person's expectation that their behavior will be responsible for the reinforcement available, as well as the value of such reinforcement for that person. A person with a high internal locus of control is one who expects that the outcome is within their control; in other words, that their behavior affects change in their situation. The anxiously attached, whose attachment bids have not been consistently met with sensitive responses, would have a more external locus of control, having been conditioned to expect that they cannot effect necessary responses from others. Indeed, Mallinckrodt (1992) demonstrated that those participants who rated their parents as caring on the Parental Bonding Instrument demonstrated greater social self-efficacy, a construct related to internality of control, whereas participants who rated their parents as emotionally

unresponsive to their needs had more external social locus of control. Lefcourt's conclusion based on research on the development of locus of control corroborates with attachment theory: "Warmth, supportiveness, and parental encouragement seem to be essential for development of an internal locus of control." (Lefcourt, 1982, p136).

As would theoretically be predicted, internal locus of control is positively associated with secure attachment (Hexel, 2003; Mickelson, Kessler, & Shaver, 1997), and positively correlated with self-esteem (Geist & Borecki, 1982), while external locus of control is related to both attachment anxiety and attachment avoidance (Mickelson et al, 1997). Although these studies did not use the same measures as the present study, Dílmaç, Hamarta, & Arslan (2009) did use measures employed in the present study, and the results were as expected: securely attached participants also had a significantly more internal locus of control than either preoccupied or fearful subjects, both of whom are high in attachment anxiety.

Attachment and contingencies of self worth

Using the RQ as a measure of attachment, Park et al (2004) demonstrated connections among 795 college students between attachment style as assessed by the RQ (Bartholomew & Horowitz, 1991) and particular domains by which self-worth is gauged. Specifically, those identifying as secure were more likely than those identifying as fearful or dismissive to base their self-esteem on family support, and a multiple hierarchical regression demonstrated that family support uniquely predicted security, independent of self-esteem. It is noteworthy as well, that it was more likely for participants identifying as secure to have their esteem contingent on virtue. Dismissing participants were least likely

of all types to base their self-worth on family support, as expected, given the devaluation of attachment relationships intrinsic to the dismissive type, and a multiple hierarchical regression showed that dismissiveness is *not* based on family support, approval from others, or love from Deity. Fearful participants (high in both attachment avoidance and attachment anxiety), based their self-worth independent of self-esteem on appearance, but not approval, as well as academic competence, whereas preoccupied participants based their self-worth on appearance and approval from others, independent of self-esteem.

The securely attached have learned, based on supportive, sensitive responses from their attachment figures, that they are capable of eliciting support and responsiveness from their significant others. This support is not dependent on anything that they do per se, or on how they look, but on *who they are.* Demonstrated change in attachment security reflecting expressed change in the IWM might be accompanied, too, by change in contingencies of self-worth: the more positive the model of self, the less a person might place their contingencies of self-worth on factors which involve a more external locus of control. Therefore, contingencies of self-worth are considered in this study, and for the purposes of this study, the following subscales of the Contingencies of Self Worth Scale (CSW) were included: appearance, family support, approval from others, and academic competence. While greater internality of control and greater attachment security would be expected to be associated with lower scores on the appearance, approval, and possibly academic competence subscales, it would not necessarily result in higher scores on the family support subscale, since a person is putatively “earning” their own security rather than obtaining it from sensitive responsiveness from attachment figures within their family. If, however, a person’s family were to be more sensitive and

responsive to their needs as a result of changes in their behavior, then perhaps a demonstrated increase in security would be associated with an increase in one's worth being contingent upon family support.

Based on the results of Study 2, it was hypothesized that participants receiving the intervention would demonstrate decreased attachment anxiety as assessed by the ECR-r; increased explicit security as assessed by the RQ; increased implicit security as assessed by the AIAT; increased self-esteem; and increased emotional intelligence as assessed by the Trait Meta Mood Scale and Range and Differentiation of Emotional Experience Scale. It was further explored whether the intervention would result in greater internality as assessed by the LOC; increased self-compassion, as assessed by the SCS; decreased exhibitionism, exploitation, and entitlement, but increased self-sufficiency and authority as assessed by the NPI; decreased contingency of self-worth on approval of others and appearance, as assessed by the CSW. It was also explored whether a decrease in avoidance would be demonstrated.

While a significant difference between the Attachment and control groups was demonstrated in Study 2 with the inclusion of the second sample with its greater representation of attachment avoidance, with those in the Attachment Group demonstrating an overall increase in avoidance, this may be due to the fact that only attachment anxiety was targeted and the groups were small. Both of these factors may have caused an increase in attachment avoidance among those with avoidance. However, in this study, because attachment avoidance is taught as well as attachment anxiety, participants with attachment avoidance cannot defensively think that the teaching does not apply to them, and only to those with attachment anxiety. Further, the larger size of

the class may disinhibit avoidant defense mechanisms, allowing participants to "blend into the crowd," and not have to defensively increase their avoidance in response to a frontal focus on them, as occurred in Study 2 with its small numbers of participants.

The delivery of a psychosocial intervention in the form of a class allows for the inclusion of several components previously demonstrated to effect change in attachment and related variables, as discussed in Chapter 2: role play, empathic listening instruction, and modeling of appropriate attachment-related behavior (Kilmann et al, 1999, 2006). The inclusion of a control group not receiving these components allows for a comparison of the effects of these components on the outcome variables. Moreover, making relational outcomes based on motivational orientation salient to participants in the experimental condition through the use of not only role play and modeling of appropriate attachment related behavior, but also discussion of insecurely attached behavior among protagonists presented in movie clips and stories read in class encourages motivational transformation. Additionally, the use of a no-intervention control group precludes the possibility that any difference between the groups suggesting an effect of the intervention is due to the control group, as may have occurred in Study 2. Assessing both implicit and explicit security at both posttest and follow up allows for an examination of whether improvement in implicit security precedes change in explicit security.

METHODS

Participants

Participants were recruited from among incoming freshmen attending Rutgers-Newark through the New Jersey Educational Opportunity Fund (EOF), enacted by state

law over forty years ago to enable those from educationally and economically disadvantaged backgrounds to attend university. 72 participants agreed to participate; of these, 62 (39 females, comprising 62.9% of the sample) completed the experiment. The sample was predominantly Hispanic (29 participants, or 46.8%); 14 identified as Asian (22.6%); 9 identified as African American (14.5%); 7 identified as Arabic (11.3%); 2 identified as White (not Hispanic) (3.2%); and 1 (1.6%) identified as Other. Participants ranged in age from 17 years to 19 years, 9 months of age, with a mean age of 18 years, 4 months. In response to the RQ forced choice, of all participants, 25 (40.3%) identified as securely attached; 3 (4.8%) identified as ambivalently attached14 (22.6%) identified as dismissively attached, and 20 (32.3%) identified as fearfully attached. The average scores for the RQ paragraphs were as follows: secure (*M*= 4.40; *SD*= 1.85); fearful (*M*= 3.73; *SD*= 1.94); preoccupied (*M*= 3.11; *SD*= 1.72); dismissive (*M*= 4.05; *SD*= 1.74). The average attachment anxiety scores of this sample (n= 61) was 2.87, (*SD*= 1.14, min= 1.00, max= 5.33), while the average attachment avoidance scores of this sample (n= 60) was 3.21 (*SD*= 1.11, min= 1.22, max= 6.22).

None of the participants was married; 24 (19.4%) were currently involved romantically at pretesting while 38 (61.3%) were not. Of twenty providing information as to how long they were involved, times ranged from 10 months to four years, five months. Of those 45 participants responding to the question, 32 (25.8%) had ever been romantically involved, whereas 13 (10.5%) had never been romantically involved. 57 (91.9%) participants were unfamiliar with attachment theory at the time of the experiment, while 5 participants (8.1%) were already familiar with attachment theory. Of these five people, two learned of attachment theory from a class, while two learned of it

from talking with others. Those believing that there is a deity numbered 37 (60.7%); 20 (32.8%) were not sure; and 4 (6.6%) believed there is not. In response to the 7-point Likert scaled question asking to which extent their Deity is not loving to very loving, the mean rating of 58 responding was 5.67; (*SD*= 1.594). Of 58 rating their Deity on a 7 point Likert scale from rejecting to accepting, most felt their Deity was more accepting than rejecting (*M*= 5.72; *SD*= 1.531). Of 58 rating their Deity on a 7 point Likert scale from not punishing to very punishing, most felt their Deity was less punishing than not (*M*= 3.24, *SD*= 1.537). 13 Participants identified as Catholic (38.2%); 6 identified as Christian (17.6%); 4 identified as Islamic (11.8%); 2 each (17.7%) identified as Coptic Orthodox, Roman Catholic, and Hindu ; 1 each identified as Jehovah's Witness, Reform Christian, Pentecostal, Hindu/Christian, and Buddhist/Catholic. 29 (46.8%) considered themselves religious, while 33 (53.2%) did not, whereas 37 (59.7%) considered themselves spiritual, while 25 (40.3%) did not.

Materials

Participants were asked to complete a battery of measures assessing attachment and related constructs. Participants were also asked to provide demographic information.

Demographics

For a list of demographics questions, see Appendix Q. In the demographic questions, the question "Do you consider yourself spiritual?" was added to allow for differentiation between religiosity, or adhering to the practices of a religion, and spirituality, which does not involve adhering to formal religious practice.

Locus of Control Scale (LCS). This widely used forced choice, twenty-nine item scale developed by Rotter (1966), assesses the extent to which a person expects that their behavior can directly affect outcomes. Scores range from 0-23, with higher scores reflecting a more external locus of control, and lower scores reflecting a more internal locus of control.

Contingencies of Self Worth Scale (CSW)

This scale (Crocker, Luhtanen, Cooper, & Bouvrette, 2003) is comprised of seven subscales, each with five items rated on a seven-point Likert scale, and assesses the degree to which a person bases their self-worth on various contingencies. Scores range from 1 to 7, with higher scores demonstrating that self-worth is more contingent on the factor represented by that particular subscale. In research, any number of the subscales may be used; the entire scale need not be used. For purposes of this study, the following subscales were included: Appearance, Others' Approval, Academic Competence, and Family Support.

For a description of other instruments included, see Study 2 Methods section (Appendix O).

Procedure

During the EOF summer orientation, 81 students indicated they would like to participate in a study on "Learning and Interpersonal Relationships," and signed consent forms. Several students were dropped from the study either because they were dismissed

from the program, or did not meet the financial requirements to participate in the EOF program. At registration over a week later, students were randomly assigned, 31 to the experimental condition, and 37 to the control condition. Data are reported for the 62 participants who completed the study, 30 in the experimental condition, and 32 in the control condition.

All participants were pretested at the first academic readiness class, during which time they completed the battery of measures, including demographic questions to provide information for their individual attachment IAT's, which were prepared and then administered during the second academic readiness classes. Participants were assessed three times throughout the semester by half of the ECR-R and the RQ to enable examination of attachment over time, and post-tested both 15 weeks later during the last academic readiness class, as well as followed up a second time the following semester. At the follow-up, participants were asked for permission to follow up with more posttests six months later, a year later, and two years later.

Each week, including at pretesting and both post testings, participants answered three questions (WQ) regarding the status of their current relationship and their satisfaction with such (see Appendix R) to determine if there were any between groups differences over time.

Experimental Condition- 2 Credit Attachment Awareness Class

The experimental condition was in the form of a 2-credit class "Attachment Awareness," admission to which was by permission only, met once weekly, and the focus of which was to educate students about attachment and engage them in cognitive-

behavioral exercises theoretically designed to decrease attachment insecurity as well as increase security (See Appendix S for the manualized protocol and Appendix T for class syllabus).

Content of the classes

The classes focused on teaching attachment through interactive participation. A detailed description of the content of the sessions follows, organized by theme, with both attachment avoidance and attachment anxiety topics taught. Because the intervention is in the form of a university class which requires some academic evaluation, a midterm and two quizzes were given.

First session: Introductory Class. During the first session of the experimental condition, participants participated in an introductory class on attachment theory. The introductory lecture is based on the idea that effecting long-term change in the IWM requires awareness of one's own insecurity as well as learning about the benefits of security. As the course progresses, participants are taught that insecure attachment differs from secure attachment in terms of focus: the insecurely attached are unable to be other-focused because they are too self-focused, whereas the securely attached are able to be other focused. Such an approach operationalizes attachment security and insecurity in such a way that should make it easier for students to effect behavioral change by rendering classification irrelevant: regardless of whether a person has attachment avoidance or anxiety, such a person is self-focused, and no dismissively attached person, for example, can defensively say that they are not self-focused, and have no need to learn.

Conversely, anxiously attached participants would not feel singled out, potentially exacerbating their negative views of themselves. Much of the format of the class is modeled on the Socratic method of eliciting responses from students; this method is used not only in cognitive behavioral therapy (Liese & Larson, 1995) and Adlerian psychology (Adler &Stein, 2006), but has been demonstrated to elicit more student involvement and foster an internal locus of control.

Second and Seventh Sessions: In class reading. During the second session, participants participated in an attachment workshop involving discussion of P. D. Eastman's book *Are You My Mother?,* read in class as an illustration of anxious attachment in which the main character searches for security by seeking the ever-elusive mother. During the seventh session, participants participated in an attachment workshop involving discussion of Carolyn Crimi's book *Don't Need Friends*, read in class as an illustration of avoidant attachment in which the main character defends against needing friends after his best friend moves away. These storybooks are read in class to illustrate both attachment anxiety and avoidance through the behavior of a protagonist, since it might be easier to see behavior in others than in oneself. Further, being read to might activate the schema of being read to as a child, and by association, trigger and make accessible related IWMs, which might make participants more amenable to receiving attachment-relevant information. Also, participants were encouraged to think of the children in their lives who behave as the protagonists (see pages 12 and 21 of manual). Indeed, throughout the intervention, subject matter is continually related to the individual's life (See Manual).

Third Session: Self Disclosure Exercise. Participants were paired into same-gender dyads based on attachment style, with every effort made to not pair participants who are both high in avoidance or anxiety or to pair a highly anxious with a highly avoidant participant, and not to pair highly securely attached participants. These combinations were avoided for attachment theoretical reasons, because of the communication styles and motivational orientation of those with different attachment insecurities.

Two people high in avoidance would not be mutually disclosing (Mikulincer & Nachshon, 1991), creating a superficial interaction, whereas pairing a highly avoidant participant with a highly anxious participant would only exacerbate their insecurities in a vicious cycle: the more the anxious partner would disclose or emote, the more the avoidant partner might withdraw and erect defenses, which would only further the attempts of the anxiously attached partner to connect. Pairing participants who are secure with each other would not teach them as much about attachment, nor would it allow insecurely attached participants to experience relating with a more securely attached partner.

Dyads participated in an interpersonal closeness generating exercise (Aron et al, 1997), and later in the semester, engaged in attachment role-play as well as writing exercises together. Participants were told that for the remaining sessions of the experiment, they were to wait for their assigned partner to arrive before entering the experimental room. If one partner arrived before the other, they were told to remain outside until their partner arrived. Waiting for the partner after engaging in the closeness

generating exercise was intended to maintain closeness and create security with that person.

Fourth and Eighth- Twelfth Sessions: Anxiety and Avoidance Movies. During the fourth session, participants viewed and discussed clips from movies *What About Bob* and *Antwone Fisher*, both movies featuring protagonists high in attachment anxiety, while during the eighth and tenth sessions participants viewed and discussed clips from the movies *Sabrina* and *Good Will Hunting,* both featuring protagonists high in attachment avoidance. During the ninth, eleventh, and twelfth session, salient attachment issues raised by the avoidant movie clips were reviewed. More time was given to discussing the movie clips illustrating attachment avoidance than was given to the movie clips illustrating attachment anxiety for several reasons. Firstly, the self-focus inherent in attachment anxiety is more obvious than the self-focus inherent in attachment avoidance. Secondly, the behavior of those high in attachment anxiety is much more easily understood, whereas the defense mechanisms of those high in attachment avoidance are more subtle. Therefore, the movie clips portraying attachment avoidance required more discussion and explanation than those portraying attachment anxiety.

Fifth Session: *Empathic Listening Class.* Participants viewed a videotaped example of empathic listening in the tradition of Carl Rogers, which uses reflective listening, encouraging the speaker to come up with their own solutions to their problems, after which they role played listening as a person with attachment anxiety, a person with attachment avoidance (see Appendix U for experimenter generated avoidant scenarios),

and empathically as a securely attached person. According to social learning theory (Bandura, 1977), observing others engage in empathic listening helps a person learn to listen empathically. The empathic listening class is included because the securely attached are more capable of empathic listening, which is a skill that can be learned (Fernald, 1995). It is theorized that by learning to communicate as do those who are securely attached, the underlying insecure IWM may change towards security. Also, learning effective interpersonal skills such as empathic listening might help to increase positive interpersonal exchanges, and thus effect change in the IWM.

To that end, one assignment was to consciously practice empathic listening, writing about an instance when it was practiced, how it felt, and how, if at all, the recipient responded differently. Similarly, participants wrote about an instance when they felt really heard and another when they wanted to be heard but were not, describing how they felt in these situations, and if they responded differently in each situation, how. Because empathic listening is characteristic of secure attachment, by practicing empathic listening, participants are essentially activating, or making more accessible, a secure IWM. Further, in describing their different responses to being heard and not being heard, participants are becoming more aware of the effects of the communication styles of the insecurely attached. Perhaps, too, reflecting on how differently it feels to be heard or not will help participants to be more conscious of really hearing others.

Sixth and Thirteenth Sessions: Writing, Discussing, and Rewriting. During the sixth session, participants participated in an in-class writing and discussion session in which each participant wrote about an experience illustrating behavior typical of anxious

attachment (either in themselves or another person), and after discussing with their partners, rewrote the piece from the perspective of one who is securely attached, while during the thirteenth session, participants participated in an in-class writing and discussion session in which each participant wrote about an experience illustrating behavior typical of attachment avoidance (either in themselves or another person), and after discussing with their partners, rewrote the piece from the perspective of one who is securely attached.

Fourteenth Session: During the fifteenth session, in groups of three, participants presented chapters from Bowlby's *A Secure Base* for extra credit.

Methods of the Intervention

In the interest of improving attachment security and related constructs, the intervention included four approaches: 1) psychoeducational, which included using attachment as pedagogy through various methods including lecture, discussion, reading, writing, viewing film clips and role play; 2) insight, which involved relating attachment to the participant's own life, and viewing attachment insecurity as being self-focused; 3) Noöetic or humanistic, which involved ennobling participants; 4) behavioral, which involved demonstrating how change is possible and practicing change. These approaches were achieved through in-class exercises as well as homework assignments, which are discussed below.

Self-Compassion Induction. Although participants had some choice, some assignments were mandatory, such as the self-compassion induction (Leary et al, 2005).For this exercise, students were asked to write about an experience that led them to feel badly about themselves, and then list ways in which others experienced similar events; write a paragraph to themselves expressing empathy as if they were writing to their best friend; and describe their feelings objectively and unemotionally. Participants who performed this exercise demonstrated, not only increases in the self-kindness, common humanity, and mindfulness subscales of self-compassion, but also an increase in happiness, as well as a decrease in both anger and sadness, as well as responsibility for the negative event about which they wrote (reflective of an internal locus of control) without feeling self-deprecatory (Leary et al, 2005).

According to Bowlby (1969/1982), if a person's own needs for security are attended to (the attachment system is no longer activated), then a person can care for another (the caregiving system can be activated); conversely, a person whose attachment needs are not met cannot be there for another. Theory was supported in a study which demonstrated not only that attachment anxiety and attachment avoidance were negatively correlated with empathy, but also that activating secure attachment increased empathic responses (Mikulincer et al, 2001). It is likely difficult for the insecurely attached to respond empathically towards others since they themselves were not the recipients of empathy. Therefore, an increase in self-compassion, or empathy for oneself, would make one more able to be compassionate towards others.

Behavioral: Role play. There are several theoretically sound and research-based reasons for role-play and role-play performance. Firstly, behaving in a securely attached manner should change one's motivation to that of the securely attached. Alschuler, McIntyre, & Tabor (1970, as cited in McClelland & Steele, 1973) demonstrated that the motivations of participants became more Achievement oriented partially by thinking, talking and acting as if they were high in *n*Ach. Secondly, according to social learning theory (Bandura, 1977), learning is achieved by observing and modeling the behavior of others. Additionally, practice operating with a more secure IWM should make it more chronically accessible (Collins & Read, 1994). Dua (1970) demonstrated that among female participants who had self-referred for counseling due to interpersonal difficulties, those who received an 8-week behavioral intervention, the goal of which was to improve interpersonal interactions, became more internal than those who participated in an 8 week intervention aimed at changing their cognitions. This study supports the superiority of a behavioral intervention over a cognitive one, and thus during the current intervention, participants were often asked to role-play securely attached behaviors.

Insight: Reflective Thinking. To encourage thinking, specifically reflective thinking, which is characteristic of the securely attached, participants were asked to rewrite from the first person perspective of a securely attached person scenarios they had written in class which described behavior reflecting anxious as well as avoidant attachment either in themselves or another person. In the rewrite, participants wrote from a securely attached perspective in the first person, using reflective words such as "I realize that," or "because of" or "the reason for this…" rather than emotional words, like "I felt abandoned, I felt

rejected." Increased use of such causal and reflective words over time was demonstrated to be associated with increase in adaptive behaviors (Pennebaker, Mayne, Francis, 1997).

Several exercises were designed to encourage insight and awareness of the interpersonal effects of attachment-related behavior. Participants wrote how a situation involving either themselves or someone else could have been handled more securely and with less attachment anxiety; wrote how a situation involving either themselves or someone else could have been handled more securely and with less attachment avoidance; practiced behaving securely with someone the student did not already know, and then writing about the experience, including how the participant behaved, how the other person responded, how the participant felt. Similarly, participants were asked to first consider the needs of someone else before approaching that person for help and then describe how they felt after restraining themselves. Participants also wrote about a situation in which they or someone else behaved less anxiously than usual in that type of situation, describing the type of anxious behavior that was not being repeated this time, and describing how they felt about themselves or the person behaving differently, and how the non-anxious behavior elicited different responses. On the other hand, participants were to behave in a situation as one would who is high in attachment avoidance, describing how it felt and how others responded, as well as describe the interpersonal effects of their own or someone else's avoidant behavior. Participants also acted and spoke as if they were secure, or how a secure person would act and speak, with people they did not know, and then described their feelings and the reactions of others.

Not only were exercises designed to increase interpersonal awareness, but also to encourage other-focus: participants wrote about giving the benefit of the doubt and how it

felt; described how they are similar to others; described expressions of, and responses of others to, gratitude; described an instance of apologizing and the response; described the reaction of a person to whom a smile was initiated, and how it felt; performed an anonymous act of kindness, describing how the recipient responded; wrote a letter of forgiveness to the participants' attachment figure(s), expressing understanding of them.

Psychoeducational. Psychoeducation involves teaching skills and ideas to those suffering psychologically, and is similar to therapy insofar as it seeks to alleviate suffering, but different insofar as it does not involve focusing on the individual's process, although it can resemble cognitive or insight therapies (Rich, 2011).This approach is widely and successfully used among diverse populations, from those labeled with schizophrenia (Hogarty, Anderson, Reiss, et al, 1991) to those suffering with a fear of blushing (Dijk, Buwalda, & de Jong, 2011).

Several homework assignments were psychoeducational. For example, one homework assignment asked participants either to elucidate three of the ways one character expressed avoidance in film clips viewed during class or to describe how they think others view them, and examine how this thinking makes them feel, and whether it affects the way in which they act. This second option was theoretically based on internalization theory (Tice, 1992), and designed to encourage the participants to think about their behavior and its effect on others. In the event that the latter exercise was too challenging for a student, perhaps due to an avoidant attachment style, that student would at least have to recognize and analyze avoidance in another, an exercise which might then help them to become more aware of avoidance in themselves. This type of indirect

learning might be particularly helpful for those with attachment avoidance, who have strong defense mechanisms against recognizing fault within themselves.

Noöetic or Humanistic. In general, the intervention is based on a Nöetic approach (Graber, 2005; Miller & Schultze, 2003) like that of Maslow (1943), Frankl (1955, 1965), and Fromm (1958), which emphasizes an internal locus of control. Because those high in attachment anxiety are especially prone to emotional dysregulation resulting in addictions as well as need for external validation, which is not within one's control, one focus in the intervention is to teach that participants can choose their behavior, and that their choice of behavior in turn brings about different results. Similarly, those high in attachment avoidance, who would like to think that they are independent, are paradoxically dependent upon the opinions of others, as evidenced by scenes from *Good Will Hunting,* which are discussed in class. Participants are encouraged not to define or value themselves by others.

For example, after watching *Good Will Hunting,* in which the protagonist, in discussing life's meaning with his therapist, defensively asks, "What winds *your* clock?", participants were asked to describe their "spark:" something not just that they enjoy, but that motivates them and gives their life meaning. Participants wrote about how they nurture their spark in the present, and how they plan to live it in the future. This assignment was based partially on logotherapy, which posits that the need to have meaning in life is motivating (Frankl, 1967), and informed by the work of Benson (Benson, 2008; Scales, Roehlkepartain, & Benson, 2009), who found that teenagers who were aware of their sparks, or what motivated them, were more likely to be altruistic and

desire to make a positive impact, as well as value strong friendships, characteristics which, not incidentally, are suggestive of secure attachment. Perhaps through thinking and writing about their sparks, or what motivates them and gives their lives meaning, they may move towards greater attachment security. Similarly, one assignment was to write for 15 minutes before going to sleep about "your ideal self." Not only might writing before going to sleep encourage the unconscious mind to think during sleep, but also the exercise raises the idea of an "ideal self" to which the participant may aspire.

Furthermore, participants are taught that performing acts of self control increases self-respect and builds self-esteem, leading to security. Participants are asked to describe not only how an anxiously attached character portrayed on film clips viewed in class could exert self control (Bob Wiley in *What about Bob)*, but also to describe performing an act of self control themselves, as well as how they felt about themselves afterwards. Similarly, one homework option was to make a verbal fast, not to talk for a day or for several hours, describing how it felt to be quiet and silent. That focusing on self control might lead to an increase in security is partially based on the findings of Lopez & Gormley (2002). Also, exercises in self-control are partially based on the finding that the self-esteem of the securely attached is contingent upon virtue (Park et al, 2004), which might include self-control. By increasing self-control, perhaps those high in attachment anxiety can concomitantly increase security.

Frequently, different options were given for homework assignments; because of their attachment styles, participants may be uncomfortable doing a certain assignment or it may be too difficult for them. For example, a participant high in attachment avoidance might be uncomfortable with personal disclosure (Mikulincer & Nachshon, 1991). For

the same reason, participants often had the option to describe behavior either in themselves or in someone else whom they had observed. Such choices should serve to increase locus of control (Martin & Marsh, 2003).

Control Condition

The control condition was comprised of EOF students not taking the class "Attachment Awareness," but concurrently enrolled in an academic readiness class required for all EOF students, in which academic skills were taught for 14 weeks.

To compare the effect of the intervention with that of the control group, a series of ANCOVAs were performed on change in the dependent variables. These analyses directly test the hypothesis that improvement in attachment and attachment-related dependent variables will be evident among those receiving the intervention as compared to those not receiving the intervention.

Results

An ANCOVA was performed on change in each dependent variable across the two conditions. (For descriptive statistics of dependent variables, see Appendices U and V. For correlations among dependent variables, see Appendix X.) Gender was controlled for as suggested by Kobak & Sceery (1988). Other covariates were need for cognition, as suggested by findings of Mallott & Hogan (2003), and the pre-randomization baseline value of the dependent variable being tested. For each dependent variable, ANCOVAs were run twice, looking at change in each dependent variable from pretest to posttest and also looking at change in each dependent variable from pretest to follow up (see

Appendix Y). These tests would allow an exploration of whether certain dependent variables change first, and others later, in addition to determining whether any change demonstrated at posttest is sustained over time.

The dependent variables that were assessed are the following: AIAT; CSW and its subscales; the DE subscales; the avoidance and anxiety subscales of the ECR-r; IRMS; LOC; MRS; narcissism as assessed by the NPI; RQ; RSE; SCS; and TMMS subscales (see Appendix Y).

Attachment Anxiety

While no significant effect of condition was demonstrated, a significant effect of baseline anxiety was demonstrated on change in attachment anxiety from pretest to post test.

Significant effects of condition and baseline attachment anxiety were demonstrated on change in attachment anxiety from pretest to follow up, with those in the experimental condition decreasing and those in the control condition increasing.

Further, although no significant effect of gender was demonstrated, a significant interaction of gender and condition was demonstrated, with decreases among those in the experimental condition for both males (M =- 0.01, SE = 0.30) and females (M = -0.70, SE = 0.25), and a decrease as well among males in the control condition (M =- 0.11, SE = 0.26), but an increase among females in the control condition (M = 0.73, SE = 0.20).

Attachment Avoidance

There was a significant effect of baseline avoidance on change in avoidance from pretest to posttest, but no significant effect of condition on change in avoidance. Considering participants falling within the upper 50th percentile of avoidance, there was no significant effect of avoidance.

Examining the effect of condition on change in avoidance from pretest to follow-up, a significant effect of baseline avoidance on the dependent variable was demonstrated, but no significant effect of condition was demonstrated among those in the experimental condition
or among those in the control condition.

Implicit Security

There was a significant effect of need for cognition, baseline implicit security, and gender on change in implicit security from pretest to posttest. Additionally, there was a trend toward a significant effect of condition, with those in the experimental condition slightly decreasing (and those in the control condition increasing. Post hoc paired t tests indicate a trend toward a significant increase among those in the experimental condition ($t(9) = 2.13$, $p = .062$) as well as a trend toward a significant decrease among those in the control condition ($t(10) = -2.10$, $p = .062$).

However, this significant effect of condition was lost at follow-up, with no significant effect of condition on change in implicit security from pretest to follow up, although there was a trend toward a significant effect of baseline implicit security on change in implicit security from pretest to follow-up, with those in the experimental

condition slightly increasing (and those in the control condition decreasing. Post hoc paired t tests demonstrated that these changes were not significant for those in the experimental group or for those in the control group.

Self-Esteem

There was a significant effect of baseline self esteem on change in self esteem from pretest to posttest, but no significant effect of condition on the dependent variable, with those in the experimental condition decreasing less than those in the control condition.

An ANCOVA examining the effect of condition on change in self esteem from pretest to follow up demonstrated no significant effect of condition, although again a significant effect of baseline self esteem on the dependent variable was demonstrated. Post hoc paired t tests demonstrated that these changes within conditions were insignificant from pretest to follow up.

Range of Emotions

A significant effect of condition was demonstrated for change in range of emotions from pretest to posttest as well as a significant effect of baseline value of range on the dependent variable, with those in the experimental condition increasing while those in the control condition decreased. Post hoc paired t tests demonstrate that the decrease among those in the experimental condition was significant ($t(26) = -2.12$, $p = .044$), whereas the decrease among those in the control condition was not significant ($t(28) = 1.32$, $p = .198$).

This significant effect of condition was maintained at follow up, in addition to a significant effect of baseline range on change in range from pretest to follow up, with participants in the experimental condition increasing while those in the control condition decreased. Post hoc t tests indicated that the significance of the change in range among those in the experimental condition was maintained from pretest to follow up ($t(12) = -2.40$, $p = .034$). for neither condition was the change significant from pretest to follow up, while the change among those in the control condition was insignificant ($t(22)= 0.92$, $p = .367$).

Differentiation of Emotions

While no significant effect of condition was demonstrated for change in differentiation of emotions from pretest to posttest, a significant effect was demonstrated on the dependent variable of baseline differentiation of emotions as well as a trend toward a significant interaction of gender and condition with males in the experimental condition decreasing ($M = -2.51$, $SE = 1.54$)while females remained essentially unchanged ($M = 0.90$, $SE = 0.999$) and females in the control condition decreasing ($M = -1.42$, $SE = 1.05$), while males in the control condition remained essentially unchanged ($M = - 0.20$, $SE = 1.27$).

No significant effect of condition was demonstrated on change in differentiation from pretest to follow up, although a significant effect was demonstrated of baseline differentiation on the dependent variable, with those in the experimental condition increasing and those in the control condition decreasing.

Intrinsic Religiosity

While there was a significant effect of baseline intrinsic religiosity on change in intrinsic religiosity from pretest to posttest, there was no significant effect of condition on intrinsic religiosity condition, with participants essentially remaining unchanged in both the experimental and control conditions. As none of the covariates were significant, an ANOVA was performed on change in intrinsic religiosity from pretest to follow up and no significant effect of condition was demonstrated, with those in the experimental condition slightly increasing and those in the control condition slightly decreasing.

Extrinsic Religiosity

While there was no significant effect of condition on change in extrinsic religiosity from pretest to posttest, there was a significant effect of baseline extrinsic religiosity on change in religiosity from pretest to posttest, with those in the experimental condition slightly decreasing while those in the control condition slightly increased. This significant effect of baseline explicit religiosity was demonstrated again at follow up, although no significant effect of condition was demonstrated , with those in the experimental condition decreasing more than those in the control condition.

Authority

There was a significant effect of baseline authority on change in authority from pretest to posttest and a trend toward a significant effect of condition on change in authority from pretest to posttest, with participants in the experimental condition decreasing less than those in the control condition. Post hoc paired t tests indicate that the

decrease among those in the experimental condition was not significant ($t(28) = 1.04, p = .31$), while a trend toward a significant decrease was demonstrated among those in the control condition ($t(29) = 1.97, p = .059$).

No significant effect of condition was demonstrated on change in authority from pretest to follow up, although a significant effect was again demonstrated for baseline authority on the dependent variable.

Self Sufficiency

While no significant effect of condition on change in self-sufficiency from pretest to posttest was demonstrated, a significant effect of baseline self-sufficiency on change in self-sufficiency from pretest to posttest was demonstrated (among those in the experimental and control conditions. However, there was a significant interaction of gender with condition, with slight decreases among males (M =- 0.60, SE = 0.42) and females (M = - 0.21, SE = 0.28) in the experimental condition as well as females in the control condition (M = - 0.70, SE = 0.30), but a slight increase among males in the control condition (M = 0.42, SE = 0.34).

The significant effect of baseline self-sufficiency on change in self sufficiency was maintained at follow up, although there was no significant effect of condition on change in self-sufficiency from baseline to follow up.

Superiority

Those in the control condition decreased more than twice as much in superiority from pretest to posttest as those in the experimental condition. However, this difference

was not significant. A significant effect of baseline superiority on change in superiority from pretest to posttest was demonstrated.

An ANOVA demonstrated that there was no significant effect of condition on change in superiority from pretest to follow up.

Exhibitionism

While no significant effect of condition was demonstrated for change in exhibitionism from pretest to posttest , significant effects on the dependent variable were demonstrated for baseline exhibitionism as well as need for cognition, with essentially no change among those in the experimental or control conditions.

There was no significant effect of condition on change in exhibitionism from pretest to follow up, although a significant effect of baseline exhibitionism on the dependent variable was demonstrated.

Exploitation

While there was no significant effect of condition on change in exploitation from pretest to posttest, a significant effect of baseline exploitation on the dependent variable was demonstrated, with those in the control condition increasing more than those in the experimental condition.

Similar results were obtained at follow up: while there was no significant effect of condition on change in exploitation from pretest to follow up, a significant effect of baseline exploitation was demonstrated on change in exploitation from pretest to follow

up those in the control condition again increasing more than those in the experimental condition.

Vanity

While no significant effect of condition was demonstrated on change in vanity from pretest to posttest, a significant effect of baseline vanity on the dependent variable was demonstrated as well as a trend toward a significant effect of need for cognition on the dependent variable among those in the experimental and control conditions.

At follow up, there was no significant effect of condition on change in vanity from pretest, although there was a significant effect of baseline vanity on change in vanity. The variance for change in vanity between the experimental group (n = 15) and the control group (n = 22) from pretest to follow-up was significantly different ($F(1,35) = 8.45$, $p = .006$). No adjustments were made, as ANOVA is relatively impervious to violations of homogeneity of variance when sample sizes are roughly equal (Field, 2009), as in the analyses presented herein.

Entitlement

There was no significant effect of condition on change in entitlement from pretest to posttest, although there was a significant effect of baseline entitlement on decrease in entitlement.

Another ANCOVA was performed on change in entitlement from pretest to follow up , and while no significant effect of condition was demonstrated a trend toward

a significant effect of baseline entitlement on change in entitlement from pretest to follow up was demonstrated.

Overall Narcissism

While there was no significant effect of condition on overall narcissism, a significant effect of baseline total narcissism was demonstrated on decrease in overall narcissism from pretest to posttest.

Similarly, while no significant effect of condition was demonstrated on change in overall narcissism from pretest to follow up, a significant effect of baseline overall narcissism was demonstrated on change in overall narcissism from pretest to follow up.

Attention to Emotions

A significant effect of condition was demonstrated on change in attention from pretest to posttest, as well as a significant effect of baseline attention on change in attention from pretest to posttest, with those in the experimental condition increasing and those in the control condition decreasing. Post hoc paired t tests indicate that these differences are insignificant.

While the significant effect of condition was lost at follow up the significant effect of baseline attention was maintained, with participants decreasing in both the experimental and control conditions.

Clarity of Feelings

No significant effect of condition was demonstrated on change in clarity of feelings from pretest to posttest although a significant effect was demonstrated of baseline clarity on the dependent variable with those in the experimental condition increasing and those in the control condition decreasing.

No significant effect of condition was demonstrated on change in clarity of feelings from pretest to follow up, although a significant effect was demonstrated of baseline clarity on change in clarity from pretest to follow up.

Repair of Feelings

No significant effect of condition was demonstrated on change in repair of feelings from pretest to posttest although a significant effect was demonstrated of baseline repair on change in repair from pretest to posttest. At follow up, no significant effect of condition was demonstrated on change in repair from pretest to follow up, although a significant effect was demonstrated for baseline repair on the dependent variable.

Prejudice

While no significant effect of condition was demonstrated on change in prejudice from pretest to posttest, a significant effect of baseline prejudice was demonstrated on the dependent variable, and a significant main effect of gender such that females decreased(M = - 0.81, SE = 0.53) whereas males increased (M = 2.62, SE = 0.73). Post hoc paired t tests demonstrated that the increase among males was significant (t(20) = -

2.46, p = .023), while the decrease among females was not significant (t(36) =1.01, p = .32).

At follow up, no significant effect of gender was demonstrated, nor was a significant effect of condition demonstrated, although again a significant effect of baseline value of prejudice was demonstrated on change in prejudice from pretest to follow up with those in the control condition increasing more than twice as much as those in the experimental condition.

Self-Kindness

No significant effect of condition was demonstrated on change in self-kindness from pretest to posttest although a significant effect of baseline value of self-kindness was demonstrated on the dependent variable and a significant interaction of gender with condition was demonstrated with males and females demonstrating the opposite patterns: while males in the experimental condition decreased (M = -0.19, SE = 0.21), males in the control condition increased (M = 0.05, SE = 0.17). Conversely, while females in the experimental condition increased (M = 0.83, SE = 0.14), females in the control condition decreased (M = - 0.39, SE = 0.15). Post hoc paired t tests demonstrate that these differences among males and females were insignificant.

No significant effect was demonstrated for condition on change in self-kindness from pretest to follow up, and the significant interaction of gender with condition was lost.

Self Judgment

No significant effect of condition was demonstrated on change in self judgment from pretest to posttest, although a significant effect of baseline value of self judgment was demonstrated on change in self-judgment from pretest to posttest. A significant effect of baseline value of self-judgment was again demonstrated on change in self-judgment from pretest to follow-up and a trend toward a significant effect of condition was demonstrated, with those in the experimental condition decreasing and those in the control condition increasing.

Common Humanity

Significant effects were demonstrated for need for cognition and baseline value of common humanity on change in common humanity from pretest to posttest. Additionally, a significant effect of condition was demonstrated on change in common humanity from pretest to posttest with participants in the control condition decreasing, while participants in the experimental condition essentially remained unchanged. Post hoc t tests demonstrate no significant difference between pretest and posttest among those in the experimental condition ($t(29) = -0.04$, $p = .97$), although participants in the control condition significantly decreased in common humanity ($t(29) = 3.75$, $p = .001$).

However, this significant effect of condition was lost at follow up, although a significant effect of baseline common humanity was demonstrated on change in common humanity from pretest to follow up. Post hoc paired t tests indicate that the decrease among those in the control condition lost significance at follow up ($t(22) = 0.50$, $p = .63$).

Isolation

There was no significant effect of condition on change in isolation from pretest to posttest, but there was a significant effect of baseline value of isolation on the dependent variable. Similarly, at follow up, there was no significant effect of condition on change in isolation from pretest to follow up, but there was a significant effect of baseline isolation on the dependent variable.

Mindfulness

There was no significant effect of condition on change in mindfulness from pretest to posttest, but there was a significant effect of baseline value of mindfulness on decrease in mindfulness from pretest to posttest. At follow up, there was no significant effect of condition on change in mindfulness from pretest to follow up.

Over-identification

There was no significant effect of condition on change in over-identification from pretest to posttest, but there was a significant effect of baseline over-identification on change in the dependent variable.

There was no significant effect of condition on change in over-identification from pretest to follow up, although there was a significant effect of baseline over-identification on the dependent variable.

Total Self Compassion

There was no significant effect of condition on change in overall self-compassion from pretest to posttest, but there was a significant effect of baseline overall self-compassion on change in self-compassion from pretest to posttest, with those in the experimental condition slightly increasing and those in the control condition slightly decreasing.

While there was no significant effect of condition at follow up on change in overall self-compassion, there was a significant effect of baseline overall self-compassion on the dependent variable, with those in the experimental condition increasing and those in the control condition decreasing, and there was a strong trend toward a significant interaction of gender and condition, with all participants decreasing with the exception of females in the experimental condition, whose increase was about double (M = 1.84, SE = 0.69) the decreases of females in the control condition (M = -0.95, SE = 0.59) and males in both the experimental (M = -0.63, SE = 1.06) and control (M = - 0.42, SE = 0.66) conditions. Post hoc t tests demonstrate that the changes were insignificant among males ($t(9) = 0.06, p = .954$) in the control condition, but the decrease among females in the control condition was significant ($t(12) = 2.24$, $p = .044$).No significant changes were demonstrated among females ($t(8) = - 1.62$, $p = .14$), or males ($t(3) = - 0.19$, $p = .86$) in the experimental condition.

Locus of Control

While there was no significant effect of condition on change in locus of control from pretest to posttest, a significant effect of baseline locus of control on the dependent

variable was demonstrated, with participants in both the experimental condition and the control condition decreasing. Post hoc paired t tests demonstrated no significant difference among participants in either group from pretest to posttest.

Additionally, a trend toward a significant interaction of gender and condition was demonstrated, with all participants becoming more external except for females in the experimental condition, who became more internal as hypothesized (M = - 0.31, SE = 0.66) while males in the experimental condition became more external (M = 1.55, SE = 0.96), and both males (M = 0.93, SE = 0.80) and females (M = 2.06, SE = 0.71) in the control condition became more external. Post hoc paired t tests demonstrate no significant differences among males or females of either condition, and while post hoc independent t tests demonstrate no significant differences between males and females in the control condition, among participants in the experimental condition, there was a trend toward a significant difference between males and females at posttest ($t(27) = 1.74$, p = .09). This trend grew stronger at follow up ($t(13) = 1.86$, p = .086).

At follow-up there was no significant effect of condition on change in locus of control from pretest to follow up, although there was a significant effect on the dependent variable of baseline locus of control with all participants becoming more external. Post hoc paired t tests demonstrate no significant differences among participants in either condition.

Family Support

There was no significant effect of condition on change in family support from pretest to posttest, although there was a significant effect of baseline family support on

the dependent variable with all participants decreasing in both the experimental condition as well as the control condition.

This pattern was repeated at follow up: while there was no significant effect of condition on change in family support from pretest to follow up there was a significant effect of baseline family support on the dependent variable with decreases among those in the experimental condition as well as the control condition.

Appearance

There was no significant effect of condition on change in placing one's contingency of self worth upon appearance, although a significant effect of baseline value of the dependent variable was demonstrated.

Similar results were obtained at follow up: while there was no significant effect of condition on change in the dependent variable from pretest to follow up, a significant effect of baseline value of the dependent variable was demonstrated.

Academic Success

While there was no significant effect of condition on change from pretest to posttest in the extent to which a person places their self worth contingent upon academic success, there was a significant effect of baseline value of academic success on the decrease in the dependent variable among those in the experimental and control conditions.

No significant effect of condition was demonstrated on change in the dependent variable from pretest to follow up, although a significant effect of baseline value of the

dependent variable was demonstrated on decrease in the dependent variable from pretest to follow up.

Approval from Others

There was a trend toward a significant effect of condition on change from pretest to posttest in the approval subscale of the Contingencies of Self Worth Scale, and a significant effect of baseline approval was demonstrated on the dependent variable, with participants in the experimental condition increasing more than those in the control condition. Post hoc paired t tests indicate that the change among participants in the experimental condition was significant ($t(27) = -2.33$, $p = .028$).

There was no significant effect of condition on change in approval from pretest to follow up, although there was a significant effect of baseline approval on change in the dependent variable, with participants in the experimental condition decreasing and those in the control condition increasing Post hoc paired t tests demonstrate that the changes from pretest to follow up were insignificant among both those in the control condition ($t(21) = 0.13$, $p = .901$) as well as those in the experimental condition ($t(14) = -0.17$, $p = .868$).

Attachment Security

No significant effect of condition on change from pretest to posttest in security assessed by the RQ was demonstrated, although a significant effect of baseline security on the dependent variable was demonstrated, with increases among participants in both the experimental and control conditions. Post hoc paired t tests demonstrate the increase

among participants in the experimental condition was significant ($t(29) = -3.20$, $p = .003$), although the increase among participants in the control condition was not ($t(29) = -1.86$, $p = .073$).

These findings were maintained at follow up: while no significant effect was demonstrated of condition on the dependent variable, a significant effect of baseline security on increase in security was demonstrated among both those in the experimental condition as well as those in the control condition. Post hoc t tests indicate that the increase among those in the experimental condition maintained significance from pretest to follow up ($t(14) = -2.18$, $p = .047$), while the trend towards a significant increase among those in the control condition was lost at follow up ($t(22) = -0.69$, $p = .496$).

Fearful Attachment

There was no significant effect of condition on fearfulness as assessed by the RQ, although there was a significant effect of baseline fearfulness on change in fearfulness, with those in the experimental condition decreasing and those in the control condition increasing. Paired t tests indicate that these changes within conditions were not significant.

Similarly, at follow up, no significant effect of condition was demonstrated on change in fearfulness from pretest to follow up, although a significant effect of baseline fearfulness was demonstrated on change in fearfulness from pretest to follow up with increases among both those in the experimental condition as well as the control condition. Paired t tests demonstrate a trend toward a significant change among those in the

experimental condition ($t(14) = -1.98$, $p = .068$) but no significant change among those in the control condition ($t(22) = -0.41$, $p = .683$).

Preoccupied Attachment

There was no significant effect of condition on change from pretest to posttest in preoccupied attachment as assessed by the RQ, although there was a significant effect of baseline preoccupied attachment on change in attachment with a slight decrease among those in the experimental condition, and almost no change among those in the control condition. While an ANCOVA did not demonstrate any significant effect of condition on change in preoccupied attachment from pretest to follow up, a significant effect of baseline preoccupied attachment on change in attachment was demonstrated, with a slight decrease among those in the experimental condition, and slight increase among those in the control condition. Post hoc paired t tests demonstrated that these changes within groups were insignificant.

Dismissive Attachment

There was a significant effect of condition on change in dismissiveness from pretest to posttest as assessed by the RQ, as well as a significant effect of baseline dismissiveness, with participants in the experimental condition decreasing and those in the control condition increasing. Post hoc paired t tests demonstrate a trend toward a significant change among those in the experimental condition ($t(29) = 1.84$, $p = .077$), while the change among those in the control condition was significant ($t(29) = -3.06$, $p = .005$).

While there was no significant effect of condition on change in dismissiveness from pretest to follow up, a significant effect of baseline dismissiveness was demonstrated on the dependent variable, with participants in the experimental condition decreasing and those in the control condition increasing. Post hoc paired t tests demonstrate that the trend towards significance in the decrease in dismissiveness among those in the experimental condition became stronger ($t(14) = 2.01$, $p = .064$), but no significance in the increase among those in the control condition ($t(22) = -1.05$, $p = .30$) was demonstrated.

Comparison of Attachment Style

A Chi-square test demonstrated a significant positive relationship between attachment on the forced choice RQ at pretest and posttest $\chi2(9, N = 60) = 26.703$, $p = .002$).

Repeated Measures assessed throughout Intervention

Repeated Measures ANCOVAs were performed on the following dependent variables which were assessed not only at pretest, posttest and follow up, but three times during the course of the intervention: attachment anxiety, attachment avoidance, fearfulness, dismissiveness, preoccupied attachment, and attachment security. Between subjects variables were condition and gender, and need for cognition and baseline values of the dependent variable were covariates, testing the effect of the intervention on the four measurements administered during the intervention as well as the posttest administered after the intervention.

Attachment Anxiety. There was a significant main effect of anxiety (F(3, 44) = 5.41, *p*= .003), with all participants increasing over time in both the experimental (*M* = 2.70*, SE* = 0.19) and control (*M* = 3.14*, SE* = 0.18) conditions.

Attachment Avoidance. There was no significant effect of condition on attachment avoidance (F(3, 45) = 0.60, *p*= .62) among participants in the experimental (*M* = 3.09*, SE* = 0.20) and control (*M* = 3.17*, SE* = 0.19) conditions.

Attachment Security. There was a very weak trend toward a significant main effect of security (F(3, 44) = 2.29, *p*= .09), with all participants increasing over time in both the experimental (*M* = 5.09*, SE* = 0.28) and control (*M* = 4.82*, SE* = 0.27) conditions. There was a significant effect of condition (F(3,138) = 2.97, *p*= .034), with participants in the experimental condition increasing while participants in the control condition decreased at the 3rd time point.

Preoccupied Attachment. Mauchly's test indicated that the assumption of sphericity had been violated, $\chi^2(5) = 11.07$, *p* = .05, ($\varepsilon = .79$)There was no significant effect of condition (F(2.36, 61.25) = 1.19, *p*= .99).There was a significant effect of need for cognition on preoccupied attachment over time (F(2.36,61.25) = 3.53, *p*= .029), as well as significant main effect of preoccupied attachment over time (F(2.36, 61.25) = 3.70, *p*= .024), with all participants increasing over time in both the experimental (*M* = 2.95*, SE* = 0.42) and control (*M* = 3.43*, SE* = 0.33) conditions.

Fearful Attachment. There was no significant effect of condition on fearful attachment ($F(3, 44) = 0.19$, $p = .91$), among participants in both the experimental ($M = 3.72$, $SE = 0.28$) and control ($M = 3.79$, $SE = 0.27$) conditions.

Dismissive Attachment. There was a significant effect of condition on dismissive attachment ($F(3, 138) = 3.06$, $p = .03$), among participants in both the experimental ($M = 4.14$, $SE = 0.23$) and control ($M = 4.37$, $SE = 0.22$) conditions, which was evident at the last time point, at post testing, when those in the experimental condition decreased while those in the control condition increased.

Attachment and Spirituality: Confirmatory Analyses.

A confirmatory partial correlation was performed, and confirming theory, in this sample at pretesting the secure paragraph of the RQ significantly correlated with the IRMS when controlling for gender (see Table 8). Zero order effects suggest that gender may be moderating the correlation ($r=.368$, $n= 57$, $p = .004$). Additionally, the secure paragraph of the RQ correlated significantly with both the intrinsic and extrinsic subscales of the IRMS. Further, it was demonstrated that the dismissive paragraph of the RQ correlated significantly with the IRMS and the intrinsic subscale, but not with the extrinsic subscale. There were no significant relationships between the IRMS or its two subscales with any other attachment measure.

Discussion

It is noteworthy that the breakdown by attachment style among the sample in this study indicates greater and different type of insecurity than is typically found in college students (i.e., Lopez & Gormley, 2002, whose sample of college students included 46% secure, 15% preoccupied, 19% dismissive, and 20% fearful). Specifically, there is more avoidance and less preoccupied attachment among participants in the current study.

This difference in attachment breakdown between EOF Rutgers students and a sample of other students is not surprising, given the findings of Schmitt (2008) who surveyed 17,804 participants from 56 different countries, and demonstrated that regardless of culture, dismissing attachment as assessed by the RQ correlated with several factors including impoverishment of resources, among other things. Further, van IJzendoorn & Bakermans-Kranenburg (1996) found in their meta-analytic study that low SES mothers demonstrate more dismissing and unresolved (or fearful) attachment. On the other hand, Bartley, Head, & Stansfeld (2007) found that attachment was unrelated to SES, although they used an adaptation of the less reliable RQ (Hazan & Shaver, 1987), asking respondents to rate their attachment styles on a continuum from 0 ("the complete opposite to me") to 100 ("the statement describes me exactly") rather than along the standard 7-point Likert scale.

Effect of Condition on Dependent Variables

The significant effect of condition on the decrease in attachment anxiety among those in the experimental condition at follow up, several months after the end of the intervention, suggests that the intervention had an effect on decreasing attachment

anxiety and also that the decrease in attachment anxiety takes time. That no decrease in attachment avoidance or dismissiveness was demonstrated among participants receiving the intervention supports evidence suggesting that avoidant attachment is reticent to change (Horowitz et al, 1993).

This significant effect of condition on decreasing attachment anxiety was preceded by a significant effect of condition, increasing one aspect of emotional intelligence, attention to emotions among those in the experimental condition at posttest. Further, a significant effect of condition was demonstrated on range of emotions, with those receiving the intervention increasing significantly at posttest. Although the significance of the increase among those receiving the intervention was not maintained through follow up, the significant effect of condition was maintained through follow up. Additionally, a trend toward a significant effect of condition was demonstrated, with those receiving the intervention decreasing in self-judgment at follow up.

That the significant decrease in anxiety at follow up was accompanied by these other effects of condition demonstrating improvement among those receiving the intervention suggests that the intervention did have a real effect on decreasing attachment anxiety: not only is anxiety decreasing, but also improvement is demonstrated with regard to several constructs related to lower levels of attachment anxiety.

On the other hand, the trend toward a significant effect of condition with those in the experimental condition unexpectedly *decreasing* in implicit security while those in the control condition increased, suggests that at first the intervention might be damaging: it may decrease participants' implicit self-views to learn about attachment. However, this effect of condition was not significant, was lost at follow up, and the directions of change

were reversed at follow up, with those receiving the intervention *increasing* in implicit security, while those in the control condition decreased. These curious findings suggest that perhaps implicit security deteriorates before it improves, supporting Dabrowski (1966) that intrapersonal deterioration precedes improvement. Further, the lack of a significant effect at follow up may be due to attrition. Similarly, the significant effect of condition on the significant increase in approval among those in the experimental condition at post test was lost at follow up, although the significant decrease among those in the experimental condition was significant. Again, while this loss of the significant effect of condition may be due to attrition, nonetheless, the *improvement* among those in the experimental group was significant at follow up.

It is not clear why security differentially fluctuated at the third mid-intervention assessment, with those receiving the intervention increasing while those not receiving the intervention decreasing in security, although the very weak trend toward a significant main effect of security with all participants increasing during the course of the intervention, taken together with the significant correlation of attachment style assessed at pretest and posttest suggest that overall, all participants maintained their original attachment styles, but became more secure with time.

Loss of effects over time

The significant effect of condition on increase in attention among those in the experimental condition post test was not maintained through follow up. Also, the significant effect of condition on common humanity with those in the control condition significantly decreasing was not maintained through follow up. This loss of significant

effects may be due to the effects of the intervention wearing off with time, suggesting that perhaps booster sessions are needed, or perhaps significant effects were not maintained through follow up due to attrition.

Buffering effect of intervention

The significant effects of condition on the significant decrease in common humanity and significant increase in dismissiveness among those in the control group as well as the trend toward a significant effect of condition on a trend towards a significant decrease in authority among those in the control group suggest a buffering effect of the intervention during the intervention. These effects of condition were demonstrated at post test, and lost at follow up. The loss of the significant effect of condition may be due to attrition, or the wearing off of the apparently protective effects of the intervention. While the significant effects of condition on dismissiveness and common humanity was lost at follow up, the increase in dismissiveness and decrease in common humanity among those in the control condition remained significant through follow up.

It is not clear what about the control condition is causing a significant decrease in common humanity and a significant increase in dismissiveness at both posttest and follow up as well as a trend toward a decrease in authority at posttest: is it the effects of EOF program itself, or this particular population in university, or is it university attendance in general? The significant increase in dismissiveness among those in the control condition suggests defensive self-enhancement (Mikulincer & Shaver, 2007) may be aroused, although it is not clear what is causing this. Perhaps these participants are feeling threatened by university demands. On the other hand, perhaps transitioning to college is

stressful for all students, whether or not they are EOF, and similar results would be demonstrated among non-EOF freshmen.

Interactions of Gender and Condition

Males and females seem to be differentially affected by the intervention and control conditions. That the intervention is beneficial for females is suggested by several findings. A trend toward a significant interaction of gender with condition at posttest demonstrated females in the experimental condition increasing in internality of control while all other participants became more external. At posttest, females in the control condition decreased in differentiation of emotions while females in the experimental condition slightly increased in differentiation of emotions, and males demonstrated the opposite pattern. Further, a significant effect on self-kindness was demonstrated at posttest, with females receiving the intervention increasing in self-kindness, females not receiving the intervention decreasing in self-kindness, and males demonstrating the opposite pattern.

At follow up, a strong trend toward a significant interaction of gender with condition demonstrated that females receiving the intervention increased in overall self compassion while all other participants decreased. That improvement in total self compassion among females in the experimental condition follows an improvement in self kindness among these participants suggests that among females, increase in total self compassion may follow increase in self kindness.

Finally, at follow up a significant interaction of gender and condition demonstrated that females in the experimental condition significantly decreasing, while females in the control condition increased in attachment anxiety at follow up.

The differential effects of the intervention and control condition on females may be due to the nature of the intervention, which emphasizes the importance of interpersonal relating, whereas university in general does not emphasize the importance of relationships, which is especially important to females, as demonstrated by the work of Eccles (1994, 2009), which suggests that women do not enter certain STEM professions because they feel they are not professions in which they can interact with others and be helpful to others.

Conversely, the intervention seems to be less helpful for males; in fact, the finding of a significant interaction of condition and gender with males in the control condition slightly increasing in self sufficiency while all other participants decreased suggests either that something about the control condition is particularly helpful for males or that something about the experimental condition is harmful for males, as suggested by the decrease in self-kindness among males in the experimental condition. It may be that males do not feel as empowered in an intervention that emphasizes interpersonal relating. However, it may be that participating in such an intervention together with females may be limiting for males: male graduates of coed schools were significantly less likely than male graduates of all-male schools to use communication and writing skills in their careers (James & Richards, 2003). Overall, the intervention seems to buffer against the deleterious effects of the control condition on females, while it appears to reverse the positive effects of the control condition on males.

Main effect of gender on prejudice

An unexpected significant effect of gender was demonstrated, with females in both conditions decreasing in prejudice and males in both conditions increasing significantly in prejudice. It may be that in response to transition such as university attendance, males are more likely to think in prejudiced ways, viewing themselves as the in-group and others as the out-group. This finding supports the suggestion that males cooperate more when intergroup competition is present, while females are unaffected by intergroup competition (Van Vugt, De Cremer, & Janssen 2007).

Effect of Covariates on Change in Dependent Variables

A significant effect of need for cognition on change in several dependent variables at posttest, but not follow up, was demonstrated. Specifically, need for cognition moderates the effect of the intervention on implicit security, exhibitionism, and common humanity. It may be that the extent to which a person enjoys thinking constrains change in these outcome variables after the intervention. Further, when examining change over time during the intervention, a significant effect was demonstrated of need for cognition on preoccupied attachment only, suggesting that need for cognition may moderate change in model of self.

It is noteworthy that with regard to a few dependent variables, while a significant effect of baseline values of the dependent variables were demonstrated at posttest, no significant effect of these baseline values were demonstrated at follow up. This phenomenon occurred for the Mindful and Self Kind subscales of the Self Compassion Scale as well as intrinsic religiosity and the superiority subscale of the Narcissistic

Personality Inventory. For changes in implicit security and entitlement, baseline values demonstrated trends toward significant effects.

The loss of a significant effect of the baseline value of the dependent variables over time suggests that perhaps these particular variables are more amenable to change, and suggest further interventions. For example, interventions to increase self-compassion (Leary et al, 2005; Gilbert & Procter, 2006) may be means by which model of self may be improved, and attachment anxiety decreased. Similarly, as suggested by Mikulincer & Shaver (2007a), meditation may be one way to decrease attachment anxiety. Perhaps, too, an intrinsic orientation towards religion may be a way to decrease attachment anxiety, as suggested by the correspondence hypothesis (Kirkpatrick, 1998; 1999).

Limitations

The trend toward a significant effect of the intervention, with those receiving the intervention unexpectedly trending toward a significant decrease in implicit security while those not receiving the intervention trended toward a significant increase in implicit security was troubling. However, this finding may be explained by suspicions verbalized among participants that the goal of the study was to measure change in attachment, effectively making them less implicitly secure at post test: participants may have felt manipulated by the intervention, activating attachment anxiety with its associated external locus of control (Mickelson et al, 1997). However, that the trend toward a significant effect of condition on change in self judgment, with those receiving the intervention decreasing and others increasing was followed by a significant effect of condition at follow up with those receiving the intervention significantly decreasing in

attachment anxiety whereas those who did not receive the intervention increased in attachment anxiety suggests that nonetheless, the intervention had a positive long term effect on real improvement in attachment anxiety.

The components of this exploratory intervention were not targeting specific outcome variables, but rather exploring the effects of attachment as pedagogy on an array of attachment-related outcome variables. It is not known which parts of the intervention are contributing to the results. However, it is likely given results of Study 2 that the interactive nature of the class is essential.

Further, given the large number of participants, it was difficult to ensure that participants, who all knew each other, were actually role playing rather than talking to each other. Therefore, in the future, in addition to the instructor, several research assistants will be in the room, enforcing compliance with the in-class interventions. A group of several participants will be assigned to one assistant who will oversee them. Finally, because of the large amount of people in this experiment as compared to the first two experiments, there was not as much time for in-class processing and discussion of in-class exercises. Therefore, the presentations will be streamlined.

Study 4

Semester-Long Targeted Psycho-Educational Intervention

Given the findings of Study 3 that a psychoeducational intervention in the form of a university class could impact upon the dependent variables, it was decided to create a more focused intervention, targeting specific dependent variables with specific intervention activities. Towards this end, the intervention was retooled, and several measures dropped from the assessment battery, both to lessen the burden on participants as well as to provide more focused outcome measures theoretically related to change in attachment, and three subscales of an empathy scale were added (discussed below).

Because true change in attachment should covary with change in the underlying models of self and/or other, the intervention targets not only attachment security, but also the parts of the IWM – views of self and other – by operationalizing these parts of the IWM with constructs that have been demonstrated to differ by attachment security. Specifically, locus of control and the common humanity and self-kindness subscales of the self-compassion scale serve as proxies for the view of self, while empathy and narcissism serve as proxies for the view of other. As discussed in the introduction to Study 2, scores on the chosen subscales differentiate between the securely and insecurely attached.

Finally, the intervention targets emotional intelligence, specifically the ability of participants to attend to their own feelings, which is integral to both the view of self and other, as ability to attend to one's own feelings is prerequisite for empathy, and one can only attend to the feelings of another to the extent that one can attend to one's own

feelings as suggested by Slade (1999) as well as the motivational structures of those with both attachment avoidance and attachment anxiety. Those high in attachment avoidance defensively exclude awareness of their own feelings, because they were rejected by attachment figures; similarly, they are uncomfortable with the feelings of others. On the other hand, those high in attachment anxiety are too preoccupied with their own feelings to attend to the feelings of another, due to their hyper emoting as a result of intermittent reinforcement from their attachment figures. Thus, the current intervention targets implicit and explicit attachment, emotional intelligence defined as ability to pay attention to one's emotions, and the IWM of both self and other as assessed by the locus of control scale and several subscales of the self compassion scale, empathy scale, and narcissism scale.

Attachment and Empathy (Empathic Concern, Personal Distress, & Perspective Taking)

According to Bowlby, the caregiving and exploring systems can be active once the attachment system is deactivated, as would be the case for one who is securely attached, and whose attachment needs are met (Bowlby, 1969/1982) while conversely, the insecurely attached would be capable of less empathy. Indeed, insecure attachment has been associated with less empathy and secure attachment with greater empathy (Westmaas & Silver; Simpson et al, 1992). Further, since those high in attachment avoidance tend to defensively exclude awareness of feelings whereas those high in attachment anxiety tend to hyper emote and be more aware of their own feelings, those high in avoidance would not suffer in response to the suffering of another, whereas those

high in anxiety would. Several studies have supported the theoretical relationship between attachment and empathy, some of which will be discussed.

While several instruments have been developed to measure empathy i.e., the Hogan Empathy Scale (HES; Hogan, 1969); the Questionnaire Measure of Emotional Empathy (QMEE; Mehrabian & Epstein, 1972); and the Balanced Empathy Emotional Scale (BEES; Mehrabian, 1996, 1997), the Interpersonal Reactivity Index (Davis, 1980, 1983) assesses empathy multidimensionally, along both cognitive (Perspective Taking subscale) and affective dimensions (Personal Distress and Empathic Concern subscales), and is more widely used than the more recently developed Basic Empathy Scale (Jolliffe & Farrington, 2006) or the Questionnaire of Cognitive and Affective Empathy (Reniers, Corcoran, Drake, Shryane, & Völlm, 2009). Therefore, the Interpersonal Reactivity Index was chosen to assess both the cognitive and the affective aspects of empathy in this study to help elucidate the mechanism by which attachment changes: that is, does change involve an emotional process or does it perhaps involve a cognitive process?

Mikulincer et al (2005, Studies 1 and 2) demonstrated that greater attachment anxiety was associated with greater personal distress while watching someone suffering on videotape, ostensibly in an adjoining room, while greater attachment avoidance was associated with less compassion and less willingness to help the distressed confederate, and that either subliminally (Study1) or supraliminally (Study 2) priming security had no effect on ratings of personal distress. However, priming security did result in greater compassion and willingness to help the suffering person and replace her in performing distressful tasks, and these priming effects were evident regardless of attachment assessed prior to the primings. Mikulincer et al (2001, see Study 1) demonstrated that those

participants primed with attachment security after reading about a student whose parents were killed in an accident expressed more empathy and lower levels of personal distress. Attachment in these studies was assessed with the ECR-r, and empathy and personal distress were assessed by items taken from Batson's adjective list of empathy and personal distress (Batson, Fultz, and Schoenrade, 1987) and rated on a 7-point Likert scale.

While secure attachment is associated with empathy and insecure attachment – both high anxiety as well as avoidance—is associated with lack of empathy as discussed in the introduction to Study 2, it is important to note that those high in attachment anxiety may be helpful to alleviate their own distress. In their correlational study, Erez, Mikulincer, van Ijzendoorn, & Kroonenberg (2008) demonstrated that attachment anxiety as assessed by the ECR-r was significantly correlated with selfish reasons for volunteering, including career-promotion, social approval, self-enhancement, and self-protection while attachment avoidance was significantly correlated with less volunteerism, and inversely correlated both with altruistic reasons for volunteering, and also with empathic reasons for volunteering. Similarly, Gillath et al (2005) demonstrated that attachment avoidance was related to less volunteering while attachment anxiety was related to volunteering for ulterior motives, such as feeling belongingness or alleviating one's own distress. Further, Erez et al (2008) demonstrated that the relationship between attachment anxiety and volunteerism was moderated by self focus.

Examining the connections between the three subscales of the IRI that are examined in the present study and the Adult Attachment Scale (Collins & Read, 1990), Joireman, Needham, & Cummings (2001, Study 1) demonstrated that while higher scores

on attachment anxiety were significantly correlated with higher scores on personal distress, higher scores on comfort with closeness and trust were significantly correlated with higher scores on empathic concern and perspective taking. Using the ECR-r, Joireman et al (2001, Study 2) demonstrated that higher scores on empathic concern were significantly correlated with lower ratings of anxiety and avoidance on the ECR-r, although only attachment avoidance was significantly inversely correlated with perspective taking, whereas attachment anxiety was not significantly correlated with perspective taking, and the personal distress subscale was significantly correlated with attachment anxiety as well as with avoidance, although this correlation with avoidance was smaller. When comparing the RQ paragraphs to the three subscales of the IRI using MANOVA, univariate analyses demonstrated a significant relationship for empathic concern and personal distress, while perspective taking was not significantly related to any of the categories. Post hoc Tukey tests indicated that the secure paragraph was associated with significantly higher Empathic Concern than the fearful style, and those with a secure style had significantly lower personal distress than those with either a fearful or preoccupied style. In their conclusion, Joireman et al (2001) suggest that interventions ought to focus on increasing empathic concern and perspective taking.

The findings of Britton & Fuendeling (2005) agree with the findings of Joireman et al (2001) that attachment is more related to personal distress and empathic concern than perspective taking, and that the relationship between attachment and empathy assessed by the IRI appears to involve emotion rather than cognition (Britton & Fuendeling, 2005). Further, Davis (1983) demonstrated that only the empathic concern subscale of the IRI predicted helping behavior, of which the securely attached are more

capable. Therefore, an increase in empathic concern and decrease in personal distress would be expected to be more suggestive of increase in attachment security among those high in attachment anxiety than increase in perspective taking. Overall it is hypothesized that among those in the experimental condition with attachment anxiety, perspective taking and empathic concern would increase, and personal distress would decrease, and that hypothesized changes in the emotional components of empathy but not perspective taking, would be associated with change in attachment. Results could potentially further our understanding of how the emotional and cognitive constructs of empathy relate to attachment and how attachment might change.

Empathy, Emotional Intelligence and Gender

In a 2006 online prescreening of Rutgers-Newark psychology students (n=547) the perspective taking subscale of the Interpersonal Reactivity Index was significantly correlated with both the range and the differentiation subscales of the RDEES. Additionally, the empathic concern subscale of the IRI was significantly correlated with both the range and the differentiation subscales of the RDEES. These correlations suggest that empathy and emotional intelligence are related; specifically, the ability for a person to be in touch with their *own feelings* and to differentiate between them, or in other words, to be aware of their own feelings, is related to the capacity to take the perspective of someone else and to be empathic to someone else. Further, gender significantly correlated with perspective taking and empathic concern, with females scoring significantly higher on these constructs than males, corroborating findings of Davis (1980), who demonstrated that females score significantly higher on each of the IRI

subscales than males. This suggests that gender needs to be controlled for when examining the construct of empathy using the IRI. However, Riggio, Tucker, & Coffaro (1989), also assessing empathy with the IRI, demonstrated that while females have greater emotional empathy than males, there were no gender differences with regards to cognitive empathy, although the differential in results between the prescreening and this latter study may be due to the large sample in the prescreening, as suggested by the very low order of magnitude in the correlation between gender and perspective taking. Nonetheless, using the ECR-r and the IRI, Britton & Fuendeling (2005) demonstrated that males were higher in attachment avoidance and lower in the IRI subscales than were females, replicating the findings of Davis (1980) as well as the findings of the 2006 online Rutgers-Newark prescreening.

Empathy: Prior Interventions

There have been previous attempts at increasing empathy such as Empathy Training (ET) (Feshbach & Feshbach, 1982); Cognitive/Affective Empathy Training (CAET) (Pecukonis, 1990); and the Communication Skills Training program (CST) (Avery, Rider, & Haynes-Clements, 1981), which involved 16 1 hour sessions in which participants practiced self-disclosure and empathy skills, in addition to receiving instruction. Manger, Eikeland, & Asbjornsen (2001) conducted a study in which subjects participated in a year-long intervention for three hours each week, using various modalities including role play to facilitate demonstrated increase in empathy. When children play, they are learning and able to do that which they otherwise could or would not (Vygotsky, 1978), and citing the work of Sully when playing at what is already real,

"What passes unnoticed by the child in real life becomes a rule of behavior in play." (Vygotsky, 1978). It may be play may work similarly for adults as it does for children: to make the unnoticed noticed, and a standard by which to behave. Role play allows a child to do that which he feels he cannot do it "real life." Further, Abendroth, Horne, Ollendick, & Passmore (1977) demonstrated increased empathy among participants using Helping Skills: A Basic Training Program (Danish & Hauer, 1973) for 17 hours over the course of 6 weeks.

Aspects of the current study which target empathy include components used in these programs, such as role play, self-disclosure, and attention to and discussion of emotions. Citing evidence behavioral training in empathy is effective, in their intervention with participants both with and without behavioral problems, Manger et al (2001) demonstrated a significant increase in empathy; although they did not have a specific empathy module, empathy was included in many aspects of their study.

Attachment and Emotional Intelligence (Attention to Emotions)

For a general discussion of the TMMS (Salovey et al, 1995) as it relates to attachment, see Study 2. The current study focuses only on the attention subscale, to reduce the burden on participants and also because the intervention targets increasing attention to emotions, and not the other two aspects of emotional intelligence as assessed by this scale. Further, the attention subscale of the TMMS which assesses the extent to which a person pays attention to their emotions and values their own feelings is prerequisite to the other two aspects of emotional intelligence, the ability to clarify emotions and to regulate one's emotions (for a discussion, see Berrocal & Extremera,

2008). Secure attachment was demonstrated to not only correlate with all three subscales of the TMMS, but to predict higher scores on all three scales (Hamarta, Deniz, & Saltali, 2009).

Self compassion: Prior Interventions

For a general discussion of self-compassion related to attachment, see Study 2. The current study is focused on only two of the six subscales of the Self Compassion Scale, self-kindness and common humanity. Self kindness assesses the extent to which a person is kind to themselves, essentially serving as a secure base for themselves, while common humanity assessed the extent to which a person does not feel alone in their suffering, but part of humanity which similarly suffers (Neff, 2003b). While increasing attachment security has been demonstrated to lead to an increase in compassion towards others (Mikulincer & Shaver, 2005), there is also an intervention to increase self compassion, Compassionate Mind Training (CMT) (Gilbert & Irons, 2005), which encourages awareness with the use of a "Gestalt two-chair dialogue" with another chair for the compassionate voice, as well as a quicker technique to induce self compassion (Leary et al, 2005). The self compassion induction (Leary et al, 2005) has been demonstrated to increase self compassion (Leary et al, 2007, Study 5). For a discussion about how the self compassion induction relates to attachment, please see Study 3 Introduction. It is hypothesized that those in the experimental condition will increase in both self-kindness as well as common humanity.

Locus of control: Prior Interventions

While it is recognized that locus of control is not easy to change, over time, internality increases, as demonstrated by a study of high school students (Chubb, Fertman, & Ross, 1997). Lefcourt (1982, Chapter 10) discusses successfully induced change in locus of control, citing studies that use item response measures such as that used in this study, as well as clinical case studies. For example, Masters (1970, as cited in Lefcourt, 1982) succeeded in helping a troubled adolescent client to shift from an external locus of control, with which he viewed his parents as controlling and himself as a "pawn," to a more internal locus of control, by teaching the youth that the responses of his parents are contingent upon his own behavior, reorienting the client's thinking and changing his behavior. Indeed, one technique which has been demonstrated to lead to increased internality of control is to help people transfer their learning to future situations and to help people see how their actions are related to outcomes (Reimanis, 1974). Similarly, university students became more internal after a month of learning to eliminate self-defeating behaviors (Parks, Becker, Chamberlain, & Crandall, 1975), and university students involved in quasi-group therapy emphasizing expression of emotions as well as awareness of responsibility and personal freedom demonstrated increased internality as assessed by Rotter's locus of control scale (Foulds, 1971).

While reflective journaling was not demonstrated to lead to an increase in locus of control, but to an increase in self-efficacy (Fritson, 2008), Ajzen (2006) argues that self-efficacy and locus of control are strongly related, so that causing an increase in self-efficacy might eventually impact locus of control as well. Gardner & Gardner (1974) suggest that teachers can increase internality of control by not only reinforcing internal

statements, but also countering external statements made by students with more internal ones, suggesting for example that when a student says that others want him to do something, the teacher ask what do *you* want to do? Further, teachers can include lesson plans that require students to discover a problem and detail a plan to solve it, and help students see that their actions are related to outcomes, and how to change an undesirable situation (Gardner & Gardner, 1974). One study failed to demonstrate an increase of internality after positive feedback was provided on task performance (Wolfe, 2011), suggesting that positive feedback is not enough to increase internality. Other interventions have demonstrated an increase in internality when participants are given choices which affect outcomes affecting them.

Narcissism: Prior Interventions

Only three subscales of the NPI are targeted by this study: one subscale representing maladaptive narcissism –exploitation-- and two subscales representing more adaptive narcissism: self sufficiency and authority Emmons (1984, 1987). For a discussion about how secure attachment is related to adaptive narcissism and insecure attachment related to maladaptive narcissism, see Study 2 introduction.

Interventions for improving narcissism are not in the experimental literature, but a treatment approach for pathological narcissism is discussed in the clinical literature, and involves a Rogerian stance of unconditional positive regard (Stevens, Pfost, Skelly, 1984) and involves the therapist serving as a mirror for the narcissistically damaged clients, giving contingent feedback, providing what the attachment figures did not provide for the clients. Specifically, one goal for the treatment of narcissism is to help the client relate

genuinely to others and to correct cognitive distortions (Spruiell, 1974, as cited in Stevens et al, 1984). Theoretically, these methods can be applied to timely and contingent responses to weekly homework assignments, as well as responsiveness during class time on part of the instructor. Further, during a semester long intervention, components are included to help participants better relate to others by teaching them about the effects of their actions on others as well as including an empathic listening course, described below.

Another aspect of treatment of narcissism involves helping a client suffering with narcissism with separation and individuation as well as engaging in "confrontation" with the client to challenge distortions of reality such as the expectation that others will not disagree with the self, but will perfectly mirror the feelings one has (Wilber, 1984). Within the context of a semester long intervention with many people, these treatment goals may theoretically be approached through reflective writing assignments, including writing about an activity that invests one's life with meaning and is intrinsically motivating. Writing about such an activity may encourage reflection about individuation and separation. Further, adolescents who are aware of their "sparks," are more likely to be altruistic and desire to make a positive impact, as well as value strong friendships (Benson, 2008; Scales et al, 2009), characteristics which, not incidentally, are suggestive of secure attachment.

It is expected that those in the experimental condition would demonstrate a decrease in maladaptive narcissism represented by exploitation as well as increases in adaptive narcissism represented by authority and self sufficiency.

Emotional intelligence: Prior Interventions

Interestingly, Mikulincer & Shaver (2007a) note that mindfulness as achieved through meditation is similar to attachment security, while attachment insecurity is associated with less mindfulness (Shaver, Lavy, Saron, & Mikulincer, 2007); therefore, perhaps fostering attention to emotions, attachment security can be increased. In fact, while mindfulness has many demonstrated beneficial effects, including in attachment-related domains – mental and physical health, interpersonal relationships and behavioral regulation –mindfulness has not yet been employed as an attachment intervention to increase attachment security. Nonetheless, a recent study indicates that criminals practicing yoga were demonstrated to be calmer and more self accepting. Further, a six week Mindfulness Based Stress Reduction (MBSR) course (Kabat-Zin, 1982, 2003) resulted in not only an increase in self compassion as assessed by the self compassion scale (Shapiro, Astin, Bishop, & Cordova (2005, as cited in Neff et al, 2006), but also this increase in self compassion was found to mediate MBSR stress reduction.

Reflective Writing and Change

Reflection fosters change affectively, cognitively and behaviorally (Thorpe, 2004), and involves "internally examining and exploring an issue of concern, triggered by an experience, which creates and clarifies meaning in terms of self and which results in a changed conceptual perspective" Boyd and Fales (1983, p100). "Awareness is the cornerstone of reflection. Without awareness, reflection cannot occur."(Scanlan and Chernomas 1997, p1139). One theoretical model of reflection is that of Scanlan and Chernomas (1997) which includes awareness, critical analysis, and new perspective.

Awareness includes description of thoughts, feelings, behaviors, events, situations, or perceptions.

Hubbs & Brand (2005) suggest that reflective journaling can help a student progress through the 4 stages of experiential learning by describing and reflecting on experience, and then exploring the meaning of the experience after which new interpretations are applied to the experience. In fact, Carl Rogers (1982 cited in Hubbs & Brand 2005) advocated using reflective journaling as a tool for growth, stating that "The only learning which significantly influences behavior is self-discovered, self appropriated learning" (p. 223). Vygotsky (1986, cited in Hubbs & Brand, 2005) states: “Thought is not begotten by thought; it is engendered by emotion, i.e., by our desires and needs, our interests and emotions. Behind every thought there is an affective-volitional tendency, which holds the answer to the last "why" in the analysis of thinking,” (p. 252).

According to Dunlap (2006), it is important to give feedback to reflective writing assignments. Several studies suggest that college students are more involved in writing assignments when the assignments are more abstract, require evaluation and synthesis, not merely regurgitating the ideas of others, and include instructor feedback (Norton, 1994). Further, in a seminal work on reflective thinking, Dewey (1910) defines reflective thought as “active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it, and the *further conclusions to which it tends*,” (Dewey, 1910, p6; italics added). Therefore, reflective thinking emphasizes the consequences of ideas and would affect future actions. Certainly a reflective thinker (or writer) is then cast into the role of observer and is able to distance from the ideas, and consider from another perspective. Indeed, this may foster metacognitive awareness,

prerequisite to change in attachment (Main et al, 1985), and may lead as well to greater internality of control (see discussion above on prior interventions targeting locus of control.) Indeed, Holly (1989, citing Earle, 1976, p 196) suggests that reflective writing increases internality of locus of control, insofar what is implicitly, or unconsciously known, becomes consciously known, and one can learn from habit and change when one realizes their habits are ineffective. In fact, Feldman et al (1998) credit reflective practice with changes they achieved.

Further, reflective writing includes feelings, as well as analysis of how and why these feelings evolved (Thorpe, 2004) thus raising awareness of feelings in the writer. Thorpe (2004) suggests letting students practice reflective journaling in class. Reflective writing can be in the form of autobiographical writing as well (Boud, Keogh, & Walker, 1985). It is important to note that writing involving increased use of certain types of words such as insight (i.e., realize, understand, think, and consider) and causal words (i.e. cause, effect, reason, and because) over time led to greater adaptation (Pennebaker et al, 1997, Study 2). Specifically, after their significant other died from AIDS, men who had increased in their use of insight and causal words over time were not as likely to obsess about the death one year later. Further, an analysis of six studies involving writing over 3-5 sessions demonstrated that an increase in usage of insight and causal words led to better outcomes among participants months later, including higher grade point averages among students and faster employment among unemployed engineers, suggesting a cognitive, rather than an emotional, model of change, since use of emotional words, either positive or negative, did not lead to the same beneficial outcomes.

This study had two goals. The first was to determine if a semester-long psychoeducational intervention teaching attachment reconceptualized along the dimension of focus on self or other will decrease attachment anxiety, replicating the results of the last study. The second goal was to shed light on the developmental process of how change towards attachment security might occur by 1) not only examining the effect of the intervention on change in attachment anxiety, but also examining the effect of the intervention on emotional intelligence as well as other outcome variables representing the two parts of the IWM (views of self and other) and 2) examining effects of condition over time. A further goal of this study is to explore whether the intervention will cause a decrease in attachment avoidance as well.

Given the findings of Study 3, it is more likely than not that significant change in dependent variables other than attachment would be demonstrated at the first posttest, such as increased attention to emotions, for example, which is prerequisite for empathy; greater attachment security might only obtain at second post testing as suggested by Kilmann et al (1999), who demonstrated an increase in security six months after the end of a 17 hour intervention. Because this study demonstrated a significant increase in security at the follow up but not at the first posttest, it may be that attachment changes through interacting differently with others over time, only later causing a change in the underlying IWM. Alternatively, it might be that a person experiences improvements in their view of themselves, which then leads to a change in attachment security.

Several hypotheses are made: as previously demonstrated, there will be an effect of condition on attachment anxiety, but not attachment avoidance at the follow up, such that the anxiety of those in the experimental condition will decrease; also replicating Study 3, there will be an effect of condition on emotional intelligence at posttest, as demonstrated by an increased ability among those in the experimental condition to pay attention to their emotions; there will be an effect of condition on implicit attachment security such that the implicit security among those in the experimental condition will demonstrate an increase. Further, change in the IWM will be demonstrated by more positive views of self and other as demonstrated by improvements in the subscales representing these constructs.

The nature of this study, examining only constructs targeted by the intervention itself such as empathy and narcissism, further allow for an examination of whether change in focus is effected as a result of the intervention. Additionally, while those in the control group engage in reflective writing, as do those in the experimental group, the control group is not geared towards changing the focus of participants from self to other as is the experimental group. That participants in both conditions engage in reflective writing, while motivational transformation is a feature of the experimental group only, may control for the effect of reflective writing on any demonstrated change, making it more likely that motivational transformation is responsible for any demonstrated changes among those in the experimental group.

Methods

Participants were recruited following a presentation created and given during EOF summer orientation by the PI. This talk (see Appendix AA) was designed to educate about research in psychology and encourage interest in research as well as participation in the study. 51 students signed up in response to the talk, after which the PI sent an email on August 9th to all incoming EOF freshmen in a further recruitment attempt, yielding another 4 participants.

Fifty five (55) incoming EOF freshmen at Newark campus of Rutgers University in New Jersey agreed to participate, with one dropping out prior to randomization. The remaining 54 participants were randomly assigned to one of two conditions by an online random sequence generator (http://www.random.org/lists/)to randomized numbers 1-54.

However, there was a considerable amount of subject attrition (27.3%): three subjects were dropped because they were disqualified from being EOF students, and due to scheduling conflicts, many of which were discovered several weeks into the semester, 11 subjects were dropped from the study, while 2 were not randomly moved from the experimental to the control condition, for reasons unknown to the candidate. To make up for the attrition, the remaining 21 students in the control group whose schedules permitted them to participate in the experimental condition were randomized and contacted in order of randomization to see if they were interested in switching to the experimental condition, resulting in 4 participants switching to the experimental condition over a month into the experiment, with a final count of 21 participants in the experimental condition, and 19 in the control condition.

The six participants who violated protocol by switching into a different condition after randomization are not considered in analyses, leaving a total of 34 participants. Data are reported for those participants who adhered to protocol as defined by remaining in the same condition from the time of randomization: 17 each in the experimental and control conditions.

The sample comprised of 14 males (41.2%) and 20 females (58.8%). The mean age of the participants was 18.16 years (*SD* = 0.76). The sample was diverse, with12 (35.3%) individuals identifying as African American, 3 (8.8%) identifying as Arabic, 8 (23.5%) identifying as Asian, 8 (23.5%) identifying as Hispanic, and 3 (8.8%) identifying as Other. The average attachment anxiety represented in this sample was 3.46 (SD = 1.19, min= 1.00, max=6.78) while the average attachment avoidance represented in this sample was 3.08 (SD = 1.05, min= 1.56, max=5.78).

Of 24 responding to the question, "Do you affiliate with an organized religion?" the majority, 9, identified as Islamic; 6 identified as Catholic; 4 identified as Christian, 2 identified as Baptist, and 1 each as Buddhist, Coptic Orthodox, and unaffiliated. None were married, although 9 (26.5%) were currently romantically involved while 25 (73.5%) were not. Of the eight participants who provided data, the mean length of current relationship was 16 ½ months (SD =9.71). Among those who were not currently romantically involved, 19 (73.1%) had been involved romantically, while 7 (26.9%) had not.) Only 4 (11.8%) were familiar with attachment theory; 3 of these were familiar through class (75%), while 1 (25%) was familiar by talking with others. Of 34 responding, 21 (73.5%) identified as at least somewhat religious (4 or higher on a 7 point

Likert scale), while of 34 responding, 16 (48.1%) identified as at least somewhat spiritual (4 or higher on a 7 point Likert scale).

Materials.

In addition to being asked to complete demographics questions for idiographic AIAT creation (see Appendix Q), participants were asked to complete the NCS to control for individual differences, as well as several measures to assess attachment, model of other (or social skills), model of self (or mental health), and emotional intelligence.

Attachment. The AIAT was used to assess implicit attachment, while the Revised Experiences in Close Relationships (ECR-r) (Fraley et al, 2000) assessed the two dimensions of attachment avoidance and attachment anxiety by self report, as in Studies 2 and 3 (see Study 2 for a description of the scale) with one difference: an online random sequence generator was used to randomize all 18 anxiety items as well as all 18 avoidance items; the first 9 of each were selected and were re-randomized together for the pretest. The last 9 avoidance and anxiety items that had been randomized were re-randomized together using the online random sequence generator, and this second set of items was presented at both post-test and follow-up. Additionally, to boost statistical power as well as to see if any changes occurred over time during the course of the intervention, half of the scale was administered during the fourth, eighth, and eleventh weeks of the semester.

Model of Other or Social Skills. Social skills or model of other were assessed using several subscales from two widely used scales: the empathic concern, perspective taking, and personal distress subscales of the Interpersonal Reactivity Index (Davis,

1980; 1983) and the exploitative, self- sufficiency, & authority subscales of the Narcissistic Personality Inventory (Raskin & Terry, 1988).

The Interpersonal Reactivity Index (IRI) (Davis, 1980) is a widely used measure of empathy with four subscales, and is unique in that it assesses empathy multidimensionally, considering both emotional and cognitive aspects of empathy. For the purposes of this study, three of the four subscales were used: the Empathic Concern subscale assesses the extent to which one feels someone else's pain, the Personal Distress subscale assesses the extent to which a person feels distress by the suffering of another, and the Perspective Taking subscale, assesses the ability of a person to put oneself in the shoes of another. Each subscale is comprised of 7 items, and scores for each subscale range from 0-24, with higher scores reflecting greater ability of the construct assessed.

For a description of the Narcissistic Personality Inventory, see Study 2 Methods.

Model of self or Mental Health. The Locus of Control Scale (Rotter, 1966) and the self-kind and common humanity subscales of the Self Compassion Scale were used as proxies for model of self. For a description of each, see Study 2.

Emotional Intelligence. This construct was assessed by the attention subscale of the TMMS (Salovey et al, 1995), which is comprised of 13 items assessed on a Likert scale from 1-5. Higher scores indicate that a person places greater importance on their feelings and has greater ability to pay attention to one's emotions. For a description of the TMMS, see Study 2 methods section.

Need for Cognition. This scale was included to control for demonstrated individual differences (Mallott & Hogan, 2003).

Attachment Awareness. Eight questions were created to assess knowledge of attachment along a seven point Likert scale from “definitely” to” not at all” (see Appendix BB).

Course Evaluations. Students completed standard Rutgers-University written course evaluations with additional questions to assess how they felt about the intervention and how they felt it affect their perceptions of themselves and others (see Appendix BB).

Procedure

All participants were pretested together on a single day during their summer academic orientation, at which time they completed all the measures. All participants were post tested together in a large classroom after the end of the semester, similarly completing all the measures, and were post tested again the following semester.

Control Condition

To gain cooperation from EOF academic readiness teachers, it was agreed to run this study as a collaborative effort, with two EOF academic readiness teachers conducting the control group. Over the course of the semester, participants read six articles related to diversity, and wrote six journal papers in response in exchange for one credit (See Appendix CC for control condition syllabus and readings). Students met bimonthly during the last 20 minutes of their academic readiness classes. At a meeting with EOF staff, the protocol for the control group was given as follows: during the first week of class, a general introduction was given, and diversity-related readings were posted for students to read, in response to which they were to write reflection papers guided by

questions created by academic readiness teachers. These reflection papers were to include interpretations, feelings, and views of participants on diversity at Rutgers, and were posted or emailed to one of the two academic readiness teachers. Throughout the week participants were reminded of the reading and reflection paper, and to check Sakai. Attendance was not taken, nor were quizzes or tests given.

Experimental Condition

Each of the intervention outcomes was targeted by specific activities during the intervention, with several activities targeting more than one outcome variable. The procedure for the experimental condition was similar to that of the experimental condition of Study 3, with few exceptions, including the way role play was facilitated.

Role Play. Whereas no research assistants facilitated role play during Study 3, four research assistants were present in the classroom to help enforce and facilitate participation in role play sessions, beginning after the third session. During the first role-play of the anxiety (and avoidance) modules of the intervention, each member of the dyad role played both anxious (and avoidant) as well as secure attachment behaviors. Research assistants were instructed to facilitate discussion among several dyads of the scenarios role played (see Appendices F, G, and T) after the role playing, focusing on impressions securely attached and insecurely attached behaviors make on others as well as thoughts and feelings actors had, both as generators and receivers of secure and ambivalent behavior.

As a method of the intervention, role play targets many of the outcome variables. It targets attachment insofar as by practicing securely attached behavior, a more secure internal working model is activated and made more accessible, and forces a person to play at being empathic and taking the perspective of another. Participants also have the opportunity to experience being the recipient of sensitive responsitivity when their partner, playing at being securely attached, provided contingent responses to their bids for connection, thus allowing the experience of a more internal locus of control. Being the recipient of insecurely attached behavior may encourage a person to feel more common humanity insofar as a participant becomes aware of the suffering and feelings of another as enacted during the role play. Finally, role playing and the ensuing discussion focusing on the feelings of each participant as the giver and receiver of securely and insecurely attached behavior raises awareness of feelings, increasing emotional intelligence.

Reflective Writing Assignments. The reflective journaling assignments, including the autobiographical term paper and in-class rewriting of experiences involving insecurely attached behavior from the perspective of a securely attached person, served several functions in the intervention, targeting all of the outcome variables. (For a description of course assignments, see Appendix DD). For several assignments, as well as in-class rewriting of attachment experiences (discussed below), participants were instructed to use reflective and causal words, which should facilitate more adaptive responses (Pennebaker et al, 1997).

To encourage students to complete more thoughtful assignments and thus derive more benefit from their completion, it was emphasized that plagiarism would not be tolerated, and only typewritten assignments would be accepted, either emailed prior to class or handed in at the start of class. Additionally, all reflective journaling assignments were returned during the course of the semester with feedback to improve for the next assignment, and to provide contingent responses in an effort to increase locus of control, and encourage further reflection. While overall, reflective writing assignments target all of the dependent variables –attachment, locus of control, self compassion, empathy, narcissism, and attention to emotions— certain assignments target only particular outcome variables.

One such take-home assignment asked participants to describe their own "spark," an activity which is intrinsically motivating and infuses one's life with meaning. This exercise in particular targets locus of control and narcissism. Another take-home assignment was the self compassion induction (Leary et al, 2005), for which participants were asked to write about an experience that led them to feel badly about themselves, and then list ways in which others experienced similar events; write a paragraph to themselves expressing empathy as if they were writing to their best friend; and describe their feelings objectively and unemotionally. This exercise targets attachment, locus of control, self compassion, and attention to emotions.

The assignment to read the scenarios from which participants would choose one to role play, in addition to describing and labeling two examples of attachment behavior as well as the responses, either observed in someone else or experienced by the participant, targeted attachment as well as attention to emotions. Similarly, an assignment

requiring that participants describe an instance of feeling heard and understood and another of feeling unheard, accompanied by a discussion of if and how related feelings and responses were different in each case is targeting attention to emotions and attachment.

To facilitate greater reflectivity in writing, an explanation of reflective writing was included in the introductory class and made available throughout the semester.

Interpersonal Closeness Generating Exercise. The 26 participants in the experimental condition were paired by attachment style as in Study 3 for the interpersonal closeness generating exercise (Aron et al, 1997) during the second session (see syllabus in Appendix EE). However, during the second class, dyads had to be changed because several students arrived at class very late, and partners were assigned without regard for attachment style. Dyads were reassigned after the third class when several students were added and dropped from the class, and for the remainder of the intervention, these dyads performed role plays together, but partners were not required to wait for their partner to arrive before entering the classroom, as they were for Study 3. Conducting this exercise early in the semester was planned so that partners could participate in subsequent role plays with each other, practice empathic listening with each other after role playing with each other listening characterizing anxious and avoidant attachment, as well as help each other rewrite in class their insecure attachment experiences from a more secure perspective after discussing. The interpersonal closeness generating exercise and subsequent in class dyadic activities are targeting all the outcome variables. Attachment is targeted insofar as each partner had one person with whom they consistently interact,

who had been chosen for them based on complementary attachment style, thus potentially fostering the activation of more secure IWMs. Locus of control is targeted insofar as participants experience being listened to empathically as well as receiving contingent responsitivity from their partner, given the pairing of insecure participants with particular attachment styles, not pairing highly avoidant with highly avoidant, anxious with highly anxious, or highly anxious with highly avoidant, pairings which would only exacerbate pre-existing insecurities. Common humanity is targeted insofar as participants, through mutual disclosure, experience that they are not alone in their suffering. Empathy, narcissism, and attention to emotions were especially targeted through the empathic listening practice as well as role play of secure attachment, and discussion of feelings each partner has as giver and receiver of empathic listening practice as well as behaviors reflective of attachment security, avoidance, and anxiety.

Lectures and Discussions. Participants were taught that insecure attachment, whether anxious or avoidant, involves self focus, whereas secure attachment is characterized by other focus. Through the in-class reading and discussion of storybooks depicting protagonists with anxious and avoidant behavior as well as in-class viewing and discussion of movie clips featuring protagonists depicting attachment anxiety and attachment avoidance, the interpersonal ramifications of insecure attachment behavior as compared to secure behavior are emphasized, with a focus on the feelings engendered in others as a result of protagonist insecurely attached behavior, as well as feelings of the protagonist. This approach especially targeted narcissism as well as empathy, locus of control, self compassion, and attention to emotions.

Choices. Throughout the intervention to increase internality of control, participants were provided choices as to the method of course evaluation (i.e., whether class participation or homework would be given more weight in determining the final grade) as well as participation (i.e., whether the midterm should be done in class or at home, and which scenario to role play).

Research assistants recorded the number of times each participant in the experimental condition engaged verbally during the intervention for an index of behavioral participation, and cognitive involvement for the experimental condition was assessed by a midterm and two quizzes. Course evaluations were conducted at the end of the semester to assess teaching effectiveness and participant feelings across conditions.

A comparison of the dependent variables across both conditions facilitates an examination of whether any demonstrated effects on the dependent variables are due to the intervention.

Results

Overview of Analyses

First, those who completed the study are compared with those who dropped out before follow up, with analyses performed first for all participants, and then comparing between completers and dropouts in the experimental condition, as well as completers and dropouts in the control condition. Then, the effect of condition on change in a theoretically derived latent variable is examined, examining change from pretest to posttest at the end of the semester as well as change from pretest to follow up towards the

end of the next semester. Next, the effect of condition on change in this latent variable from pretest to post test as well as from pretest to follow up is examined among participants high in attachment anxiety, since the goal of the intervention is to improve view of self, and decrease attachment anxiety, and results are better obtained when a person has much anxiety to lose. For the same reason, change in attachment avoidance is examined among those high in attachment avoidance.

The effect of condition on each of the 13 dependent variables is assessed, from pretest to posttest and again from pretest to follow up. Next, these analyses are performed for those high in attachment anxiety, and exploratory ANCOVAs are performed on data from those high in avoidance on avoidance scores at pretest, posttest, and follow up as well as change in avoidance from pretest to posttest and also on change in avoidance from pretest to follow up.

The relationship between implicit security and attachment anxiety is examined. The effect of condition on attachment awareness is examined among all participants, both from pretest to posttest as well as from pretest to follow up. Exploratory ANCOVAs are performed examining the effect of condition among participants high in attachment anxiety on attachment awareness, both from pretest to posttest as well as from pretest to follow up. Secondary analyses are performed with MANCOVAs comparing the effect of condition on change in several constructs (from both pretest to posttest as well as from pretest to follow up) comprised of change values of several dependent variables. Exploratory analyses are performed using MANCOVAs to examine the effect of condition on change in these same constructs, considering participants high in attachment

anxiety. Finally, behavioral engagement was assessed, and exploratory ANCOVAs are performed examining effect of condition on course evaluations.

Of the 34 participants who remained in the study and adhered to protocol by remaining in the same condition after randomization, 91.18% (31; 15 in the experimental condition and 16 in the control condition) completed the first written posttest (for descriptive statistics, see Tables 9 and 10; for correlations among dependent variables at pretesting, see Table 11) and 58.82% (20 subjects; 10 in the experimental condition and 10 in the control condition) completed the second written posttest. Due to the large attrition, performing one repeated measures ANCOVA including all three time points would result in a loss of data at post testing. Therefore, the change in the dependent variables from pretest to posttest was analyzed from the 31 participants who completed the first posttest, while the change in the dependent variables from pretest to follow-up was analyzed from the 20 participants who completed the follow up assessment.

Comparison of Completers and Dropouts

Independent t-tests were performed comparing those who completed the study through follow up (completers, n = 20) with those who did not complete the follow up assessment (dropouts, n = 14). (For a description of results, see Table 12.) Demonstrated between condition differences on outcome variables need to be considered within the context of these significant differences between those who completed the study and those who did not.

Table 12

Differences Between Completers (n= 20) and Dropouts (n= 14) (Study 4)

Dependent variable	Conditions Combined		Among experimental Participants		Among Control Participants	
	Completers	Dropouts	Completers	Dropouts	Completers	Dropouts
Baseline Anxiety	NS		t(15) = 1.89, p = .078		t(12) = -1.93, p = .077	
			3.67	2.66	3.20	4.35
			(1.18)	(0.92)	(0.69)	(1.48)
Anxiety at posttest	NS		t(13) = 2.67, p = .019		NS	
			2.86	1.75		
			(0.63)	(0.97)		
Anxiety at 3rd midpoint during intervention	NS		t(8.12) = 3.54, p = .007[a]		NS	
			3.11	1.28		
			(1.40)	(0.32)		
Change in avoidance	t(29) = -2.21, p = .035		NS		t(13) = -2.00, p = .06	
	-0.45	0.52			-0.72	0.47
	(1.42)	(0.81)			(1.35)	(0.87)

Table 12 *(continued)*.

Change in perspective taking	t(29) = 2.67, p = .012		NS		t(13) = 1.96, p = .072	
	1.94	-2.84			2.50	-2.71
	(4.57)	(5.41)			(3.66)	(6.47)
Self kindness at posttest	t(29) = 2.08, p = .047		t(14) = 2.02, p = .06		NS	
	3.73	3.18	3.90	3.13		
	(0.75)	(0.66)	(0.60)	(0.92)		

[a] Levene's test significant, assumption of equality of variances violated

Primary Analysis: Theoretically driven MANCOVA: self-kindness, attention and empathic concern

Because self-kindness, attention, and empathic concern are all correlated with one another, and MANCOVA works best at identifying latent variables when the dependent variables are moderately correlated (Field, 2009), change in these three variables was examined. Further, it would be theoretically expected that these three dependent variables should covary, since essentially kindness to oneself is similar to empathic concern with the exception of the recipient of the response: with self-kindness, oneself is the recipient, whereas with empathic concern, another person is the recipient. In order to respond sensitively in either case, a person must be able to attend to their own feelings, and invest those feelings with meaning.

A MANCOVA was performed on the difference from pretest to posttest among all participants on the three primary variables: self-kindness, attention, and empathic concern with condition and gender as between-subjects variables, controlling for need for cognition as well as values of the dependent variables at pretesting. A strong trend towards a significant effect of condition on the dependent variables was demonstrated as well as significant effects on the dependent variables of baseline values of attention, self-kindness, and empathic concern (see Table 13).

A MANCOVA was performed on the same primary variables—self-kindness, attention, and empathic concern—on difference from pretest to follow-up to see if the effect of condition was maintained, while controlling for values of the dependent variables at pretesting, as well as need for cognition, with gender and condition as

between-subjects variables. No significant effect of condition on the dependent variables was demonstrated (see Table 13).

Secondary Analysis: Theoretically driven MANCOVA: self-kindness, attention and empathic concern among high anxiety participants

Given that the intervention targeted a decrease in attachment anxiety, and only those who had high attachment anxiety would have been able to decrease anxiety, it was decided to examine change in the dependent variables only for those who demonstrated high attachment anxiety at pretesting. Further, including those who are high in attachment avoidance could be preventing any significant results from being obtained, since it was demonstrated that avoidance increases in response to an intervention using attachment as pedagogy (See Study 2, Chapter 4.) Therefore, a median split was performed on the variables attachment anxiety and attachment avoidance, and those who fell within the upper half of attachment anxiety were included from the total sample (n = 17), with 8 participants in the experimental group and 9 in the control group.

A MANCOVA was performed on the difference from pretest to posttest among participants scoring in the upper half of attachment anxiety on three primary variables: self-kindness, attention, and empathic concern with condition and gender as between-subjects variables, controlling for need for cognition as well as values of the dependent variables at pretesting. A significant effect of condition on the dependent variables was demonstrated, with those in the experimental condition increasing in attention while those in the control condition decreased in attention and those in the experimental condition

Table 13

Effect of Condition on Reflective Function with Effects of Covariates and Interactions of Gender x Condition

Among All Participants

	Mean Change by Condition				Effect			
	Experimental		Control					
	Post	Follow	Post	Follow	Post-test	Univariate analyses: effect on Δ in primary variables	Follow-up	Univariate analyses: effect on Δ in primary variables
Reflective Function					F(3, 23) = 2.97 .053		F(3,12) = 2.44 NS	
Baseline Attention to Emotions	4.32 (1.77)	-3.50 (2.50)	-3.72 (1.90)	-2.50 (2.50)	F(3, 23) = 16.50 .00	attention F(1, 25) = 36.77 .00	F(3,12) = 9.89 .001	attention F(1, 14) = 16.86 .001
Baseline Self Kindness	0.13 (0.19)	- 0.39 (0.26)	- 0.01 (0.21)	- 0.10 (0.26)	F(3, 23) = 8.80 .00	self kindness F(1, 25) = 28.04 .00	F(3,12) = 9.16 .002	self-kindness F(1, 14) = 11.39 .005
Baseline Empathic Concern	-1.01 (1.41)		-2.85 (1.51)		F(3, 23) = 3.13 .045	empathic concern F(1, 25) = 8.30 .008	NS	

Table 13 *(continued)*.

Need for Cognition					F(3, 22) = 1.27 NS			NS
Gender					F(3, 20) = 1.34 NS			NS
Gender x Condition						NS		NS

Among Participants High in Attachment Anxiety

	Mean Change by Condition				Effect			
	Experimental		Control					
	Post	Follow	Post	Follow	Post-test	Univariate analyses: effect on Δ in DV	Follow-up	Univariate analyses: effect on Δ in DV
Reflective Function					F(3, 8) = 5.03.03	attention F(1, 10) = 11.01.008	F(3,7) = 11.31 .004	self-kindness F(1, 9) = 2.63 NS attention F(1, 9) = 1.69 NS empathic concern

F(1, 9) = 0.60
NS

Table 13 *(continued)*.

Baseline Attention to Emotions	6.97 (2.20)	-9.83 (14.58)	-3.22 (2.50)	-1.00 (4.12)	F(3,8) = 17.68.001	attention F(1, 10) = 48.18.00	F(3,1) = 17.21NS
Baseline Self Kindness	0.50 (0.16)	- 0.27 (0.76)	0.16 (0.15)	0.52 (0.85)	F(3,8) = 19.11.001	self-kindness F(1, 10) = 46.35.00	F(3,1) = 1.87NS
Baseline Empathic Concern	0.21 (2.46)	-1.00 (4.52)	-2.18 (2.29)	-3.00 (3.94)	F(3,5) = 3.79.093		F(3,1) = 5.59NS
Need for Cognition					F(3,8) = 2.92NS	self-kindness F(1, 10) = 8.00.018	F(3,1) = 22.52NS
Gender					F(3,5) = 0.58NS		F(3,1) = 30.48NS
Gender x Condition					NS		NS

demonstrated a increase in empathic concern while those in the control condition demonstrated a decrease in empathic concern and those in the experimental condition demonstrated a greater increase in self-kindness than those in the control condition (see Table 13).

To investigate whether changes in the primary variables from pretest to posttest were significant, post hoc paired *t* tests were conducted on change in attention, empathic concern, and self-kindness from pretest to posttest, and it was demonstrated that among participants in the experimental condition (n = 7), attention did not significantly increase from pretest to posttest ($t(6) = -0.49$, $p = .64$), and among those in the control condition (n = 8), attention did not significantly decrease from pretest to posttest ($t(7) = 0.00$, $p = 1.00$). There was no significant difference in increase in empathic concern from pretest to posttest among those in the experimental condition ($t(6) = -0.073$, $p = .945$) or decrease in empathic concern from pretest to posttest among those in the control condition ($t(7) = 0.908$, $p = .394$). There was no significant difference in increases in self-kindness from pretest to posttest either among those in the experimental condition ($t(6) = -0.415$, $p = .693$) or among those in the control condition
($t(7) = -0.907$, $p = .394$).

A MANCOVA was performed on the same primary variables—self-kindness, attention, and empathic concern—on difference from pretest to follow-up to see if the effect of condition was maintained, while controlling for values of the dependent variables at pretesting, as well as need for cognition, with gender and condition as between-subjects variables. A significant effect of condition was demonstrated with those in the experimental condition decreasing in self-kindness while those in the control

condition increased in self-kindness, and those in the experimental condition decreasing in attention more than those in the control condition and those in the experimental condition decreasing in empathic concern less than those in the control condition. Separate univariate ANOVAs on the outcome variables revealed no significant effect of condition on change in

These findings comparing groups on a latent variable represented by attention to emotions, self-kindness, and empathy demonstrate that the intervention has an effect on change in a latent variable moderated by attachment anxiety.

Primary Analyses: *effect of condition on the dependent variables*

A series of ANCOVAs were performed in SPSS on change in the dependent variable from pretest to posttest and then again from pretest to follow-up, with gender and condition as fixed factors and need for cognition and baseline value of the dependent variable as covariates. When no significant effects are demonstrated for the covariates or for gender, the results are reported and these variables are removed from the model, and the ANCOVA is performed again without them (see Table 14 below). Note that in a few instances, the variances were significantly different in the experimental group and the control group. With regards to violations of variance, ANOVA is relatively impervious to violations of homogeneity of variance when sample sizes are roughly equal (Field, 2009), as in the analyses presented herein. Therefore, no adjustments were made. Further, the violation disappeared when removing from the model variables that had no significant effect on the dependent variable. Nonetheless, all violations of variance are indicated in the table, along with sample sizes.

Table 14

Conditions Compared for All Participants, Including any Effects of Gender, Covariates on Dependent Variables, and Interactions of Gender x Condition (Study 4)

Change in Dependent Variable	Mean Change by Condition				Effect			
	Experimental		Control					
	Post	Follow	Post	Follow	Pre -Post		Pre-Follow	
Attachment Anxiety	- 0.96	- 0.57	- 0.81	- 0.65	F(1, 25) = 0.14	NS	F(1, 14) = 0.02	NS
Baseline value	(0.27)	(0.37)	(0.29)	(0.45)	F(1, 25) = 10.28	.004	F(1, 14) = 3.39	.087
Need for Cognition					F(1, 22) = 0.34	NS	F(1, 11) = 0.40	NS
Gender					F(1, 22) = 2.51	NS	F(1, 11) = 0.02	NS
Gender x Condition					F(1, 22) = 0.54	NS	F(1, 11) = 0.93	NS
Attention to Emotions	4.18	-3.00	-2.86	-2.67	F(1, 28) = 7.15	.012	F(1, 16) = 0.01	NS
Baseline value	(1.79)	(2.31)	(1.85)	(2.45)	F(1, 28) = 45.55	.00	F(1, 16) = 17.95	.001
Need for Cognition					F(1, 25) = 0.01	NS	F(1, 13) = 0.092	NS
Gender					F(1, 25) = 2.41	NS	F(1, 13) = 2.31	NS
Gender x Condition					F(1, 25) = 1.82	NS	F(1, 13) = 0.09	NS

Table 14 *(continued).*

Attachment Avoidance	- 0.17	0.18	0.09	0.05	F(1, 28) = 0.39	NS	F(1, 16) = 0.03	NS
Baseline value	(.28)	(0.52)	(0.29)	(0.55)	F(1, 28) = 11.63	.002	F(1, 16) = 5.85	.03
Need for Cognition					F(1, 25) = 0.23	NS	F(1, 13) = 0.15	NS
Gender					F(1, 25) = 0.01	NS	F(1, 13) = 0.29	NS
Gender x Condition					F(1, 25) = 1.20	NS	F(1, 13) = 0.07	NS
Common Humanity	0.43	0.35	0.31	- 0.27	F(1, 27) = 0 .30	NS	F(1, 16) = 3.14	.095
Baseline value	(0 .15)	(0.23)	(0.16)	(.25)	F(1, 27) = 36.65	.00	F(1, 16) = 12.59	.003
Need for Cognition					F(1, 24) = 0 .58	NS	F(1, 13) = 1.19	NS
Gender					F(1, 24) = 0 .56	NS	F(1, 13) = 0.42	NS
Gender x Condition					F(1, 24) = 0.58	NS	F(1, 13) = 0.13	NS
Empathic Concern	- 0.77	-1.00	-2.78	-3.22	F(1, 28) = 1.10	NS	F(1, 16) = 1.41	NS
Baseline value	(1.33)	(4.18)	(1.38)	(3.73)	F(1, 28) = 9.01	.006	F(1, 12) = 1.26	NS
Need for Cognition					F(1, 25) = 0.03	NS[e]	F(1, 12) = 0.09	NS
Gender					F(1, 25) = 1.92	NS[e]	F(1, 12) = 0.15	NS
Gender x Condition					F(1, 25) = 0.14	NS[e]	F(1, 12) = 0.03	NS

Table 14 *(continued).*

Self Kindness	0.09	- 0.30	0.04	- 0.11	$F(1, 27) = 0.04$	NS	$F(1, 16) = 0.31$	NS
Baseline value	(0.19)	(0.24)	(0.20)	(0.25)	$F(1, 28) = 33.67$	.00	$F(1, 16) = 10.54$	.005
Need for Cognition					$F(1, 24) = 1.75$	NS[d]	$F(1, 13) = 1.58$	NS
Gender					$F(1, 24) = 1.61$	NS[d]	$F(1, 13) = 0.02$	NS
Gender x Condition					$F(1, 24) = 0.47$	NS[d]	$F(1, 13) = 0.22$	NS
Locus of Control	-0.48	-2.44	-1.91	-1.10	$F(1, 25) = 1.31$	NS	$F(1, 17) = 1.50$	NS
Baseline value	(0.86)	(1.33)	(0.85)	(3.03)	$F(1, 25) = 8.45$	.008	$F(1, 13) = 0.03$	NS[c]
Need for Cognition					$F(1, 24) = 0.02$	NS[b]	$F(1, 13) = 0.11$	NS[c]
Gender					$F(1, 25) = 8.67$	.007	$F(1, 13) = 0.05$	NS[c]
Gender x Condition					$F(1, 24) = 0.74$	NS[b]	$F(1, 13) = 1.10$	NS[c]
Authority	- .33	- 0.19	- 0.38	- 0.83	$F(1, 28) = 0.01$	NS	$F(1, 16) = 0.75$	NS
Baseline value	(0.41)	(0.53)	(0.40)	(0.50)	$F(1, 25) = 7.98$	. 009	$F(1, 16) = 4.31$	.054
Need for Cognition					$F(1, 25) = 1.06$	NS	$F(1, 13) = 2.34$	NS
Gender					$F(1, 25) = 2.98$	.097	$F(1, 13) = 0.89$	NS
Gender x Condition					$F(1, 25) = 0.02$	NS	$F(1, 13) = 2.71$	NS

Table 14 *(continued).*

Exploitation	- 0.24	0.56	- 0.45	- 0.60	F(1, 29) = 0.28	NS	F(1, 16) = 3.09	.098
Baseline value	(0.28)	(0.46)	(0.28)	(0.43)	F(1, 29) = 8.08	.008	F(1, 16) = 5.72	.03
Need for Cognition					F(1, 26) = 0.57	NS	F(1, 13) = 0.46	.51
Gender					F(1, 26) = 0.74	NS	F(1, 13) = 0.01	NS
Gender x Condition					F(1, 26) = 0.14	NS	F(1, 13) = 0.56	NS
Self Sufficiency	- 0.45	- .22	0.26	- .88	F(1, 29) = 2.09	NS	F(1, 17) = 0.57	NS
Baseline value	(0.34)	(0.58)	(0.34)	(0.58)	F(1, 29) = 14.22	.001	F(1, 17) = 7.21	.016
Need for Cognition					F(1, 26) = 0.27	NS	F(1, 14) = 0.03	NS
Gender					F(1, 26) = 0.06	NS	F(1, 14) = 0.02	NS
Gender x Condition					F(1, 26) = 0.00	NS	F(1, 14) = 0.55	NS
Personal Distress	-1.87	- 0.84	- 0.002	-1.29	F(1, 28) = 2.27	NS	F(1, 16) = 0.07	NS
Baseline value	(0.86)	(1.15)	(0.89)	(1.21)	F(1, 28) = 12.69	.001	F(1, 16) = 11.73	.003
Need for Cognition					F(1, 25) = 0.57	NS	F(1, 13) = 1.08	NS
Gender					F(1, 25) = 0.65	NS	F(1, 13) = 1.95	NS
Gender x Condition					F(1, 25) = 1.30	NS	F(1, 13) = 0.04	NS

Table 14 *(continued)*.

Implicit Security	5.26	7.20	4.55	1.90	F(1, 25) = 0.40	NS	F(1, 13) = 9.92	.008
Baseline value	(0.77)	(1.15)	(0.82)	(1.22)	F(1, 25) = 73.53	.00	F(1, 13) = 23.31	.00
Need for Cognition					F(1, 22) = 0.27	NS	F(1, 13) = 7.39	.018
Gender					F(1, 22) = 0.11	NS	F(1, 11) = 2.05	NS[a]
Gender x Condition					F(1, 22) = 0.11	NS	F(1, 11) = 0.89	NS[a]
Perspective Taking	.44	0.59	- 0.56	0.57	F(1, 28) = 0.55	NS	F(1, 16) = 0.00	NS
Baseline value	(0.96)	(1.46)	(0.99)	(1.54)	F(1, 28) = 32.11	.00	F(1, 16) = 13.10	.002
Need for Cognition					F(1, 25) = 3.11	.09	F(1, 13) = 0.06	NS
Gender					F(1, 25) = 1.77	NS	F(1, 13) = 0.33	NS
Gender x Condition					F(1, 25) = 0.47	NS	F(1, 13) = 0.07	NS

[a]The variance for change in implicit security between the experimental group (n = 9) and the control group (n = 8) from pretest to follow-up was significantly different (F(3,13) = 7.10, p = .005).
[b]The variances were significantly different in the experimental group (n = 14) and the control group (n = 16) (F(3, 26) = 4.99, *p* = .007).
[c]The variances were significantly different in the experimental group (n = 9) and the control group (n = 10) (F(3,15) = 3.85, p = .032).
[d]The variances were significantly different in the experimental group (n = 16) and the control group (n = 14) (F(3, 26) = 3.48, p = .03).
[e]The variance for change in empathic concern between the experimental group (n = 16) and the control group (n = 15) from pretest to follow-up was significantly different (F(3, 27) = 3.85, *p* = .02).

The increases in implicit security were significant by post hoc paired t tests for both those in the experimental (t(14) = -4.06, *p* = .001) and control (t(12) = -2.45, *p* = .031) conditions. However, post hoc paired t tests demonstrate that while increase in implicit security was not maintained among those in the control condition (t(7) = -0.90, *p* = 0.40), the significant increase among those in the experimental condition was maintained (t(8) = -2.97, *p* = .*0*18).

While no significant effect of condition on change in locus of control from pretest to post test was demonstrated, a significant effect of gender on change in locus of control from pretest to posttest was demonstrated (see Table 14) with males becoming more internal (*M* = -3.04*, SE*= 0.95) and females increasing in externality (*M*= 0.66*, SE*= 0 .77).Post hoc paired sample t tests demonstrate no significant difference among females from pretest to posttest on increase in locus of control (t(17) = -1.21, *p* = 0.24); however, the difference among males was significant
(t(11) = 3.87, *p* = .003).

Although those in the control condition decreased more than three times as much in empathic concern from pretest to follow up than those in the experimental condition, this difference was not significant. Nonetheless, post hoc paired t tests demonstrate that while the change in empathic concern among those in the experimental condition was not significant (t(8) = 0.72, *p* = 0.49), the decrease among those in the control condition was significant (t(8) = 2.59), *p* = .032).

Among all participants, a significant effect of condition is demonstrated for attention at post test, and a significant effect of condition on implicit security is

demonstrated at follow up, as well as trends toward a significant effect of condition on common humanity at follow up.

Secondary Analyses: Testing effect of condition on the dependent variables among participants high in attachment anxiety

A series of ANCOVAs was performed comparing the dependent variables across conditions considering only those who fell into the upper 50th percentile of attachment anxiety (see Table 15 below).

The trend toward a significant effect of gender on change in common humanity from pretest to posttest demonstrated males increasing more (M = 0.69, SE = 0.10) than females (M = 0.43, SE = 0.08). Post-hoc paired t tests demonstrated that this increase in common humanity among males was significant (t(1) = -13.00, p = .049) among those in the experimental condition, while there was no significant difference between pre and posttest among males in the control condition (t(3) = - 0.79, p = 0.49). Exploratory paired t-tests considering all males demonstrate no significant difference among males in the experimental condition from pretest to posttest on change in common humanity (t(15) = -1.39, p = 0.18), and a trend toward a significant difference among all males in the control condition from pretest to follow up on decrease in common humanity (t(13) = -1.99, p = .07) . No significant differences were demonstrated for females in the experimental condition t(4) = - 0.86, p = 0.44) or the control condition t(3) = - 0.63, p = 0.57. Post hoc independent t tests demonstrated no significant differences between males and females in common humanity at posttest among those in either the experimental (t(5) = 1.88, p = 0.12) or the control condition (t(6) = 0.00, p = 1.00). The significant interaction of

condition and gender at post test demonstrated males in the experimental condition increasing more (M = 1.20, SE = 0.65) than females in the experimental condition (M = 0.65, SE = 0.11), and males in the control condition increasing less (M = 0.18, SE = 0.12) than females (M = 0.22, SE = 0.12) in the control condition. Post hoc independent t- tests demonstrated a trend toward a significant difference between males and females in the experimental condition (t(5) = 2.26, p = .07).

The significant interaction of gender with condition demonstrated males in the experimental condition decreasing (M = -1.02, SE = 0.44) while females in the experimental condition increased (M = 0.76, SE = .20), and males in the control condition increasing (M = 0.11, SE = 0.298) while females in the control condition decreased (M = - 0.84, SE = 0.25).There were not enough data to perform a post hoc paired t-test for males in the experimental condition, although post hoc paired t test demonstrated no significant difference among males in the control condition (t(1) = 0.00, p = 1.00). Post hoc paired t tests demonstrate no significant difference in common humanity at follow up among females in either the experimental condition (t(4) = - 0.33, p = 0.76) or the control condition (t(1) = 1.67, p = 0.34). While there were not enough data to perform a post hoc independent t tests for those in the experimental condition, among participants in the control condition, the difference between males and females in common humanity at follow up was significant (t(3) = 5.56, p = .01).

The significant effect of gender on the dependent variable demonstrated males decreasing in externality (M = -3.63, SE = 1.31) and females increasing in externality (M = 1.63, SE = 1.07). Post hoc paired t tests reveal that the difference among females was

Table 15

Effects of Condition and Covariates on Dependent Variables among Participants High in Attachment Anxiety with Interactions of Gender x Condition (Study 4)

	Mean Change by Condition				Effect			
Change in DV	Experimental		Control					
	Post	Follow	Post	Follow	Post-test		Follow-up	
Attachment Anxiety	-1.54	-1.21	-1.07	-0.88	F(1, 13) = 0.56	NS	(F(1, 9) = 0.18	NS
Baseline value	(1.37)	(1.16)	(1.05)	(1.37)	F(1, 9) = 1.56	NS[a]	F(1, 8) = 0.00	NS
Need for Cognition					F(1, 9) = 0.01	NS[a]	F(1, 5) = 0.20	NS
Gender					F(1, 9) = 0.16	NS[a]	F(1, 5) = 0.21	NS
Gender x Condition					F(1, 9) = 0.75	NS[a]	F(1, 5) = 1.30	NS
Attention to Emotions	6.86	-5.79	-3.12	-5.86	F(1, 12) =11.40	.005	F(1, 8) = 0.00	NS
Baseline value	(2.12)	3.63	(1.98)	(4.03)	F(1, 12) = 73.06	.00	F(1, 8) =8.71	.018
Need for Cognition								
Gender								
Gender x Condition								

Table 15 *(continued).*

Common Humanity*	0.93	-0.13	0.20	- 0.36	F(1, 10) =31.14	.00	F(1, 11) = 0.59	NS
Baseline value	(0.10)	(0.23)	(0.08)	(0.19)	F(1, 10) =150.10	.00	F(1, 11) =44.66	.001
Need for Cognition								
Gender					F(1, 10) =3.86	.08	F(1, 11) =1.89	NS
Gender x Condition					F(1, 10) =4.95	.05	F(1, 11) =17.62	.006
Empathic Concern	0.14	-1.00	-2.13	-3.00	F(1, 13) = 0.53	NS	F(1, 9) = 0.60	NS
Baseline value	(5.21)	(4.52)	(6.62)	(3.94)	F(1, 9) = 3.28	NS	F(1, 8) = 2.40	NS
Need for Cognition					F(1, 9) = 0.03	NS	F(1, 5) = 1.93	NS
Gender					F(1, 9) = 0.00	NS	F(1, 5) = 1.75	NS
Gender x Condition					F(1, 9) = 1.93	NS	F(1, 5) = 0.85	NS
Self Kindness	0.48	- 0.09	0.18	0.31	F(1, 11) = 1.85	NS[b]	F(1, 8) = 0.82	NS
Baseline value	(0.16)	(0.28)	(0.15)	(0.31)	F(1, 11) = 73.18	.00[b]	F(1, 8) = 4.98	.056
Need for Cognition					F(1, 11) = 6.96	.023[b]	F(1, 5) = 0.00	NS[c]
Gender					F(1, 9) = 0.69	NS	F(1, 5) = 1.05	NS[c]
Gender x Condition					F(1, 9) = 0.23	NS	F(1, 5) = 1.01	NS[c]

Table 15 *(continued).*

Locus of Control	-0.63	-2.67	- 1.38	- 0.40	F(1, 10) = 0.20	NS	F(1, 9) = 2.83	NS
Baseline value	1.31	(1.03)	1.07	(3.13)	F(1, 8) = 0.95	NS	F(1, 5) = 0.92	NS
Need for Cognition					F(1, 8) = 1.10	NS	F(1, 5) = 0.10	NS
Gender					F(1, 10) = 9.59	.011	F(1, 5) = 0.03	NS
Gender x Condition					F(1, 10) = 4.26	.066	F(1, 5) = 1.02	NS
Authority	- 0.64	-1.00	- 0.05	- 0.40	F(1, 9) = 0.64	NS	F(1, 8) = 0.31	.59
Baseline value	(0.57)	(2.24)	(0.47)	(0.89)	F(1, 9) = 11.16	.009	F(1, 4) = 2.97	NS
Need for Cognition					F(1, 8) = 2.01	NS	F(1, 4) = 0.33	NS
Gender					F(1, 9) = 4.17	.072	F(1, 4) = 0.00	NS
Gender x Condition					F(1, 9) = 0.14	NS	F(1, 4) = 0.21	NS
Exploitation	- 0.17	0.50	0.02	- 0.40	F(1, 12) = 0.10	NS	F(1, 9) = 0.88	NS
Baseline value	(0.44)	(2.07)	(0.41)	(0.55)	F(1, 12) = 6.00	.031	F(1, 5) = 0.00	NS
Need for Cognition					F(1, 9) = 0.40	NS	F(1, 5) = 2.75	NS
Gender					F(1, 9) = 0.18	NS	F(1, 5) = 2.49	NS
Gender x Condition					F(1, 9) = 0.39	NS	F(1, 5) = 3.33	NS

Table 15 *(continued).*

Self Sufficiency	- 0.18	- 0.67	0.41	1.20	$F(1, 12) = 0.69$	NS	$F(1, 9) = 3.04$	NS[d]
Baseline value	(0.49)	(2.34)	(0.45)	(0.45)	$F(1, 12) = 13.55$	.003	$F(1, 5) = 0.16$	NS
Need for Cognition					$F(1, 9) = 1.58$	NS	$F(1, 5) = 2.43$	NS
Gender					$F(1, 9) = 0.03$	NS	$F(1, 5) = 1.85$	NS
Gender x Condition					$F(1, 9) = 0.82$	NS	$F(1, 5) = 2.30$	NS
Personal Distress*	-3.44	0.00	0.24	0.00	$F(1, 9) = 5.49$	.04	$F(1, 9) = 0.00$	NS
Baseline value	(1.23)	(4.56)	(0.96)	(4.18)	$F(1, 9) = 31.58$	.00	$F(1, 5) = 0.73$	NS[e]
Need for Cognition					$F(1, 9) = 9.42$	.013	$F(1, 5) = 0.29$	NS[e]
Gender					$F(1, 9) = 11.77$	.008	$F(1, 5) = 0.00$	NS[e]
Gender x Condition					$F(1, 9) = 0.66$	NS	$F(1, 5) = 1.17$	NS[e]
Implicit Security	2.86	7.20	1.80	1.67	$F(1, 10) = 0.15$	NS	$F(1, 6) = 0.72$	NS
Baseline value	(5.43)	(10.11)	(3.42)	(6.03)	$F(1, 6) = 3.38$	NS	$F(1\ \ 2) = 4.55$	NS[f]
Need for Cognition					$F(1, 6) = 1.54$	NS	$F(1\ \ 2) = 0.26$	NS[f]
Gender					$F(1, 6) = 0.12$	NS	$F(1, 2) = 2.04$	NS[f]
Gender x Condition					$F(1, 6) = 0.47$	NS	$F(1, 11) = 0.68$	NS[f]

Table 15 *(continued).*

Perspective Taking	3.03	0.80	0.10	0.04	F(1, 12) = 1.82	NS	F(1, 8) = 0.08	NS
Baseline value	(1.59)	(1.86)	(1.49)	(2.04)	F(1,12) = 15.68	.002	F(1,8) = 12.55	.008
Need for Cognition					F(1, 9) = 0.90	NS	F(1, 5) = 0.88	NS
Gender					F(1, 9) = 0.02	NS	F(1, 5) = 0.22	NS
Gender x Condition					F(1, 9) = 0.16	NS	F(1, 5) = 1.51	NS

*Attachment anxiety moderates effect of condition on these constructs.

[a]The variance for change in attachment anxiety between the experimental group (n = 7) and the control group (n = 8) from pretest to post test was significantly different (F(3, 11) = 4.93, *p* = .021).

[b]The variance for change in self kindness between the experimental group (n= 7) and the control group (n = 8) from pretest to post test was significantly different (F(1, 13) = 6.74, *p* = .022).

[c]The variance for change in self kindness between the experimental group (n= 6) and the control group (n=5) from pretest to follow up was significantly different(F(3, 7) = 5.20, *p* = .034).

[d]The variance for change in self sufficiency between the experimental group (n = 6) and the control group (n = 5) from pretest to follow-up was significantly different (F(1,9) = 19.13, *p* = .002).

[e]The variance for change in personal distress between the experimental group (n= 6) and the control group (n = 5) from pretest to follow up was significantly different (F(3, 7) = 12.15, *p* = .004).

[f]The variance for change in implicit security between the experimental group (n = 5) and the control group (n = 3) from pretest to follow up was significantly different (F(3, 4) = 17.69, *p* = .009).

not significant (t(7) = -1.23, p = .26), although the difference among males was significant (t(5) = 4.11, p = .01). The trend towards a significant interaction of gender with condition demonstrated males decreasing in externality more in the control condition (M = -5.75, SE = 1.52) than in the experimental condition (M = -1.50, SE = 2.15) and females increasing in externality more in the control condition (M = 3.00, SE = 1.52) than in the experimental condition (M = 0.25, SE = 1.52). Post hoc paired t tests demonstrated a significant decrease in externality among males in the control condition (t(5) = 6.15, p = .002), but no significant change among males in the experimental condition (t(5) = 1.94, p = .11), and no significant change in externality among females either in the experimental condition (t(7) = - 0.58, p = .58) or the control condition (t(9) = -1.29, p = .23).

Exploratory paired t tests were conducted to see if the effects of condition on gender persisted over time, and while there was no significant change among males from pretest to follow up in either condition, and no significant change among females in the control group, females in the experimental group significantly decreased in externality (t(5) = 9.22, p = .00).

Post hoc paired t tests demonstrate no significant difference between pre- and post- test scores in perspective taking among those in the experimental group (t(6) = -1.19, p =.281) or among those in the control group (t(7) = - .22, p = .83). Similarly, post hoc paired t tests were performed and the changes from pretest to follow up were insignificant for both the experimental (t(5) = -1.17, p =.30) and control conditions (t(4)= 0.19, p = .86).

Although a significant effect of condition was demonstrated for personal distress, post hoc paired sample t tests demonstrated no significant difference in the change in personal distress between pretest and posttest among participants in either the experimental or the control group.

The trend toward a significant effect of gender on change in attachment anxiety from pretest to posttest demonstrated a decrease among males (M = -1.10, SE = 0.57) and an increase among females (M = 0.41, SE = 0.47). Post hoc paired t tests did not demonstrate any significant effect for either males ($t(5) = 1.18$, $p = .29$) or females ($t(7) = -0.40$, $p = .70$)

Attachment anxiety moderates the effect of the intervention on common humanity and personal distress.

Exploratory Analyses: effect of intervention on change in avoidance among participants high in attachment avoidance

An ANCOVA was performed on participants high in attachment avoidance only, demonstrating a significant effect of condition on avoidance (See Table 16). Post hoc paired t tests did not demonstrate any significant difference from pretest to posttest among those in the experimental ($t(6) = 1.40$, $p = .21$) or the control conditions ($t(7) = 0.85$, $p = .42$).

That a significant effect of condition was demonstrated on change in avoidance among those high in avoidance but not among all participants suggests that avoidance is moderating the effect of condition on this dependent variable, and suggests that highly avoidant participants may change in different ways than highly anxious participants,

although there were not enough subjects to compare change among participants high in avoidance with change among participants high in anxiety.

Implicit and Explicit Security

Partial correlations controlling for gender, need for cognition, and IAT order of presentation (see Study 1) were conducted, and not only did implicit security not correlate significantly with attachment anxiety (see Table 11), the sign was in the direction opposite that which was expected based on Study 1. Further, implicit security demonstrated a trend towards a significant correlation with personal distress and a strong trend toward a negative correlation with attention to emotions, a subscale of the emotional intelligence measure, TMMS.

Because the IAT was normed on a non-EOF population with a mean attachment anxiety of 2.57, and the EOF population in this study had a mean anxiety score of 3.47, those participants with anxiety levels of 2.57 or less were selected, and the correlation was run again, controlling again for need for cognition, gender, and order of IAT target word presentation, as well as membership in attachment category, created by median split of attachment anxiety and avoidance. The relationship between implicit security was in the expected direction (r= - 0.22, n = 1, p = .86). Attachment anxiety correlated significantly with personal distress (r= 1.00, n = 1, p = .018) and locus of control (r= -1.00, n = 1, p = .009). ANCOVAs were performed considering differences in anxiety and implicit security on all participants from Studies 1, 2, 3, and 4 (N = 156), controlling for gender. [3] Because there was no significant effect of gender on either anxiety

[3] Neither order of IAT target presentation nor need for cognition were controlled for, since these variables were not controlled for in all studies.

Table 16

Effect of Condition and Covariates on Change in Attachment Avoidance among Participants High in Attachment Avoidance with Interactions of Gender x Condition (Study 4)

	Mean Change by Condition				Effect	
	Experimental		Control			
	Post	Follow	Post	Follow	Post-test	Follow-up
Attachment Avoidance	-1.24	- 0.19	0.17	- 0.65	F(1, 12) =4.84.05	F(1, 9) = 0.14 NS
Baseline value	(0.42)	(2.27)	(0.39)	(1.63)	F(1, 12) = 9.34.01	F(1, 5) = 3.43 NS
Need for Cognition					F(1, 9) = 0.75 NS[a]	F(1, 5) = 0.43 NS
Gender					F(1, 9) = 0.07 NS[a]	F(1, 5) = 0.00 NS
Gender x Condition					F(1, 9) = 0.03NS[a]	F(1, 5) = 1.69 NS

[a]The variance for change in attachment avoidance between the experimental group (n =7) and the control group (n = 8) from pretest to post test was significantly different (F(3,11) = 3.60, p = .05).

($F(1,137) = 0.11$, $p = .74$) or implicit security ($F(1,111) = 0.24$, $p = .63$), an ANOVA was performed comparing means of anxiety and implicit security across all four studies (see Figure 4).

There was a significant effect of condition on both anxiety ($F(3,138) = 7.36$, $p < .001$) as well as implicit security ($F(3,112) = 7.37$, $p < .001$). Employing the Bonferroni post-hoc test, significant differences in mean anxiety were found between Studies 1($M = 2.58$, $SD = 1.12$) and 2 ($M = 3.98$, $SD = 1.23$) ($p < .001$), between Studies 1 and 4($M = 3.46$, $SD = 1.19$) ($p = .019$), and between Studies 2 and 3 ($M = 2.87$, $SD = 1.14$) ($p = .003$). There was no significant difference between Studies 1 and 3 ($p = 1$), Studies 2 and 4 ($p = .801$), or Studies 3 and 4 ($p = .135$). Significant differences in mean implicit security were found between Studies 1($M = 11.39$, $SD = 4.39$) and 2 ($M = 6.06$, $SD = 4.75$) ($p = .001$), between Studies 1 and 3($M = 7.84$, $SD = 4.92$) ($p = .03$), and between Studies 1 and 4 ($M = 7.06$, $SD = 5.47$) ($p = .002$). There was no significant difference between Studies 2 and 3 ($p = 1$), Studies 2 and 4 ($p = 1$), or Studies 3 and 4 ($p = 1$).

An exploratory ANCOVA was performed considering difference in avoidance across all four studies ($N = 156$), controlling for gender (see Footnote 7). There was no significant effect of Study on mean avoidance ($F(3, 138)= 0.54$, $p = .68$), and because there was no significant effect of gender on avoidance ($F(1,138) = 3.31$, $p = .07$), an ANOVA was performed comparing means of avoidance across all four studies. No significant effect of study on level of avoidance assessed at pretest was demonstrated ($F(3,139) = 0.60$, $p = .62$).

Effect of Intervention on Attachment Awareness.

Two ANCOVAs were performed, controlling for gender, need for cognition, and baseline attachment awareness comparing participants across two conditions on change (from pre to post test, and pre to follow up) in a composite of the eight attachment awareness questions (see Appendix BB) to determine whether participants learned and retained the attachment material taught in the intervention. This attachment awareness composite was obtained by reverse scoring responses to the two negatively worded items and then summing responses from all eight items for a total attachment awareness composite score, with lower scores reflecting greater attachment awareness.

With condition as the between subjects factor, controlling for gender, need for cognition, and attachment awareness at baseline, this composite was analyzed in two separate ANCOVAs, one assessing the difference between conditions on change from pretest to posttest, and the second assessing the difference between conditions on change from pretest to follow up.

It was demonstrated that participants in the experimental condition were significantly different on attachment awareness than participants in the control condition at posttest with participants in the experimental condition increasing in attachment awareness (see Table 17). This significant effect of condition was maintained at follow-up with participants in the experimental condition demonstrating an increase in attachment awareness (see Table 17).

Follow-up paired t tests demonstrate that the change among participants in the experimental group demonstrated at posttest was significant ($t(15) = 6.21$, $p = .00$);

however, this level of significance was not maintained at follow up ($t(9) = 2.09$, $p = .066$).

Condition had a significant effect on attachment awareness at posttest and follow up, and while participants in the experimental condition learned and retained the class material, this learning was not significant at follow up.

Exploratory Analyses: Effect of Intervention on Attachment Awareness among Participants High in Attachment Anxiety

An ANCOVA was performed on change in attachment awareness from pretest to posttest among participants high in attachment anxiety, controlling for gender, need for cognition, and baseline attachment awareness. A significant effect of condition was demonstrated among those in the experimental condition (See Table 17) and those in the control condition. Post hoc paired t tests demonstrated that change from pretest to posttest in attachment awareness among those in the experimental condition was significant ($t(6) = 4.10$, $p = .006$), while change among those in the control condition was not significant ($t(7) = -1.18$, $p = 0.26$).

An ANCOVA was performed on change in attachment awareness from pretest to follow up among participants high in attachment anxiety to see if the significant effect of condition was sustained. There was a trend toward a significant effect of condition among those in the experimental condition and those in the control condition. Post hoc paired t tests demonstrate that among those in the experimental condition, the increase from pretest to follow up was significant ($t(5) = 3.90$, $p = .011$) while the change among those in the control condition was not significant ($t(4) = - 0.31$, $p = .77$).

Table 17

Attachment Awareness Compared Across Conditions with Effects of Gender, Covariates, and Interactions of Gender x Condition

	Mean Change by Condition				Effect			
	Experimental		Control					
	Post	Follow	Post	Follow	Pre -Post		Pre-Follow	
for All Participants								
Attachment Awareness[a]	-10.46	-6.77	1.02	3.07	F(1, 27) = 59.31	.00	F(1, 17) = 7.46	.014
Baseline value	(1.00)	(2.44)	(1.05)	(2.44)	F(1, 27) = 15.04	.001	F(1, 17) = 5.48	.032
Need for Cognition					F(1, 26) = 0.00	NS	F(1, 14) = 0.49	NS
Gender					F(1, 27) = 1.02	NS	F(1, 14) = 0.00	NS
Gender x Condition					F(1, 27) = 9.12	.005	F(1, 14) = 0.00	NS
For Participants High in Attachment Anxiety								
Attachment Awareness	-6.57	-6.33	1.00	1.20	F(1, 13) = 18.84	.001	F(1, 9) = 3.68	.087
Baseline value	(4.24)	(3.98)	(2.39)	(8.64)	F(1, 9) = 2.66	NS	F(1, 5) = 0.41	NS
Need for Cognition					F(1, 9) = 0.85	NS	F(1, 5) = 0.02	NS
Gender					F(1, 9) = 2.97	NS	F(1, 5) = 0.30	NS
Gender x Condition					F(1, 9) = 0.14	NS	F(1, 5) = 0.00	NS

[a]A negative change indicates an increase in attachment awareness; a positive change indicates a decrease.

Baseline attachment anxiety moderates the effect of the intervention at follow up such that participants high in attachment anxiety in the experimental group were significantly more aware of attachment at follow up.

Exploratory Analyses of Targeted Constructs of Intervention

Because the intervention targeted several constructs assessed by several proxies, MANCOVAs were performed to examine the effects of the intervention among all participants on these constructs – attachment and models of self and other – as defined by their proxy measures.

Attachment among All Participants

A MANCOVA was performed using data from all participants on difference from pretest to posttest on three primary variables assessing attachment: attachment anxiety, attachment avoidance, and implicit security, with condition and gender as between-subjects variables, controlling for need for cognition and baseline values of the dependent variables. No significant effect of condition on the dependent variables was demonstrated (see Appendix JJ), although a trend towards significance was demonstrated for anxiety, and a significant effect of baseline value of implicit security on the dependent variables was demonstrated. See Appendix JJ for the results of separate univariate ANOVAs analyzing the effect of condition and covariates on change in the dependent variable.

To investigate whether these changes from pretest to posttest in anxiety and implicit security were significant, paired t tests were conducted, and it was demonstrated that among participants in the experimental condition (n = 15), anxiety decreased

significantly from pretest (M = 3.27, SD = 1.24) to posttest (M = 2.42, SD= .94) (t(14) = 2.41, p = .03), and participants in the control group (n = 13) significantly decreased from pretest (M = 3.73, SD = 1.25) to posttest (M = 2.79, SD = 1.42) (t(12) = 3.29, p = .006).Participants significantly increased in implicit security in both the experimental condition (t(14) =-4.06, p = .001) and the control condition (t(12) = 2.45, p = .031).

A MANCOVA was performed on difference from pretest to follow-up on the same three primary variables representing attachment: anxiety, avoidance, and implicit security, with the same covariates and between-subjects variables. While no significant effect of condition on the dependent variables was demonstrated, significant effects of baseline anxiety and implicit security were demonstrated (see Appendix JJ).

To investigate whether the changes from pretest to follow up in anxiety and implicit security were significant (see Appendix JJ), paired t tests were conducted, and it was demonstrated that among participants in the experimental condition (n = 10), the decrease in anxiety from pretest (M = 3.68, SD = 1.18) to follow up (M = 3.02, SD = 1.09) was not significant (t(9) = 1.71, p = .12), and the decrease among participants in the control group (n = 7) from pretest (M = 3.27, SD= .73) to follow up (M = 2.75, SD = 1.39) was not significant (t(6) = 1.07, p = .33).The increase in implicit security among participants in the experimental condition demonstrated a trend towards significance (t(8) = 2.15, p = .067),while the increase in implicit security among participants in the control condition was significant (t(7) = 2.99, p = .020).

View of self: Locus of Control, Self-kindness, & Common Humanity among All Participants

A MANCOVA was performed for all participants on change from pretest to posttest in locus of control as assessed by the LOC and self-compassion as assessed by the self-kind and common humanity subscales of the SCS, representing view of self. This analysis explores whether a latent variable represents these three constructs.

While no significant effect of condition was demonstrated, significant effects of baseline locus of control, self-kindness, and common humanity on the dependent variables were demonstrated, as well as a trend toward a significant effect of gender on the dependent variables was demonstrated (see Appendix JJ).

Univariate analyses revealed that the demonstrated significant effect on the dependent variables of baseline locus of control is being driven by the effect of baseline locus of control on change in locus of control from pretest to posttest, with decreases in externality demonstrated among both participants in the experimental condition as well as participants in the control condition. Univariate analyses reveal that the significant effect of baseline value of self-kindness on the dependent variables is being driven by a significant effect of this covariate on change in self-kindness from pretest to posttest, with participants in the experimental condition increasing while participants in the control condition decreased. Univariate analyses reveal that the significant effect of common humanity on the dependent variables is being driven by a significant effect of this covariate on change in common humanity from pretest to posttest with participants increasing in both the experimental condition and control conditions. Univariate analyses reveal that the trend toward a significant effect of gender on the dependent variables is

being driven by a significant effect of gender on change in locus of control from pretest to posttest, with males decreasing (*M* = -2.94*, SE* = 1.01) while females increased (*M*= 0.60*, SE* = .79).

A MANCOVA was performed to explore whether these relationships were maintained from pretest to follow up. Again, no significant effect of condition was demonstrated, and no significant effects of baseline value of locus of control, need for cognition, or gender were demonstrated, so these covariates were removed from the model and the MANCOVA was repeated.

No significant effect of condition was demonstrated, although significant effects on the dependent variables were demonstrated for baseline values of both self-kindness and common humanity. Univariate analyses reveal that the significant effect of baseline self-kindness on the dependent variables is driven by a significant effect of baseline self-kindness on change in self-kindness from pretest to follow up, with participants decreasing in both the experimental and control conditions. Univariate analyses reveal that the significant effect of baseline common humanity on the dependent variables is driven by a significant effect of this covariate on change in common humanity from pretest to follow up.

Narcissism: Exploitation, Self-sufficiency and Authority among All Participants

A MANCOVA was performed on change in three subscales of the NPI from pretest to posttest: exploitation*,* Self-sufficiency, and authority, with gender and condition as between-subjects variables and need for cognition as well as baseline values of the

three dependent variables as covariates to explore if a latent variable is represented by these constructs that changes as a result of the intervention.

No significant effects of gender or need for cognition were demonstrated so these covariates were removed from the model and the MANCOVA was performed again.

No significant effect of condition was demonstrated, although significant effects of baseline values of authority, self-sufficiency, and exploitation were demonstrated. Univariate analyses revealed that these effects were primarily due to the effect of the baseline value of the dependent variable constraining change in that dependent variable. Specifically, a significant effect of baseline value of authority was demonstrated on decrease in authority from pretest to posttest. A significant effect of baseline value of exploitation was demonstrated on decrease in exploitation from pretest to posttest. A significant effect of baseline self-sufficiency was demonstrated not only on change in self-sufficiency from pretest to posttest but also on change in exploitation from pretest to posttest.

Another MANCOVA was performed to determine differences between groups from pretest to follow-up on the same variables, with the same covariates. No significant effects were demonstrated for condition, need for cognition, exploitation, or gender. While no significant effects were demonstrated for the other covariates, univariate analyses revealed significant effects of authority and self-sufficiency, so the MANCOVA was repeated with the last two covariates.

No significant effect of condition on the dependent variables was demonstrated. A trend toward a significant effect of baseline value of self-sufficiency on the dependent variables was demonstrated , but no significant effect of baseline value of authority on

the dependent variables was demonstrated. Univariate analyses reveal a trend toward a significant effect of baseline value of authority on change in authority. A significant effect of baseline value of self-sufficiency on change in self-sufficiency was demonstrated.

Empathy, or Positive View of Others: Change in IRI Subscales Empathic Concern, Perspective Taking, and Personal Distress among All Participants

A MANCOVA was performed for all participants comparing differences on change from pretest to posttest on change in empathy, represented by IRI subscales Empathic Concern, Personal Distress, and Perspective Taking to explore whether a latent variable represented by these three constructs of empathy from one scale is affected by the intervention.

No significant effect on the dependent variables was demonstrated for Need for Cognition, Empathic Concern, or gender, while a significant effect on the dependent variables was demonstrated for both personal distress and perspective taking, so the MANCOVA was performed again without the first three covariates. A significant effect on the dependent variables was demonstrated for both baseline personal distress as well as baseline perspective taking. Separate univariate ANOVAS on the outcome variables revealed that baseline personal distress significantly constrained change in personal distress at posttest, but did not significantly effect either change in perspective taking or change in empathic concern. A significant effect of perspective taking assessed at baseline significantly was demonstrated for change in perspective taking at posttest, but not for change in personal distress or empathic concern.

A MANCOVA was performed for all participants comparing differences on change from pretest to follow-up in empathy, represented by IRI subscales Empathic Concern, Personal Distress, and Perspective Taking, controlling for gender, need for cognition, and pretest values of the dependent values. Because they did not significantly effect the dependent variable, gender, need for cognition, and personal distress at baseline were removed from the model and the MANCOVA was performed without them. There was no significant effect of condition on IRI subscales Empathic Concern, Personal Distress, and Perspective Taking; however, there was a significant effect of baseline perspective taking and baseline empathic concern on change in the three outcome variables. However, while separate univariate ANOVAs on the outcome variables demonstrated non-significant effects of baseline empathic concern on personal distress, perspective taking, and empathic concern, baseline perspective taking had a significant effect on change in perspective taking, but not on personal distress and empathic concern.

These findings suggest that there is no significant effect of condition on any latent variables representing attachment, view of self, narcissism or empathy.

Exploratory Analyses: Examining Change among Highly Anxious Participants

Given the differential results of study 2 considering the first sample with greater attachment anxiety vs. including the second sample with less attachment anxiety, a series of exploratory MANCOVAs were performed to see if there was any significant effect of condition on those high in anxiety. Effect of the intervention on those high in avoidance could not be assessed, as some of those high in anxiety are also high in avoidance and there was not enough power to compare the two.

A median split was performed on attachment anxiety. For analyses on those high in attachment anxiety, only those participants falling within the upper 50th percentile of attachment anxiety (n = 17) were analyzed. There were not enough participants to do confirmatory factor analyses.

Attachment among Participants High in Attachment Anxiety

A MANCOVA was performed using data from participants high in attachment anxiety on change from pretest to posttest on three primary variables assessing attachment: attachment anxiety, attachment avoidance, and implicit security, with condition and gender as between-subjects variables, controlling for need for cognition and baseline values of the dependent variables. No significant effect of any of the covariates was demonstrated, and so a MANOVA was performed. There was no significant effect of condition on the dependent variables at post testing (see Appendix JJ). A MANCOVA performed assessing change at follow up similarly demonstrated no significant effect of any covariates, and thus a MANOVA was performed, demonstrating no significant effect of condition on the dependent variable.

Because those high in attachment anxiety may not be able to decrease in avoidance, a MANCOVA was performed on difference from pretest to posttest on three primary variables for those falling in the upper 50th percentile of attachment anxiety: attachment anxiety, implicit security, and attention to emotions, with condition and gender as between-subjects variables, controlling for need for cognition and baseline values of the dependent variables. There were no significant effects of baseline anxiety,

need for cognition, or gender (see Appendix JJ), so these covariates were removed from the model and the MANCOVA was run again.

There was a trend towards a significant effect of condition on the dependent variables, with those in the experimental condition demonstrating a greater increase in implicit security than those in the control condition; those in the experimental condition demonstrating a greater decrease in anxiety than those in the control condition; and those in the experimental condition demonstrating an increase in attention while those in the control condition demonstrated a decrease in attention (see Appendix JJ). There was a significant effect of both baseline implicit security and baseline attention on the dependent variables. While separate univariate ANOVAs on the outcome variables demonstrated no significant effect of baseline implicit security on change in implicit security, a significant effect of baseline attention was demonstrated on both change in attention as well as change in implicit security (see Appendix JJ).

To investigate whether these changes from pretest to posttest in implicit security and attention were significant, paired t tests were conducted, and the increase in implicit security among participants in the experimental condition (n = 7) from pretest (M = 8.86, SD = 6.64) to posttest (M = 11.71, SD = 2.06) was not significant (t(6) =-1.39, p = .21). The increase in attention among those in the experimental condition was not significant (t(6) =- 0.49, p = .64), nor was the decrease in attention among those in the control condition (t(7) =- 0.00, p = 1.00). However, the decrease in anxiety was significant for both those in the experimental (t(6) =2.98, p = .025) and control (t(7) =2.87, p = .024) conditions.

A MANCOVA was again performed for participants in the upper half of attachment anxiety on change in attention, implicit security, and anxiety from pretest to follow up, with condition as between-subjects variables, controlling for need for cognition and baseline values of attention, implicit security, and anxiety. There was no significant effect of condition on the dependent variables and none of the covariates were demonstrated to have a significant effect on the dependent variables. Therefore, a MANOVA was performed, and no significant effect of condition on changes in attention, implicit security, and anxiety was demonstrated.

View of Self among Those with High Anxiety: Locus of Control, Self-kindness and Common Humanity

A MANCOVA was performed for participants falling within the 50th percentile of attachment anxiety on difference from pretest to posttest on three primary variables representing view of self: locus of control and the self-kindness and common humanity subscales of the Self Compassion Scale, with condition and gender as between-subjects variables, controlling for need for cognition and values of the dependent variables at baseline. There was a weak trend toward a significant effect of condition on the dependent variables. Post hoc paired *t* tests demonstrate no significant differences among participants in the experimental group or the control group in change in any of the variables, with the exception of participants in the experimental condition demonstrating a trend toward a significant increase in common humanity ($t(6)= -1.97$, $p = .096$).

While there was no significant effect of baseline value of locus of control on the dependent variables, univariate analyses reveal a significant effect of baseline locus of

control on change in locus of control from pretest to posttest as well as a trend toward a significant effect of baseline locus of control on change in self-kindness from pretest to posttest. While there was no significant effect of baseline value of self-kindness on change in the dependent variables from pretest to posttest, univariate analyses reveal a significant effect of baseline self-kindness on both change in locus of control as well as change in self-kindness.

A trend towards a significant effect of baseline common humanity on the dependent variables was demonstrated, and univariate analyses reveal a significant effect of baseline common humanity on change in common humanity from pretest to posttest.

A significant effect of need for cognition on the dependent variables was demonstrated, and univariate analyses revealed significant effects of need for cognition on changes in locus of control and self kindness from pretest to posttest (see Appendix JJ).

While no significant effect of gender was demonstrated on the dependent variables, a trend toward a significant effect of gender on change in locus of control from pretest to posttest was demonstrated. While no significant effect of interaction of gender and condition on the dependent variables was demonstrated, univariate analyses reveal a significant effect of interaction of gender and condition on change in locus of control from pretest to posttest, with males demonstrating a slightly greater change in locus of control than females in the experimental condition, whereas males in the control condition demonstrated less change in locus of control than females. A trend toward a significant effect of interaction of gender and condition on change in self-kindness from pretest to posttest was demonstrated, with males demonstrating greater change in self-

kindness than females in the experimental condition, and females demonstrating slightly greater change in self-kindness than males in the control condition.

Independent *t*-tests were performed separately for males and females in the experimental condition and males and females in the control condition to determine if these differences in changes from pre to posttest were significant. Males and females in the experimental condition differed significantly with regards to change in self-kindness ($t(5) = 3.33$, $p = .021$), whereas change in self-kindness was not differentiated by gender in the control condition ($t(6) = -0.32$, $p = .76$). Gender significantly differentiated change in locus of control from pretest to posttest among participants in the control condition ($t(6) = -6.36$, $p = .001$), but not among participants in the experimental condition ($t(4) = -0.49$, $p = .65$).

A MANCOVA was performed to determine if significant relationships regarding locus of control and the self-kindness and common humanity subscales of the Self Compassion Scale which were demonstrated considering change in these dependent variables from pretest to posttest were maintained when examining change in these dependent variables from pretest to follow up. Again, condition and gender were entered into the model as between-subjects variables, controlling for need for cognition and values of the dependent variables at baseline. Because no significant effect on the dependent variables was demonstrated for need for cognition, locus of control, baseline value of self-kindness, or gender, the MANCOVA was repeated without these covariates.

There was no significant effect of condition on the dependent variables, although there was a trend toward a significant effect of baseline common humanity on the

dependent variables, and univariate analyses revealed a significant effect of baseline common humanity on change in common humanity from pretest to follow up.

Narcissism: Exploitation, Self- sufficiency and Authority among Highly Anxious Participants

A MANCOVA was performed on change in three subscales of the NPI from pretest to posttest: exploitation, Self-sufficiency, and authority, with gender and condition as in between subjects and need for cognition as well as baseline values of the three dependent variables as covariates. There was no significant effect of need for cognition, authority, or self-sufficiency on the dependent variables, and so these covariates were removed from the model and the MANCOVA was performed again without them. While there was no significant effect of gender and exploitation on the dependent variables, univariate analyses revealed a significant effect, so these covariates were retained.

There was no significant effect of condition or gender. There was a trend toward a significant effect of exploitation. Univariate analyses revealed a significant effect of baseline exploitation on change from pretest to post test in both exploitation and authority.

A MANCOVA was performed on change in the dependent variables from pretest to follow-up with gender and condition as between subjects factors and need for cognition and baseline values of the dependent variables as covariates. No significant effect on the dependent variables was demonstrated of baseline values of exploitation, self-sufficiency authority. Although not significant, effect of gender and need for cognition was demonstrated on the dependent variables, and univariate analyses revealed

significant effects and trends towards significant effects, as well as a trend toward a significant interaction of condition and gender, and so these two covariates were maintained in the model while the first three were removed, and the MANCOVA was run again.

No significant effect of condition was demonstrated on the dependent variables, although a very strong trend toward a significant interaction of gender and condition was demonstrated (see Appendix JJ), and trends towards significant effects on the dependent variables of gender and need for cognition. Follow-up univariate analyses revealed a significant effect of need for cognition on change in exploitation from pretest to follow-up, a very weak trend towards significant effect of gender on increase in self-sufficiency, a trend towards a significant effect of condition on change in exploitation from pretest to follow-up, and a very strong trend toward a significant interaction of gender and condition on change in exploitation from pretest to follow-up, with males in the experimental condition demonstrating an increase ($M = 3.392$, $SE = 1.201$) while males in the control condition demonstrated a decrease ($M = -0.76$, $SE = .80$) and females in the experimental condition demonstrating a decrease ($M = -0.27$, $SE = .58$) while females in the control condition demonstrated an increase ($M = 0.07$, $SE = .66$).

Empathy, or Positive View of Others: Change in IRI Subscales Empathic Concern, Perspective Taking, and Personal Distress among Participants High in Attachment Anxiety

A MANCOVA was performed for change from pretest to posttest in empathic concern, perspective taking, and personal distress among those participants falling within

the upper 50% of attachment anxiety, with gender and condition as between subjects variables and controlling for baseline values of the dependent variables as well as need for cognition. A significant effect of baseline value of Empathic Concern on the dependent variables was not demonstrated, and so this covariate was removed from the model and the MANCOVA was performed again without it.

A significant effect of condition on the dependent variables was demonstrated, with participants in the experimental condition demonstrating an increase in empathic concern and participants in the control condition demonstrating a decrease in empathic concern; participants in the experimental condition demonstrating a decrease in personal distress and participants in the control condition demonstrating a slight increase in personal distress; and participants in the experimental condition demonstrating an increase in perspective taking over 47 times the increase demonstrated among participants in the control condition. Significant effects on the dependent variables were demonstrated for baseline personal distress, baseline perspective taking, need for cognition, gender, and a trend toward a significant effect of an interaction of gender and condition. Univariate analyses revealed significant effects of baseline personal distress on change in personal distress, baseline perspective taking on not only change in perspective taking but also on change in personal distress, and significant effects of need for cognition, gender, and condition on change in personal distress.

To determine if these effects persisted until follow-up, a MANCOVA was performed testing change in the same dependent variables from pretest to follow-up, with gender and condition as between-subjects variables and baseline values of the dependent variables as covariates, in addition to need for cognition. None of the covariates were

significant, and therefore a MANOVA was performed on the dependent variables. No significant effect of condition was demonstrated.

These findings suggest that baseline attachment anxiety moderates the effect of the intervention on empathy at posttest, with those high in attachment anxiety in the experimental condition improving. Further, attachment anxiety moderates the significant effect of need for cognition on view of self as well as locus of control, self kindness, exploitation, personal distress, and the latent variable empathy comprised of personal distress, perspective taking, and empathic concern.

Behavioral Engagement.

A behavioral participation rating was obtained for participants in the experimental group; there was insufficient data to compute behavioral ratings for participants in the control group. For each of the four classes in which all four RA's rated participants by placing a tick by their photograph on the roster every time a participant spoke, an interrater reliability analysis using the weighted Fleiss-Cohen Kappa statistic was performed to determine consistency among each pair of raters for each class, for a total of 24 comparisons. The weighted Kappa, rather than the unweighted Kappa, was chosen because the weighted Kappa reflects higher reliability since it gives credit for closeness even though the values assigned by the two raters is not perfectly matched. The weighted Kappa considers the distance between how far apart the ratings are, whereas the unweighted merely counts how many times the two ratings match, and such correlation is not the same as reliability, since the two ratings may be highly correlated, but if one is consistently a multiple of the other, the interrater reliability is low. The majority of

kappas were high, with only 3 below .7, and ranged from .56 to .96, with the majority (83%) of kappas falling within the "Almost perfect agreement" range (Viera & Garrett, 2005), and the rest yielding moderate to substantial agreement .As an aside, two of the lowest ratings occurred during the third class between two male raters and a male and female rater. It is not of no interest that it was during this third class that four new students were transferred from the control condition to the experimental condition, in which these ratings were being made. Because of the appearance of four new participants, it may have been difficult to correctly assess participation. The third lowest rating occurred with the male rater who had yielded both low ratings for kappa analysis of the third class. While it may be that these low kappas were due to dysregulation in this particular male RA, although there is not a large n to strongly support it, these outlying kappas may suggest a gender specific difference in attending to novel social cues such as is involved in integrating new people. This suggests a further avenue for research, pending a more extensive literature review.

The two raters who yielded the highest interrater reliability were selected, and their ratings were averaged for each participant's participation for each of the six classes during which both of these raters provided data. For the remaining seven classes where either rater rated participation, that single rater's score was used. Relying on one rater of the dyad yielding the highest kappa is justified insofar as the kappa was near perfect (.96). Because at least one of these raters was rating during every class with the exception of class 12 when students sat for their midterm exam and no rating was performed, participation scores for 13 classes were then averaged, yielding a behavioral participation score. Behavioral participation scores ranged from 0 to 6.54, (M = 2.10, SD = 1.90). It is

important to note that participation scores are not included for the four students who joined the experimental condition from the control condition during the third session of the intervention, because these participants were not per protocol. A participant is defined as per protocol if they remained in the same condition from the time of randomization. Intent to treat participants, who were originally randomized into one of the two conditions are not considered in the calculations in the dissertation, since these participants did not receive enough of an exposure to the condition into which they were initially randomized. Further, since violations of randomization occurred within the first several weeks of the study, all the associated posttest data is excluded, and thus participants who are not per protocol are excluded from the analysis. The application of this is to exclude these participants from all analyses. Therefore, Study 4 only considers per protocol participants.

Course Evaluations

A series of exploratory ANCOVAs was conducted on each question of the course evaluations of the two conditions, initially controlling for order effects of the questions, but since the interaction with the covariate was insignificant, a one way ANOVA was performed without controlling for order effects (See Table 19 below).

Regarding feeling differently about themselves after participating in the class, participants in the experimental condition wrote: "I feel better. I know where to access these problems. I think it changed because I was opened to a different perspective"; "I am now more aware about the way I think because of my style. I see myself in a different aspect."; " my feeling about myself [sic] are now explanatory to me. I now know why I

feel the way I do about certain things"; "because now I know why I am avoidant & careless sometimes they have been changed because I learned all of this information. "; "I feel more aware of who I am and why I do and say the things that I do. I now notice that I should change certain affects (sic) about myself."…I know how my childhood is affecting my adulthood. I didn't know the connection between my childhood and now. Now I can understand other people's behavior"; "I became more confident in the decisions I have made."

Table 19

Differences in Course Evaluation Questions Across Conditions[a] (Study 4)

Question	ANOVA	Condition(Mean/SD)	
		Experimental	Control
I learned a great deal	F(1, 36) = 5.46, p < .05	4.48 (0.81)	3.71 (1.21)
I feel differently about myself	F(1, 37) = 8.78,p < .01	4.71 (2.00)	2.89 (1.81)
increased my understanding of others	F(1, 36) = 5.05,p < .05	5.29 (1.10)	4.29 (1.61)
instructor was prepared for class and presented the material in an organized manner	F(1, 36) = 4.60, p < .05	4.57 (0.75)	3.88 (1.22)
instructor generated interest in course material	F(1, 36) = 3.72,p = .062	4.57 (0.75)	3.94 (1.25)
instructor had a positive attitude toward assisting all students in understanding the course material	F(1, 36) = 3.14,p = .085	4.57 (0.75)	4.00 (1.23)

[a]For questions with non-significant between groups differences, see Appendix BB.

Regarding the significant effect of condition on the degree to which participants felt the class increased their understanding of others, participants in the experimental condition wrote: “I learned how to listen”; “I started to look more into why I am the way I am”; “I have learned to appreciate the people in my life more and have learned to let go of my inhibitions to thank them”; “Few friends that are stubborn and have anger problems. I now understand why.”; “The feelings for them change because I am patient with them, because I understand why the react the way they do.”; “I'm more understanding to people who are avoidant because I realize that they have obviously been through some things in their life”; “My feelings towards both my caretakers have changed, both positively and negatively”;“… I realized that our relationship won't work because [my ex-boyfriend] is really avoidant. I wouldn't have known he was avoidant and why he was, if I wouldn't take this class”; “I noticed feelings differently in my friends, I found out who to rely on and who not to”; “my feelings of my mother have changed. I used to blame her for how she treated [me] but now I know why she acts how she acts. Because of the way her parents treated her.”

Discussion

Overview of Major Results

There was a significant effect of condition on change in implicit security assessed at follow up, with those in the experimental condition increasing significantly more than those in the control condition. There was also a very strong trend toward a significant effect of condition on change in reflective function at posttest, with those in the experimental condition improving. While there was no significant effect of condition on

change in attachment anxiety, anxiety nevertheless moderated several outcomes: Among those high in attachment anxiety, a significant effect of condition as well as a trend toward a significant effect of condition were demonstrated, respectively, on change from pretest to posttest in the latent variables representing views of other and self, with participants in the experimental condition improving overall. Among those high in attachment anxiety, a significant effect of condition was demonstrated on the decrease in personal distress from pretest to posttest among those in the experimental condition. The significant effect of condition on the increase in attachment awareness in those highly anxious participants at post test was maintained through follow up.

Finally, the intervention may serve to act as a buffer against a significant decrease in empathic concern among those in the control condition, and attachment avoidance moderated the significant effect of condition on the decrease in avoidance at posttest among the experimental participants high in avoidance.

Differences between Completers and Dropouts: *Results not Generalizable*

Since those who completed the follow up assessment (completers) differed significantly from those who did not complete the follow up assessment (dropouts) (see Table 12), the results concerning the follow up assessment are not generalizable. These significant differences may be related to attrition: perhaps being kind to oneself causes a person to complete a task, although this is a conjecture. That those who increased in attachment avoidance dropped out while those who decreased in attachment avoidance completed the study is not surprising: those who become more avoidant would be less likely to participate while those who become less avoidant would be more likely to

participate. This result, however, raises another question: why is it that some participants became less avoidant while others became more avoidant? The answer to this question may be similar to that which was raised in Study 2, and raises a larger question of individual differences. Perhaps another factor is influencing the response of participants to the experiment. Alternatively, the attachment avoidance may have changed due to factors unrelated to the study. Prior research has demonstrated that an idiographic approach is more fruitful in elucidating theory (Reich, Tuskenis, Slutzky, Siegel, 2000; Pelham, 1993), and this differential finding regarding change in attachment avoidance suggests an avenue for further research.

It is not clear why condition is moderating whether participants completed the study, although moderation of condition on the effect of level of anxiety on attrition may be due to the fact that those higher in attachment anxiety wanted to please the investigator who conducted the intervention, since those high in attachment anxiety place their self worth contingent upon approval from others. If this is true, then the investigator was important to those high in attachment anxiety as instructor, and this finding may suggest that those high in attachment anxiety complete assignments to please their professors. This would not be surprising given both the motivational structure of those high in attachment anxiety (Mikulincer & Shaver, 2007) as well as the finding that the self worth of those high in attachment anxiety is contingent upon the approval of others (Crocker et al, 2004). The finding suggesting that proximal rather than distal self view impacts decisions may be reflective of the impulsivity characteristic of some high in attachment anxiety and lends support to findings of Tice et al (2001) that when participants believe that their bad mood is not changeable, they are less likely to indulge

in impulsive behaviors to feel better. It may be that the changing self view of those with unstable self views is influencing their decisions. The self view among those high in attachment anxiety is not stable and therefore level of attachment anxiety which is representative of view of self (Bartholomew & Horowitz, 1991) would not have long term consequences.

Taken together, the significant differences between completers and dropouts suggest that perhaps the follow up results might be different had these participants completed the follow up, and because of the significant differences between completers and dropouts, the findings of the study are not generalizable.

Effect of Intervention

The effect of the intervention was assessed considering multivariate constructs as well as on individual outcome variables, considering all participants as well as those high in attachment anxiety. While attachment avoidance and anxiety were not explored due to the small number of participants in each of the attachment categories, given overlap of those high in anxiety and those high in avoidance, exploratory analyses were conducted on change in avoidance among participants high in attachment avoidance.

When considering the constructs attachment and views of self and other, no significant effects of condition were obtained, suggesting that the intervention had no effect on these constructs. However, attachment anxiety at baseline is moderating the effect of the intervention at posttest on change in positive view of others as assessed by changes in empathy, personal distress, and perspective taking as well as change in view of self as represented by changes in locus of control, self-kindness and common

humanity, with participants high in attachment anxiety who received the intervention demonstrating an overall improvement on change in positive view of others and a trend toward a significant change in view of self as compared to those in the control condition. This suggests that the intervention had an effect on these two constructs among those high in attachment anxiety, although this effect was short-lived. That this significant effect and trend were both lost at follow up among participants high in attachment anxiety suggests that these participants change only when focused on change, as presumably occurred during the intervention. This supports Devine (1989) that change requires intention, and suggests that those high in attachment anxiety may change with support, however it is unclear if this change could be maintained. More research is needed to examine the sustainability of change.

Given the finding of a significant effect of condition on implicit security at follow up considered together with no significant demonstration of change in explicit attachment (either anxiety or avoidance) among all participants, suggests that perhaps the IWM first changes unconsciously and only later perhaps, is conscious change evident. More research is needed to elucidate the mechanism of change in attachment.

Effect of Covariates on Change in Dependent Variables

Considering the effect of covariates on change in latent outcome variables, in most cases baseline values of the dependent variable constrained change only in that particular dependent variable, with noteworthy exceptions. One fascinating exception was in considering the construct view of self among those with high attachment anxiety: attachment anxiety moderated the significant effect of need for cognition on the latent

variable view of self, with univariate analyses demonstrating that this significant effect of need for cognition was driven by a significant effect of need for cognition on self kindness and locus of control. It may be that for those high in attachment anxiety, not only is change in self-kindness particularly difficult, but also being unkind to oneself limits one's ability to change.

A similar exception occurs, as discussed in the next section on Reflective Function, with baseline need for cognition constraining change in self-kindness. Further, it is noteworthy that attachment anxiety moderated the significant effect of need for cognition on the latent variable empathy or positive view of others, with univariate analyses revealing that this significant effect of need for cognition is driven by a significant effect of need for cognition on change in personal distress. Finally, while there was no effect of condition on a latent variable represented by authority, self sufficiency, and exploitation, attachment anxiety moderated the significant effect of need for cognition on change in exploitation. Taken together, these findings suggest that need for cognition is particularly important for those high in attachment anxiety with regards to change in attachment-related constructs.

A third exception occurs considering change in attachment among those high in attachment anxiety comprised of attachment anxiety, implicit security, and attention: a significant effect was demonstrated for the baseline value of attention on change in implicit security at posttest. That baseline attention constrains the increase in implicit security among participants high in attachment anxiety supports the suggestion that mindfulness training may be a way to increase attachment security (Mikulincer & Shaver, 2007a), allowing a person to become more secure by being mindful of their feelings.

The significant effect of baseline attention on the increase in implicit security and attention demonstrated at posttest among participants high in attachment anxiety was lost when examining change from pretest to follow up. This suggests either that baseline attention does not have an effect over time, or only has an effect while those high in attachment anxiety are involved in interactive learning about attachment. More research is needed on the potential of mindfulness to increase implicit security, or improve unconscious view of self.

Finally, attachment anxiety moderated the significant effect of baseline exploitation on change in authority. This suggests that for those high in attachment anxiety, the extent of exploitation of others – including extrinsic religiosity – would constrain change in authority. Essentially, this finding may suggest that exploiting others creates dependency, and perhaps by engaging in motivational transformation and cultivating a focus on others, those high in attachment anxiety may decrease in exploitation and subsequently increase in authority.

Reflective Function

The strong trend nearing significance demonstrated among all participants from pretest to post test for effect of condition on change in a latent variable comprised of attention to emotions, self-kindness, and empathic concern was lost at follow up. However, when considering only those participants falling within the upper 50th percentile of attachment anxiety, the effect of condition was significant from pretest to posttest, with those in the experimental condition increasing in self-kindness and attention to emotions while those in the control condition not only demonstrated

decreases in these two constructs, but also demonstrated a significant decrease in empathic concern while those in the experimental condition did not change in empathic concern. The differential findings considering all participants as well as considering those high in attachment anxiety indicate that high attachment anxiety is moderating the effects of the intervention on a latent variable represented by change in attention, self-kindness, and empathic concern.

That there was a significant effect of condition on all three dependent variables together suggests a latent construct underlying these three variables. It is noteworthy that there was a significant effect of need for cognition on increase in self-kindness from pretest to posttest across both conditions only when considering those high in attachment anxiety, demonstrating that attachment anxiety moderates the effect of need for cognition on increase in self-kindness. This finding suggests that high attachment anxiety actually may promote change, provided that a highly anxiously attached person also has a high need for cognition. Taken together, these findings suggest that the latent variable represented by changes in attention, self-kindness, and empathic concern, might be represented by reflective function, which is characteristic of attachment security (Fonagy & Target, 1997). It is not surprising that reflective function would increase as a result of the intervention, as throughout the intervention reflective function was encouraged through many means including discussions, reflective writing assignments, and examination of feelings during role play of various attachment styles.

Findings of Howes & Eldredge (1985, as cited in Miller & Eisenberg, 1988) in comparing responses of maltreated and not maltreated 20 month-old children to distressed peers in free and structured play support the findings from this MANCOVA

demonstrating a significant effect of condition on a latent variable comprised of attention to emotions and treatment of self and other: those children who were abused were more likely to respond to a peer's distress with aggression at greater levels than chance, whereas non-maltreated children respond prosocially. These children are treating others the way that they themselves were treated: those with abusive attachment figures whose feelings were not attended to, in turn did not attend appropriately to the feelings of their peers.

This significant effect of condition among participants high in attachment anxiety was maintained through the follow up several months after the end of the intervention, again demonstrating that attachment anxiety is moderating the effect of condition on change in reflective function. However, while those in the experimental condition again demonstrated less of a decrease in empathic concern than those in the control condition, the effect of condition on self-kindness and attention among those in the experimental condition was unexpectedly reversed. This reversal is ostensibly troubling, however, it could be a spurious result because the sample at follow up was so small and was a self-selected sample, significantly different in several ways from those who dropped out. Alternatively, this reversal among high anxiety participants in the experimental condition suggests that without support, learning about attachment may have deleterious effects for those high in attachment anxiety, and perhaps booster sessions or ongoing support is necessary. Indeed, those high in attachment anxiety are thought to be susceptible to "stable instability" (Davila et al, 1997) which may be due to the fact that the self worth of those high in attachment anxiety is contingent upon external factors beyond a person's direct individual control, such as approval from others (Park et al, 2004). Yet another

possibility is that these participants are illustrating Dabrowski's Theory of Positive Disintegration (Dabrowski, 1966) which essentially holds that once a person is aware of conflict within themselves, they experience greater anxiety and "disorganization" en route to a more realized self. Thus disintegration is positive. It may be that these participants are on the way towards becoming more secure, as suggested by the finding among all participants that those in the experimental condition increased significantly more in implicit security than those in the control condition, although while among those high in attachment anxiety, this increase was not significant, nonetheless those in the experimental condition increased more than those in the control condition. That high attachment anxiety is moderating the effect of the intervention on decrease in reflective function at follow up together with the finding of a significant effect of condition on increase in reflective function at posttest among these participants suggests that the reflective function of those high in attachment anxiety is particularly susceptible to change and may be contextually dependent. The increase in reflective function from pretest to posttest among highly anxiously attached participants in the experimental condition is suggestive of an increase in attachment security coupled with the decrease in reflective function at follow-up suggests that, not surprisingly, for those high in attachment anxiety, reflective function depends upon engaging in reflective thinking about attachment.

While the significant effect of condition on reflective function among those high in attachment anxiety may be due to the intervention, it also may be that participants in the control condition decrease in self-kindness and attention to emotions because of the control condition, in which largely minority students were asked to reflect upon issues of

diversity. Perhaps participants therefore defensively excluded feelings aroused by learning about diversity, and similarly became less kind to themselves. However, the findings regarding change in empathic concern taken together with increase in implicit security support a beneficial effect of the intervention and suggest a buffering effect of the intervention.

While the effect of condition did not reach significance, those participants in the experimental condition decreased in empathic concern 2.5 times less than those in the control condition at post testing, although at follow-up, the continuing decrease in empathic concern among those in the control condition became significant. Further, among those high in attachment anxiety, post testing scores of reflective function were significantly different with those in the experimental condition demonstrating an increase in empathic concern while those in the control condition demonstrated a decrease in empathic concern, and at follow up those in the experimental condition decreased three times less in empathic concern than those in the control condition. It is not clear why those in the control condition would demonstrate a decrease in empathic concern.

Implicit Security and Explicit Security

Implicit security was demonstrated to increase at follow up, but not at posttest. This would seem to contradict the opposite pattern regarding reflective function. However, it may be that an increase in reflective function precedes an increase in implicit security. When considering all participants, that no change in explicit attachment was demonstrated although significant increase in reflective function was demonstrated at posttest and significant increase in implicit security was demonstrated at follow up

among those in the experimental condition suggests that change in attachment might take time, as suggested by Scharfe & Bartholomew (1994), who found that contrary to theory, life changing experiences such as major change in relationship status including marriage or dissolution did not necessarily result in change in attachment security.

While it may be that more time is necessary to demonstrate an increase in explicit security, it may also be the case that due to the totalitarian ego (Greenwald, 1980) or cognitive dissonance (Festinger & Carlsmith, 1959), a person may resist becoming more explicitly secure despite evincing an increase in implicit security. Further, it may be that just as one must be conscious of the parts of an insecure working model in order to change them (Colin, 1996), the converse may be true: it may be that one must be conscious of the parts of a *secure* working model in order to realize them.

Implicit Insecurity and Attachment Anxiety: Model of Self

Implicit security as assessed by the IAT did not demonstrate the negative correlation with attachment anxiety that was demonstrated in Study 1. It is important to note that the IAT was developed based on undergraduates with a mean anxiety score of 2.57, whereas the average anxiety of those in this study was 3.46. This higher level of anxiety is not surprising, given the sample from which participants in Study 4 are taken: EOF students, who are more likely to have greater insecurity given their socioeconomically disadvantaged status (Schmitt, 2008), and as evidenced by a greater representation of insecurity among this sample of EOF students as compared to another sample of college students (Lopez & Gormley, 2002). Indeed, participant autobiographies indicate lives fraught with insecure attachments to attachment figures, including

biological as well as step- and foster parents who abandoned and abused them in multiple ways.

Therefore, in a sample such as that of Study 1 which is relatively less anxious the implicit self-model would correlate negatively with anxiety, because this sample of participants is more secure. However, in a sample of participants such as in Study 4 with its greater representation of attachment anxiety, the corresponding implicit model of self would *positively* correlate with anxiety. It would not be expected that those with high anxiety would have a corresponding secure implicit model of security, and indeed implicit security may only correlate negatively with anxiety among those who are not high in attachment anxiety. However, when controlling for attachment category and considering only those whose attachment anxiety is equal to or less than the mean anxiety of participants in Study 1, the expected negative correlation was obtained.

That the demonstrated positive correlation in this study was not significant may be because of the small number of participants who met the requisite level of anxiety (n = 8) for inclusion when re-examining the correlation between anxiety and implicit security: having no more than the mean level of anxiety as participants of Study 1, during which the IAT was developed. That attachment anxiety correlated negatively with locus of control and positively with personal distress in this sample suggests that these two constructs not surprisingly are defining of attachment anxiety. Due to the way the anxiously attached have been disrespected, with boundary violations and intermittent responses from attachment figures contingent not upon the needs of the highly anxious, but upon the attachment figure's own needs, these participants have learned that outcomes are not contingent upon their actions. Further, the correlation with personal

distress among those high in attachment anxiety supports attachment theory which maintains that due to the lack of mirroring provided to those with high anxiety by their caretakers, they are unable to regulate their own feelings, even in response to the suffering of others as suggested by their having greater personal distress in response to the suffering of others (Mikulincer et al, 2005).

When looking only at participants high in attachment anxiety and controlling for membership in attachment category, the expected relationship between implicit security and attachment anxiety was demonstrated, suggesting that the AIAT is assessing implicit positive model of self: among those with high anxiety, the AIAT is positively correlated, but among those with low anxiety, the AIAT correlates negatively. This is further suggested by the finding that among all participants, the MANCOVA examining the construct attachment demonstrated a decrease in explicit attachment anxiety as well as an increase in implicit security.

This relationship of implicit security to attachment anxiety suggests a limitation of the attachment IAT: it does not represent attachment security overall, but the half of the IWM representing view of self. Therefore, among those low in explicit anxiety, the AIAT will be high, reflecting positive self view: it may only reflect attachment security in those with low attachment anxiety, but for those with high attachment anxiety, the AIAT may *positively* correlate with attachment anxiety. Thus the AIAT, rather than measuring implicit security, assesses the extent to which the self model of the IWM is positive. This suggests, too, that perhaps attachment anxiety is ego-syntonic for those high in attachment anxiety, and may be one reason why view of self is less likely to

change, as suggested by the finding of a significant effect of implicit security on increase in implicit security.

Changes in Model of Self and Other

The finding among all participants examining the effect of condition on the construct of attachment (anxiety, avoidance and implicit security) that there was both a significant effect of baseline implicit security as well as a trend toward a significant effect of baseline anxiety on the construct of attachment but no significant effect of baseline avoidance on the construct of attachment suggests that the model of self is more difficult to change than model of other. This supports the findings of Fraley (2002) and suggests that the prototype IWM constrains change in the IWM as well as the findings of Brumbaugh & Fraley (2006) which suggest that attachment avoidance is more contextual and changeable than anxiety. (That baseline anxiety constrains change in anxiety whereas baseline avoidance does not constrain change in avoidance is not likely simply due to the means of these two variables, since the mean anxiety score is higher than mean avoidance score in this sample.) However, the finding of differential effects of baseline implicit security and attachment anxiety and attachment avoidance seems to contradict the findings of Davila et al (1997) suggesting "stable instability" among the preoccupied, or those with high attachment anxiety, and the findings of Baldwin & Fehr (1995) that those classified as preoccupied demonstrate the highest rate of instability of all attachment types. It may be that these apparently contradictory findings can be reconciled: the view of self is stable and the view of other is changeable depending upon differential responses from others, but because the self worth (and hence the self view) among those high in

attachment anxiety is contingent upon changing external factors such as approval from others (Park et al, 2004), level of attachment anxiety or view of self (Bartholomew & Horowitz, 1991) for these people will fluctuate, changing concomitant with different responses from others, which of course would vary partially based on the different attachment styles of others. But fluctuation is not change.

Herein lies a paradox: those with attachment anxiety are more likely to change but their change is not lasting, while those with attachment avoidance are not as likely to change because of their defense mechanisms, but if they do, their change would be lasting. This paradox is similar to another paradox of attachment theory: change is likely to occur when people are young insofar as attachment fluctuates with the caregiving environment (Waters et al, 2000) but young children do not yet have metacognitive abilities (Piaget, 1967) and therefore cannot voluntarily change. Conversely, while an older person is capable of metacognitive awareness having achieved formal operations (Piaget, 1967), the older person is less likely to change due to the entrenched pattern of attachment having been canalized (Waddington, 1957; Bowlby, 1973) over time.

Effect of Gender on Change as a Function of Condition

It is noteworthy that across ANCOVAs comparing all participants in the experimental condition with those in the control condition, there was no significant effect of gender, suggesting that males and females are equally likely to change, supporting findings of Lopez & Gormley (2002). However, there was one exception of one instance in which a significant effect of gender on change in locus of control was demonstrated at post testing, with males significantly decreasing in externality in both conditions.

Although this significant effect of gender was evident at post testing, there was no significant effect of gender at follow up. Among participants high in attachment anxiety, a trend toward a significant effect of gender was demonstrated, with males again demonstrating a decrease from pretest to posttest, with no significant effect of gender at follow up. It is not clear why this effect of gender was demonstrated, especially since males are more likely to drop out of school than are females (Sherman, 1987; Bowlby & McMullen, 2002), and not succeeding in school is associated with an external locus of control (Morris, Wu, & Finnegan, 2005).

Buffering Effect of Intervention

With regards to several variables, those in the control group became significantly worse, while those in the experimental group did not, suggesting that something about the intervention may be providing a buffering effect against the worsening in these outcome variables. Specifically, among all participants, those in the control group demonstrated a significant decrease in empathy at follow up, whereas those in the experimental group remained essentially unchanged. It is remarkable that this effect was obtained several months after the conclusion of the intervention, and suggests that perhaps learning about attachment reconceptualized in terms of focus on self or other may be preventing participants from decreasing in empathy. It is not clear why those in the control condition would demonstrate a decrease in empathy.

Similarly, at follow up, a strong trend toward a significant effect of condition was demonstrated with those in the control condition decreasing more than four times in authority than those in the experimental condition.

Significant Effect of the Intervention on Attachment Avoidance

That there was no significant effect of the intervention on attachment avoidance considering all participants, but there was a significant effect of the intervention considering participants high in attachment avoidance indicates that baseline attachment avoidance is moderating the effects of the intervention on change in attachment avoidance at posttest. Indeed, baseline attachment avoidance significantly constrained any decrease in avoidance among those in the experimental condition and slight increase in avoidance among those in the control condition. That this effect of condition was lost at follow up may be due to the fact that participants who dropped out of the study had become significantly more avoidant than those who remained in the study, and therefore any change in avoidance at follow up could not be detected. Alternatively, among those high in attachment avoidance, the effect of the intervention on any decrease in avoidance may have worn off.

Moderation of Attachment Anxiety on Outcome Variables

With regard to several dependent variables, attachment anxiety moderated the effect of the intervention. Among those with high anxiety, at post-test, participants in the experimental condition decreased in personal distress while those in the control condition increased in personal distress. Additionally, at post-test those in the experimental condition increased significantly more in common humanity than those in the control condition. Further, attachment anxiety moderated the effect of the intervention on reflective function, as discussed above.

In addition, attachment anxiety moderated the effect of condition on a latent variable represented by personal distress, perspective taking, and empathic concern, with a significant effect of condition demonstrated at posttest among those high in attachment anxiety, with participants in the experimental condition demonstrating an increase in empathic concern while participants in the control condition demonstrated a decrease in empathic concern; participants in the experimental condition demonstrating a decrease in personal distress while participants in the control condition demonstrated a slight increase in personal distress; and participants in the experimental condition demonstrating an increase in perspective taking while participants in the control condition remained essentially unchanged.

Finally, attachment anxiety moderated the effect of the intervention on change in attachment awareness among those in the experimental condition at follow up: while among all participants, the significance of change in attachment awareness from pretest to posttest was lost at follow up, the significance of change in attachment awareness among those high in attachment anxiety was maintained through follow up.

That attachment anxiety and avoidance moderated results suggests that when designing interventions, it is crucial to have enough participants to be able to examine whether high anxiety or high avoidance is moderating the results: it might seem that an intervention had no effect, but in actuality it does for highly insecure participants, but cannot be demonstrated with enough participants. Further, these moderating effects of both attachment anxiety and attachment avoidance suggest that the intervention is more helpful for these participants than for those not high in attachment anxiety or attachment avoidance.

Short Term vs. Long Term Effects of Intervention

In several instances, the significance of differences that were demonstrated at post testing among those in the experimental condition was lost at follow up, as occurred with increase in attention to emotions among all participants as well as decrease in personal distress and increase in common humanity among participants high in attachment anxiety as well as decrease in avoidance among participants high in attachment avoidance. These losses of significance at follow up suggest that perhaps one semester of interactive learning is not enough to maintain these changes, and perhaps an ongoing involvement is required. Indeed, one participant commented that the weekly questions were helpful insofar as they facilitated focus on their relationship. Not only does this anecdote illustrate the principle of dynamic systems theory (Thelen 2005) that to change a system, energy investiture is required, but also supports the conclusion of Devine that change takes "intention, attention, and time," (Devine,1989, p16).

On the other hand, in some cases significant differences and trends were demonstrated at follow up, but not at first posttest, suggesting that some changes take more time, such as occurred with change in implicit security, with those in the experimental condition increasing significantly more than those in the control condition and a weak trend towards a significant difference on change in common humanity, with those in the experimental condition increasing while those in the control condition decreased; a strong trend towards a significant difference in change in authority, with those in the control condition decreasing more than four times more than those in the experimental condition, as well as a trend towards a significant difference in change in

self-sufficiency among participants high in attachment anxiety only, with those in the experimental condition decreasing and those in the control condition increasing.

While the increases in implicit security and common humanity can be said to be beneficial results of the intervention, which seems to accelerate increase in implicit security, or positive view of self, as well as increasing an aspect of self compassion, common humanity, the experimental condition seems to provide a buffering effect on the decrease in authority. It is not clear why a trend toward this buffering effect on the decrease in authority is demonstrated. It may be due to the emphasis during the intervention that any abuse children endure at the hands of their caretakers is not the fault of the children. Conversely, those in the control condition were learning about diversity issues, some of which related to disenfranchisement of minorities, of which the majority of participants are members. Making salient to them their disenfranchised minority status by reading and writing about it may cause them to feel disempowered. While this is speculative, taken together with findings of the Prejudice condition in Study 2, it raises concerns about focusing on diversity issues among largely minority members. Further, the decrease in self-sufficiency four times greater among those in the control condition, while not significant, also lends support to this hypothesis: among participants in the experimental group, minority status was irrelevant; rather, the focus indirectly emphasized how all people are similar in terms of their humanness, challenges, and suffering, rather than different in terms of their skin color or nationality, for example.

Regardless, that significant and near significant effects of condition demonstrated at follow up indicate that although some effects might not be apparent at first, condition

had a long-term effect on certain outcome variables, and longitudinal research could shed more light on the process and mechanism of change in the IWM.

Effect of Intervention on Attachment Awareness

There was a significant effect of condition on attachment awareness with participants in the experimental condition increasing from pretest to posttest, while participants in the control condition did not change. This effect of condition continued until follow up assessment several months later during the next semester, with participants in the experimental condition demonstrating an increase in attachment awareness compared to participants in the control condition, who did not change. That this increase in attachment awareness was not significant at follow up may be due to an attrition rate of 37.5% : while 16 participants in the experimental condition completed the posttest, only 10 participants in this condition completed the follow-up. Nonetheless, the significant difference between the groups suggests that the intervention was effective in increasing attachment awareness, despite the fact that not only was attendance poor, as evidenced by participants arriving late and missing classes, but also participants did not complete all the assignments. Further, although an essay was posted on Blackboard instructing students how to write an essay (see Appendix KK), statistics output from Blackboard indicates that not one student accessed this essay the entire semester. Similarly, during the entire semester, not one student accessed the syllabus posted online, nor did a single student access the anxiety scenario or secure scenarios. Furthermore, several students did not take the quizzes which were posted online, despite the fact that several reminders were sent out. Despite evidence of an apparent lack of involvement in

the class, the significant results not only suggest that participants learned the subject matter and retained it, both also that those in the experimental condition were engaged with the material (Sylwester, 1994). That those in the experimental condition increased in attachment awareness suggests that the potentially stressful subject matter was delivered in an engaging manner that did not stress participants enough to not be able to learn. Perhaps the indirect learning involved in watching movies and discussing stories as well as the role-playing helped participants learn as well in a fun and non-threatening way.

Results from comparing course evaluations across conditions suggest that perhaps the feelings participants have about the course, or the instructor, or themselves, caused them to remember more material until the next semester. Although it was only asked if feelings about self or others had changed, and not how, follow up responses indicate that among those in the experimental condition, feelings participants had about themselves improved. The significant differences between those in the experimental and control conditions as assessed by the course evaluations may also be contributing toward the significant effect of the intervention.

Conclusion

It is encouraging that attachment awareness significantly increased among those receiving the intervention, coupled with evidence of movement toward change with significant increases in reflective function and implicit security, since the insecurely attached among these participants are at risk for perpetuating insecure attachment and its negative sequelae onto the next generation, given robust findings of intergenerational transmission of attachment (Fonagy et al, 1991). While these findings must be interpreted

with some caution given the large attrition rate and small sample size, it is hoped that the significant effects of the intervention will translate into interpersonal change and better outcomes for generations to come.

Limitations

Results of this study are only suggestive, and cannot be generalized because of the significant differences between those who dropped out and those who completed the study and also the large attrition, not only from post test to follow up, but also during the first several weeks of the experiment. This latter attrition resulted in not only dyads being formed with less than optimal partners, since many participants did not show up to the class during which the interpersonal closeness exercise was conducted, and of those that did, several subsequently left due to registration conflicts that were resolved weeks into the semester, but also dyads were not consistent throughout the experiment. Further, because of the collaborative nature of the study, both conditions were not conducted in a similar manner, for example no quizzes or tests were given in the control condition. Further, participants in the control condition engaged in reflection just as participants in the experimental condition, and this may be preventing the intervention from demonstrating more significant results.

General Discussion

The goal of this dissertation was to replicate findings of Kilmann et al (1999) that an intervention using attachment as pedagogy can decrease attachment insecurity, and to extend these findings by shedding light on how change in attachment may occur through such an intervention. While theoretically and empirically, attachment anxiety can decrease, it is not clear if demonstrated improvements represent real change in the representation of self of the IWM underlying attachment. Further, the mechanism of change is not understood, partially because the widely accepted hierarchical attachment network cannot model change, as discussed below, wherein a new three-dimensional attachment network is proposed, and which is supported by the work of this dissertation.

Overview of Findings across All Studies

An implicit measure of security which assesses the self model of the IWM was developed in Study 1. In this study, implicit security correlated significantly positively with attachment security, and negatively with attachment anxiety. Study 2 demonstrated that participants in the Attachment Group improved on attachment-related variables relative to those in the Reading Group, supporting the hypothesis that the way in which attachment is taught, rather than the subject matter itself, is responsible for the effects, such as a significant between-group difference on change in self esteem and range of emotions maintained with the inclusion of the second sample. Inconsistencies with the addition of a second cohort, such as the loss of the trend toward a significant difference on change in implicit security may be because the first sample trended towards

significantly more preoccupied attachment than both samples together, as rated by the preoccupied paragraph of the RQ.

The goal of Study 3 was to explore how attachment and related variables might improve at post- test and several months later among those of all attachment types in response to a semester long intervention reconceptualizing both attachment anxiety and avoidance as characterized by damaging self-focus. Relative to the control group, improvements in attention to emotions at post-test followed by decreased attachment anxiety at follow up corroborate findings of Kilmann et al (1999) of improvement in attachment at follow up, and suggest that improvement in emotional intelligence precedes improvement in attachment. Taken together, findings of Studies 2 and 3 suggest change in attachment is not merely due to stable instability, contextual priming, or measurement issues. Therefore, Study 4 was conducted, an intervention targeting implicit and explicit attachment as well as variables representing models of self and other. At post-test, a significant effect of condition on increase in attention to emotions was replicated as well as a strong trend toward an increase in reflective function, moderated by attachment anxiety, with those high in attachment anxiety significantly improving relative to those in the control condition. At follow up, relative to those in the control condition, those receiving the intervention increased significantly in implicit security.

Inconsistencies across Studies and Robust Effect of Interventions

Due to many differences between the studies, inconsistencies were found. Study 2 differed greatly from Studies 3 and 4 with regard to the content of the intervention as well as the attachment make up and number of the participants – the smaller groups of

Study 2 facilitated greater supervision, greater individual expression and more focused discussion. Further, Study 2 was not conducted as a class for credit, whereas Studies 3 and 4 required performance that was evaluated for a grade. These differences may be responsible for no findings regarding change in attention to emotions from Study 2, but a significant effect of condition on change in attention in Studies 3 and 4. Similarly, while clarity was not assessed in Study 4, differences between Studies 2 and 3 may explain why a trend toward a significant difference between the Reading and Attachment Groups was obtained for Study 2 on change in clarity, but not in Study 3. Alternatively, this finding might be explained by the fact that Study 2 included matched control groups, whereas Study 3 had no control group per se, but merely compared those receiving the intervention with those who did not. This is suggested by the fact that every single participant in the Reading Group decreased in clarity, indicating that perhaps the significant difference between the Attachment and Reading Groups is not due to the intervention increasing clarity, but to learning about attachment through reading only *decreasing* clarity.

Too, differences between Studies 2 and 3 may be due to the significantly different mean anxiety levels represented by these two Studies, with participants in Study 2 having a significantly greater mean anxiety than participants in Study 3. This differential in attachment anxiety may be responsible for the trend toward a significant difference demonstrated on change in over-identification of emotions, with those in the Attachment Group increasing and those in the Reading Group decreasing.

Further, because attachment anxiety may be ego-syntonic, it might be more difficult to change if one has greater attachment anxiety – this may be why a significant

effect of condition on change in attachment anxiety was demonstrated at follow up among those in Study 3, but there were no significant findings for attachment anxiety from Study 2. However, it must be recalled that no follow up assessment was conducted for Study 2, so it is not known if attachment anxiety would have decreased at follow up. It may also be that participants in Study 3 understood that the goal of the intervention was to decrease attachment anxiety, especially since attachment was assessed six times throughout the course of the experiment. This reasoning may explain another difference between Studies 2 and 3: Study 2 demonstrated a trend toward a significant difference in increase in implicit security comparing the Attachment Group with both control groups, with those in the Attachment Group increasing as hypothesized and those in the control groups decreasing. However, among participants in Study 3, a trend toward a significant effect of condition on implicit security was demonstrated at post-test, with those receiving the intervention unexpectedly decreasing while those in the control group increased. It may be that if participants knew they were supposed to increase in security, they would not, but would decrease instead; perhaps they felt manipulated and their anxious self-view of being helpless was activated, given that insecure attachment is associated with an external locus of control (Mickelson et al, 1997). Collectively, these findings suggest it is important to assess what participants thought the goal of the experiment was, and perhaps attachment should not be assessed multiple times during the intervention, as occurred during Study 3, but not Study 2.

More disturbing than the inconsistency between Studies 2 and 3 are inconsistencies between Studies 3 and 4, which were more similar to one another in methodology, including assessing attachment multiple times during the intervention.

However, differences in methodology may be responsible for the unexpected decrease in implicit security among those in the experimental condition in Study 3 but not Study 4. For example, due to the collaborative nature of Study 4, the intra-experiment attachment assessments were not conducted by the Experimenter who conducted the intervention, but by the academic readiness teachers who conducted the control group.

The significant effect of condition on decrease in attachment anxiety at follow up among those in the experimental condition in Study 3 was not replicated in Study 4. This may again be due to the fact that there was a slight difference in methodology: in Study 3 participants were required to wait outside the classroom for their partners to arrive before entering the classroom, whereas in Study 4 this was not required of participants, partially because due to registration difficulties, several weeks into the intervention, participants were switching out of the intervention. Further, because of these registration difficulties, role plays were not performed with the same partner, nor were partners appropriately paired according to attachment. It may be that partnering consistently with one person, engaging in exercises with the same person, and entering the classroom with them facilitates long term decrease in attachment anxiety, as suggested by findings that attachment security increases among newly married couples over time (Davila et al, 1999).

That the intervention in Study 2 led to an increase in avoidance whereas the intervention in Studies 3 and 4 did not may be because the intervention in Study 2 involved a smaller group which was likely more threatening and interpersonally demanding, thus arousing defense mechanisms. Alternatively, participants in Study 2 did not know each other at the beginning of the study, whereas participants in Studies 3 and 4

knew each other from the EOF summer orientation during which they spent several weeks together.

That a significant effect of the intervention was demonstrated on increase in implicit security at follow up for Study 4 but not for Study 3 cannot be due to greater representation of attachment anxiety in the sample of Study 4, since no significant differences were demonstrated between these groups on mean anxiety. It is possible that the effect is due to greater experience and more practice on the part of the experimenter. Alternatively, those in Study 3 may have guessed the purpose of the study as suggested during class, and this may have confounded the results, causing a trend toward a significant difference at posttest with those in the experimental condition decreasing in implicit security, contrary to hypothesis.

Another reason that Study 4 demonstrated an increase in implicit security at follow-up may be due to a methodological difference regarding submission of homework among participants receiving the intervention. Not only were participants in Study 4 required to email their type-written assignments prior to the beginning of the next class session, but also during the first class, students were instructed on reflective writing, and it was emphasized that the homework relate to the personal lives of students. Further, feedback was regularly given for assignments during Study 4. In contrast, those in Study 3 wrote their assignments by hand, submitting assignments at the next class, and were not instructed on reflective writing. The greater reflectivity facilitated by these methodological changes to the intervention may be responsible for the increase in implicit security at follow-up among those in Study 4.

It must be recalled, also, that Studies 3 and 4 differed in that Study 4 was conducted in collaboration with EOF staff who conducted the control condition which involved some reflective writing, whereas Study 3 was not a collaborative effort, and there was no control condition. These differences might explain the inconsistency with regards to common humanity: while a significant effect of condition was demonstrated at posttest among participants in Study 3, with controls significantly decreasing, no such significant effect of condition was demonstrated among participants in Study 4. Perhaps the substance of the control condition, which made salient different issues facing those belonging to different groups, may have allowed participants to see themselves as part of greater humanity, who suffers just as they do as individuals. On the other hand, a very weak trend toward a significant effect of condition on common humanity in Study 4 was demonstrated at follow up, with those in the experimental condition increasing as hypothesized, and those in the control condition decreasing. Further, the significant effects of condition demonstrated in Study 4 such as the greater increase in implicit security among those receiving the intervention suggest that the reflective writing involved in the control condition, in contrast to that involved in the experimental condition, was insufficient to effect positive change, including long-term change.

Finally, attachment anxiety and implicit attachment, but not attachment avoidance, differed significantly across the groups, with Study 1 representing significantly higher implicit security than the other three studies, which did not differ from one another, and Study 1 representing the lowest anxiety levels. This difference between Study 1 and subsequent studies may explain why a significant relationship was obtained between attachment anxiety and implicit security in Study 1 but not in

subsequent studies. ANOVAs comparing participants from all four studies ($N = 156$) demonstrate the relationship between attachment anxiety and implicit security: for studies 1 and 3 in which mean anxiety was lower, the mean AIAT scores were higher, but for studies 2 and 4 in which the mean anxiety was higher, the mean AIAT scores were lower (see Figure 1, Appendix II).

Because inconsistencies across studies were demonstrated for particular dependent variables, there were therefore inconsistencies in the patterns of findings across studies, making it difficult to establish how change occurs. Nonetheless,

> "…if we remain aware that measurements are but crude approximations of the operations of a construct, it will not be as disappointing when changes in these measures or correlations with other theoretically relevant scales do not reach very high magnitudes. No measures will ever account for every last individual quirk possible, so that data reflecting upon personality characteristics should not be expected to conform completely to theoretical expectations." (Lefcourt, 1982, p.149)

Despite the inconsistencies across the studies, one very robust finding was demonstrated: increase in range of emotions among those in the Attachment Group compared to those in the Reading Group in Study 2, as well as a significant effect of condition at both post-test and follow up in Study 3, with those receiving the intervention increasing in range of emotions. Taken together, these findings suggest that the intervention does have a significant effect on increasing range of emotions. (Range of emotions was not assessed in Study 4.)

Is the Intervention Helpful in Decreasing Attachment Anxiety?

Across all three studies, it seems that an intervention using attachment—reconceptualized along the dimension of focus—as pedagogy effects change and

improvement in attachment and related constructs. Further, the significant effects of the intervention in Study 4 compared to a control group appear unlikely due to the control group itself, especially with regards to a strong trend toward significant improvement in a latent variable representing reflective function, since those in the control group engaged in reflective writing as did those in the experimental group. Nonetheless, the experimental group involved more interactive class time as well as more reflective writing assignments than did the control group, and therefore significant findings of this study cannot be conclusively attributed solely to beneficial effects of the intervention itself. This is especially true given significant findings and trends indicating a buffering effect of the intervention on negative effects of the control group: those in the control group decreased more than 2.5 times as much in empathy as those in the experimental group at post test, and at follow up, those in the control group demonstrated a significant decrease in empathic concern, while those in the experimental condition remained essentially unchanged. Similarly, at follow up, a strong trend toward a significant effect of condition was demonstrated with those in the control condition decreasing more than four times in authority than those in the experimental condition.

When considering results from all interventions, it seems that a large group intervention including those of all attachment types is more beneficial for decreasing attachment anxiety than a smaller group focusing only on attachment anxiety. This is to be expected theoretically: only focusing on the deficiencies of attachment anxiety may exacerbate attachment anxiety, with its associated hyper vigilance and over-personalization, causing those with attachment anxiety to feel singled out and inferior compared to others. Certainly the trends toward significant differences between the

Attachment and Reading Groups of Study 2, with those in the Attachment Group increasing in over-identification contrary to hypothesis suggest also that a small group intervention is not beneficial to those high in attachment anxiety. The increase among participants high in attachment anxiety learning about attachment in interaction with others high in attachment anxiety suggests how attachment insecurity might be maintained in interpersonal relationship: the felt needs of those with attachment anxiety are not being met, and because their emotions have not been "contained" by "good enough" mothering (Winnicott, 1953, as cited in Steir & Lehman, 2000) with sufficient sensitivity and responsiveness, they have not learned to contain their emotions themselves, and as a result, hyperemote and over identify with their feelings. It may also be true that instead of empathizing with others in the group, participants characteristically and selfishly focus on their own angst, effectively worsening themselves.

Effect of the Intervention on Attachment Avoidance

That no decrease in attachment avoidance or dismissiveness was demonstrated among participants receiving the intervention in Study 3, no decrease in attachment avoidance was demonstrated among participants receiving the intervention in Study 4, and that there was a strong trend in Study 2 toward a significant difference in change in avoidance when comparing those receiving the intervention with both control groups with avoidance among those receiving the intervention *increasing* with the inclusion of both samples supports evidence suggesting that attachment avoidance is reticent to change (Horowitz et al, 1993) and that the intervention of Study 2 only exacerbates avoidance, likely because of defensive reactions to attachment-related interactive

learning. The trend toward a significant difference comparing Attachment and Reading Groups considering the first sample with nearly significantly more preoccupied attachment as well as near significant difference between these groups considering both samples suggests the interactive nature of the intervention, and not learning about attachment, may be causing an increase in avoidance among those receiving the intervention, especially given that every participant in the Reading Group decreased in avoidance. Similarly, when comparing the three groups on change in dismissiveness, a trend towards a significant difference was demonstrated, with those in both the Attachment and Prejudice Groups showing an increase, while those in the Reading Group showed a decrease.

However, it is noteworthy that attachment avoidance moderated the effect of condition on change in avoidance: among those high in attachment avoidance in Study 4 but not in Study 3, a significant effect of condition was demonstrated on change in avoidance at posttest, with those in the experimental condition decreasing, and those in the control condition increasing. This suggests that despite the intractability of attachment avoidance, the intervention in Study 4 seems to have been successful in decreasing avoidance among participants high in avoidance.

Nonetheless, this significant effect of condition was not maintained at follow up, which may be because the effects of the intervention are short lived, and perhaps change does indeed require effort: once participants were not actively involved in learning about attachment, the effect of condition wore off. On the other hand, the significant effect of condition on decrease in avoidance among those high in avoidance may have been lost at follow up because those who dropped out of the study were significantly different than

those who completed the follow- up, with dropouts increasing and completers decreasing in avoidance (see Table 12), precluding the demonstration of statistically significant results. Taken together, these findings suggest that attachment avoidance may be decreased in response to an intervention which targets a classroom-sized group and teaches both attachment avoidance and anxiety reconceptualized along the dimension of focus. That a significant effect of condition was obtained for Study 4 and not Study 3 may be due to increased experience on the part of the Experimenter; no significant differences were demonstrated between the samples of Studies 3 and 4 on implicit security, attachment anxiety, or attachment avoidance.

Maintaining Change over Time

Across Studies 3 and 4, improvement in several variables in response to the intervention were not maintained at follow up (such as reflective function and attention to emotions; empathy and personal distress among participants high in attachment anxiety; avoidance among participants high in attachment avoidance) suggesting the effects of the intervention are short lived, and that perhaps booster sessions are necessary. Indeed, knowing about how the mind operates can be used to one's advantage with regards to achieving change in attachment.

Rovee-Collier (1995) proposes time windows to explain how new information is integrated and recalled during cognitive development, explaining that time windows are to psychology what critical periods are to biology. Time windows might explain significant results of the repeated priming study of Carnelley & Rowe (2007), demonstrating decrease in attachment anxiety two days after daily primings of attachment

security for three consecutive days. Perhaps the concept of time windows can be applied to achieving real and lasting change in attachment by providing booster sessions after the intervention ends.

The Process of Change in Attachment

Findings of Studies 3 and 4 of significant improvements in attachment at follow up corroborate with those of Kilmann et al (1999), which demonstrated a significant increase in security at follow up, but no significant difference at the first posttest. Further research is needed to examine why this delayed improvement is evident. It may be that attachment changes through interacting differently with others over time, only later causing a change in the underlying IWM. Alternatively, it might be that a person experiences improvements in other related constructs, which then leads to a change in attachment security, as suggested by an increase in attention to emotions at posttest in both Studies 3 and 4.

Further, that implicit attachment security, but not explicit attachment security, increased at follow up during Study 4 and that implicit security increased among those receiving the intervention in Study 2, but no decrease in anxiety was demonstrated among these participants suggests that change in the model of self may first occur at an unconscious level, and only later be consciously manifested. Indeed, just as unconscious maladaptive internal working models need to be made conscious in order to change them (Colin, 1996), perhaps unconscious positive internal working models need to be made conscious in order to change them. Theoretically, implicit security might be expected to change before explicit security, considering the development of attachment to begin with:

attachment is developed based on real life experience with caregivers during the sensorimotor period of infancy, prior to the development of language and memory. Unless it is made conscious in an effort to change (Colin, 1996), attachment is unconscious (Bowlby, 1979).

In fact, taken together, these findings support a new theoretical attachment network, which, unlike the current widely accepted hierarchical attachment network (Collins & Read, 1994) is actually able to model change and maintenance in attachment, as discussed below.

Theoretical Structure of the Internal Working Model (IWM)

Given that a person has several different attachment relationships and corresponding IWMs (Bartholomew & Horowitz, 1991; Baldwin et al., 1996), the attachment network must be organized in some way. The current widely accepted "hierarchical" model of the structure of this attachment network posits an overarching prototype or core IWM with additional IWM(s) subsumed within it forming an IWM hierarchy (Collins & Read, 1994; Figure 4). This hierarchy is said to develop first based on the IWM developing with parents, which then generalizes, subsequently affecting IWMs associated with other relationships (Collins & Read, 1994).

However, this model is limited because it cannot possibly account for how the IWM underlying attachment might change. First, because the current model does not represent any *actual relationship* of the self with a particular attachment figure, but only the IWM *associated with* a particular relationship, the current model does not illustrate

the correspondence *between* the experienced relationship and its underlying conceptual unconscious schema.

This distinction between the conceptual IWM and the actual relationship with which it is associated may be illustrated by considering a discussion of the structure of knowledge within the field of cognitive development (Chi, Hutchinson, & Robin, 1989): knowledge of dinosaurs among 4 ½ year olds is represented in a hierarchical network, in which various dinosaurs are interconnected with lines, indicating membership to a particular category. A more elaborate hierarchical network, with more interconnections between dinosaurs differentiates children who have more knowledge about dinosaurs (experts) and those who have less (novices). The pattern of interconnections among exemplars in the knowledge hierarchy *reveals underlying concepts*.

For example, particular dinosaurs connected with one another are "giant plant-eaters." Nowhere in the knowledge hierarchical network is the concept "omnivore" or "herbivore" indicated; these are *inferred* from the knowledge hierarchy. So too with the current hierarchical model of the attachment network, but in reverse: while the *concepts* of self and other comprising the IWM are represented in the hierarchy itself, the associated relationships are not, but are rather inferred from the hierarchy. Thus, concepts (IWMs) are represented in the hierarchical network, but exemplars (relationships of self with others) are not.

There is a second reason the hierarchical model cannot possibly illustrate change and this can be explained by turning again to the field of cognitive development. A hierarchical network, a type of associated network, merely allows for differentiation, or assimilation of new information to form more detailed categories within the

superordinate category, as illustrated by Chi et al (1989), but does not allow for incommensurability or conceptual change, which Carey (1991) demonstrates is possible, as discussed below, contrary to Spelke (1991), who maintains that knowledge acquisition

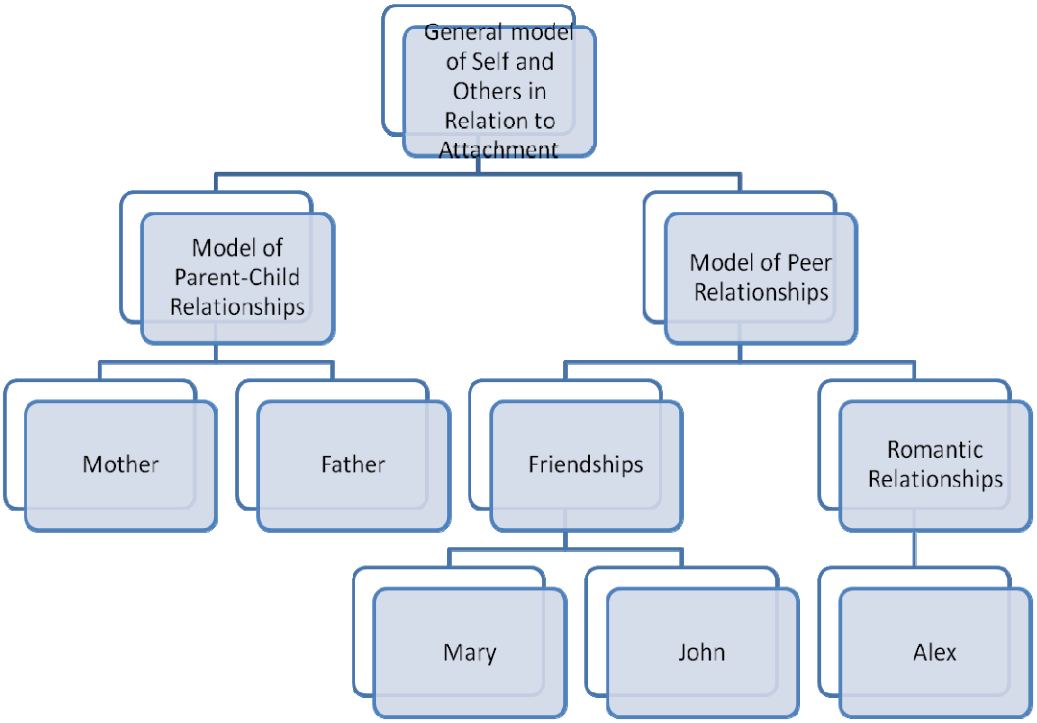

Figure 4. Attachment network hierarchy. Adapted from Collins & Read (1994).

merely involves conceptual enrichment, and that conceptual change does not occur, as occurs in science.

Conceptual change occurs within the discipline of science (Kuhn, 1962/1970) when a "paradigm shift" occurs after awareness of an incongruity, and conceptual change occurs within the individual (Carey, 1991) when discrepant information is accommodated (Piaget & Inhelder, 1969), rather than assimilating information into pre-existing schemas.

In fact, intelligence is defined as "an equilibration between assimilation and accommodation (Piaget & Inhelder, 1969, p58), which implies that failure to change one's views in light of disconfirming evidence displays a lack of intelligence.

Consider the idea of conceptual change, or incommensurability, with regard to the differentiation of weight and density, illustrating conceptual change in children, as discussed by Carey (1991). At first (T_1), weight and density are undifferentiated. There is no concept or awareness of density (C_1); all large objects are heavy, and all small objects are light, because there are not yet enough disconfirming experiences of heavy objects being light and small objects being heavy. However, after some time has elapsed (T_2), and a child has had enough experience with associating large objects with being light and small objects with being heavy, the new concept of density develops (C_2). This conceptual change involves the awareness that density exists, and is differentiated from weight. While Carey does not model conceptual change, conceptual incommensurability (such as that of weight and density here) may be effectively illustrated in a three dimensional model, instead of in a two dimensional schematic as proposed by Collins & Read (1994).

Conceptual Incommensurability Modeled

It is proposed that experienced associations are first represented on one level, with the underlying concept (C_1 at T_1) and subsequent conceptual change (C_2 at T_2) represented on a second level, only after enough experiences disconfirming the first concept are noticed and accommodated. Thus, conceptual incommensurability as discussed with regards to weight and density would be modeled in two planes in three

dimensional space, with the experienced connections between the heaviness of objects and the sizes of objects represented in the lower plane, and the underlying concepts of weight (and later density) represented in the upper plane (see Figure 5 below).

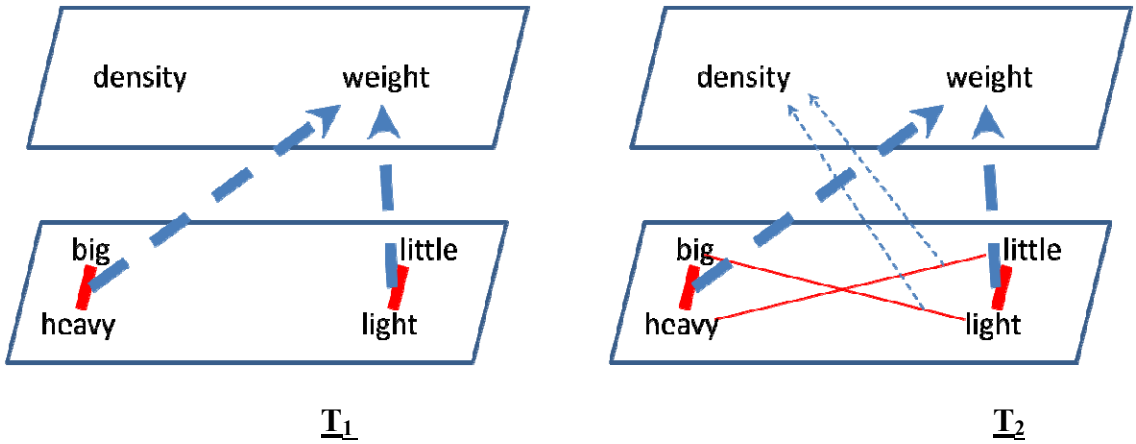

Figure 5. Conceptual incommensurability modeled. At T_1, only C_1 is understood, but with time and attention, at T_2, C_2 develops.

Here, the relationships between the experienced associations of size and heaviness are represented by solid red connecting lines, with thicker solid lines representing a more rehearsed relationship than thinner solid lines, while the underlying concepts of weight or density are represented by dashed blue arrows connecting the association in the lower plane to the underlying concept in the upper plane.

The dashed arrows connecting the associations in the lower plane with the concept of density in the upper plane are not as thick as those connecting the associations in the lower plane with the concept of weight in the upper plane: a child developing the new concept of density is less aware or conscious of density than weight, because he has more experience with weight, making weight more *chronically accessible* (Baldwin,

1992; Collins & Read, 1994) than density, and more salient. Thus when evaluating or thinking about an object's properties, what is more likely and more often to come to mind is its weight, and not its density. Even though the concept of density is eventually understood, it might take effort (at first) to remember to consider the density of an object. With enough time and experience noticing relationships illustrating density, the connection between the experience and the concept of density is strengthened, becoming more accessible, represented by thicker dashed arrows. Thus, eventually, when encountering a new object, the concept of density will come more readily to mind, rather than merely a consideration of the object's weight.

Consider this proposed model of conceptual change with regard to change in the IWM underlying attachment, specifically change in concept of self in a person who has a frequently activated IWM reflective of preoccupied attachment, with high attachment anxiety and low attachment avoidance. At first, a person has a negative self view, and can only see himself in relation to others as inadequate, inferior, incapable and unlovable (Figure 6). This self-concept, or the prototype attachment style, may have developed in relation to a primary Attachment Figure and then generalized to other relationships, as discussed earlier. However, with enough experiences disconfirming the original prototype involving relating with others differently, this person develops a positive self view, a new self concept of self as more competent and more worthy of love. As with the nascent development of the novel concept *density* after being familiar with the concept *weight,* it may be initially more effortful for a person with a newly developing positive self view to activate that positive self view rather than the more habitually activated, chronically accessible, negative self view.

With regard to weight and density, at T_1 a child knows only one simple undifferentiated correlation (C_1); a new concept is learned when, at T_2, a child becomes aware of more than one simple correlation, noticing disconfirming information (C_2). This requires not only disconfirming experiences, but also *noticing* such experiences (akin to Mandler's perceptual analysis; Mandler, 1992, 1988, as cited in Mandler, 2003). As in developmental psychology, it may also be true for attachment theory. To change, over time a person must attend to disconfirming experiences as suggested by Davila & Cobb (2004), and as demonstrated by a study in which husbands who noted that they were

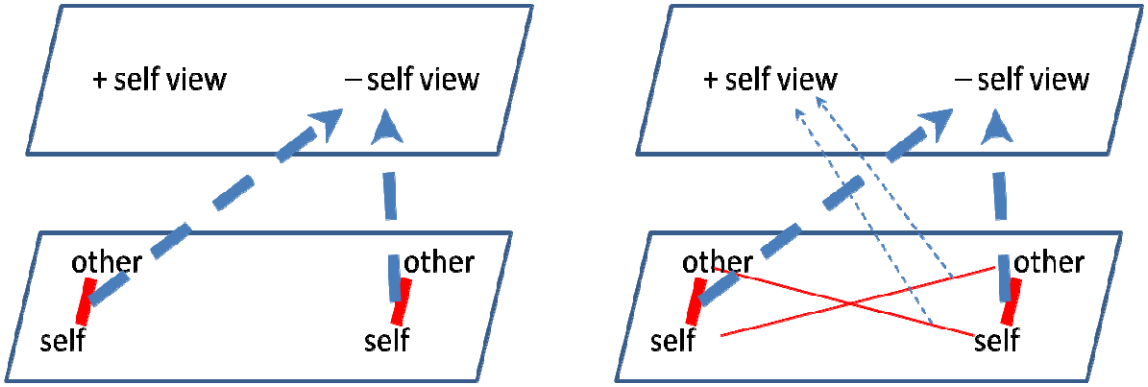

Figure 6. Model of conceptual incommensurability applied to attachment theory.

supportive to their wives became less dismissive and pregnant women high in attachment anxiety demonstrated a decrease in attachment anxiety provided they noticed their spouses were attentive and accepting during gestation (Simpson, Rholes, Campbell, & Wilson, 2003). An understanding must be achieved that there *can be* a self as worthy,

competent, and capable, not merely a self as unworthy, helpless, and inferior, just as a child achieves an understanding that weight and density both exist as different concepts.

3-Dimensional Model of Conceptual Change in the Attachment Network

This three dimensional model depicting conceptual change can be applied to the mapping of the IWM network. The different IWMs of any given person (Bartholomew & Horowitz, 1991; Baldwin et al., 1996) are partially due to the fact that a person has had relationships with attachment figures who are differentially sensitive and responsive; therefore, a person will have models of self with varying levels of feelings of worthiness as well as models of other with varying degrees of trust and regard. Not only that, but one's attachment with a particular attachment figure will fluctuate to some degree due to perturbations in the environment during the early years (Waters et al, 2000), which cause that particular attachment figure to be more or less sensitive or responsive. Each relationship an individual has is represented with a line connecting the other to the self in a "relationship plane," which is arranged in a bull's eye hierarchy with the self in the center (see Figure 7), as suggested by findings of Rowe & Carnelley (2005), who demonstrated that attachment relationships are modeled in a bull's eye hierarchical map, with more important relationships located closer to the core self.

In this study, Rowe & Carnelley (2005) assessed participants' attachment styles by classifying participants into categories based on a median split of anxiety and avoidance scores obtained from an adapted version of the ECR (Brennan, Clark, & Shaver, 1998), which supplants references to romantic partners with references to others

in general.[4] Rowe & Carnelley then asked participants to list their ten "closest and/or most important relationships" involving emotional bonds, regardless of whether the relationships were difficult or satisfying (Rowe & Carnelley, 2005, p503) and then place a sticker representing each of the ten attachment figures on a bull's eye map of concentric

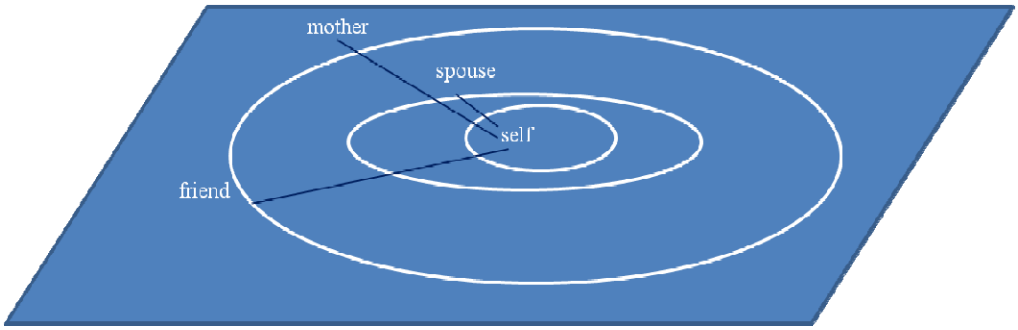

Figure 7. Bull's Eye Hierarchy (adapted from Rowe & Carnelley, 2005).

circles, with the innermost circle, or "bull's eye" representing a particular participant's self. Finally, participants completed Trinke & Bartholomew's (1997) Attachment Network Questionnaire (ANQ), which assesses the type of attachment an adult has to a number of self-identified attachment figures. While Rowe & Carnelley's unique study demonstrated idiographic differences between attachment styles in terms of how far attachment figures were from the self (with participants high in attachment avoidance placing attachment figures farther away from self than did securely attached participants)

[4] For a discussion on why it is problematic to transform continuous variables into categorical variables, however, see MacCallum, Zhang, Preacher, & Rucker (2002, as cited in Field, 2009).Further, Fraley and colleagues (Fraley & Waller, 1998; Fraley & Spieker, 2003a, 2003b) have demonstrated that attachment is better modeled with dimensions rather than categories.

as well as differences in the closeness of attachment figures *to each other,* this hierarchical map again does not illustrate change, because it does not represent individual IWMs corresponding to each relationship. Rather, only participants' global attachment styles are represented by the hierarchical structure; individual attachment styles are not modeled, but assessed separately by the ANQ.

The proposed model illustrates the individual IWMs associated with particular relationships represented in the relationship plane by representing the IWMs in a second "unconscious plane," parallel to and above the relationship plane in three dimensional space. The correspondence between a particular relationship with its underlying IWM is illustrated by a dotted arrow projecting from the line connecting a particular person with the self in the relationship plane to a particular IWM in the parallel unconscious plane above. Similar to the bull's eye hierarchy of Rowe & Carnelley (2005), the self is placed in the center of the relationship plane, with others represented at varying distances from the self, depending upon the importance the self places on any particular attachment relationship to the self, with relationships more important to the self (child, spouse, mother, father, friend) closer to the self, and relationships less important to the self represented farther from the self (i.e., newly met friend, ex-spouse).Thus, not only are attachment relationships represented, but also nascent attachment relationships and non-attachment relationships as well. The representation of relationships with varying levels of attachment relevance including non-attachment relationships, fledgling attachment relationships, and fully-developed attachment relationships better allow for the modeling of conceptual change, as will be elucidated. Relationship with the self as operationalized by the response one has to oneself in terms of self compassion (Neff, 2003a) is also

represented in the relationship map, by representing the self as an attachment figure connected to the bull's eye self.

The proposed three dimensional attachment network model is not obviated by the study of Overall, Fletcher, & Friesen (2003), which demonstrates by confirmatory factor analysis that the attachment network is better represented by a three-tier hierarchical model reminiscent of the hierarchical two dimensional model of Collins & Read (1994) rather than either of two two-tier hierarchical models, the first representing individual relationship specific IWMs nested beneath a global IWM, and the second representing relationship domain general IWMs nested beneath a global IWM. The three-tier model combines the two tier models, representing individual relationship- specific IWMs nested beneath relationship general domain IMWs, in turn nested beneath a global IWM (Overall et al, 2003, p1481, Model 3).

One potential difficulty with this study done by Overall et al (2003) is that the same attachment measure was not used to assess both the relationship general and relationship-specific IWMs: the AAQ (Simpson, Rholes, & Phillips, 1996) assessed relationship-general domains, whereas Hazan & Shaver's (1987) attachment measure assessed relationship specific IWMs. While the former measure is drawn from the latter measure, the former is comprised of 17 items assessed on a 7-point Likert scale, whereas the latter is a 7-point Likert rating of 3 paragraphs representing anxiety, avoidance, and security. It would have been preferable had the same measure been used to assess IWMs at both levels to assess like with like. Using different measures to assess IWMs in different tiers may explain the unexpected correlations between anxious and secure

ratings as well as anxious and avoidant ratings. There is no obvious reason why Overall et al (2003) used different measures to assess IWMs at different levels of the hierarchy.

Another problem with this study is that while the 3-tier model provided the best fit of the three, it was merely *the best fit* of the three models tested, and the CFA for the relationship general domain did not indicate a perfect fit: while the comparative fit indices were too low and root mean square error of approximations were too high to indicate a good fit for both models 1 and 2 when testing fit using attachment anxiety only, but indicated a good fit for the third model, the chi-square was again significant for the third model. When testing the model using attachment avoidance only, the results were less confirmatory: although the comparative fit index was sufficiently high, the root mean square error of approximation was not low enough. Further, because there were insufficient degrees of freedom to test the three tier model, the authors had constrained two of the paths from the relationship domain to the global IWM, and acknowledge (Overall et al, 2003, p1492, footnote 3):

> "Even though Model 3 is presented as a hierarchical order model, the identification problems mean that statistically it is indistinguishable from a model where the first-order factors are allowed to freely correlate. However, a higher order model can be accepted over its lower order equivalent if there is no decrease in fit…and if it is more theoretically meaningful. Ultimately, which model is chosen will depend on theoretical considerations and evidence apart from confirmatory factor analysis..."

In other words, ultimately, the three tier model does not statistically differ from a two tier model, without relationship domains.

Nonetheless, while the proposed three dimensional attachment network model is easily in concordance with a two-tier model without relationship domains, if the three tier

model is “chosen” based on theory as well as further pending research, the proposed three dimensional model may accommodate the third relationship dimension tier of model 3 as follows. In the relationship plane, the second tier (familial, friendship and romantic classes of IWMs) might be represented by lines interconnecting specific people within these classes in an associated network, which reflects the membership in a particular class achieved by transference. Each person represented in an individual’s relationship plane may be associated with an IWM idiosyncratic to the relationship with that particular person (the third individual tier), while the global IWM is identified in the unconscious plane with a) a thicker arrow projecting upwards towards it from the relationship of self and primary attachment figure than projects upwards from any other relationship, and also b) more arrows projecting down from it towards more relationships represented in the relationship plane than are projected down from any other IWM represented in the unconscious plane to relationships represented in the relationship plane. It is likely, of course, that the hypothetical associated networks representing the relationship general IWMs would differentially identify different populations, as suggested by Reich, Amit, & Siegel (2009) in a study of sex offenders against minors.

This study demonstrated that the victim schemas of sex offenders who had performed vaginal penetration differed from those who did not: specifically, every single sex offender who committed vaginal penetration upon their victim saw their victim as anxious, lonely, and worried, similar to how they perceived their past lover. Only 25% of sex offenders who saw their victims as their past lovers— anxious, lonely, and worried – committed a vaginal penetration. These results suggest that sex offenders who commit vaginal penetration may be committing sexual offenses for different reasons than those

who do not commit vaginal penetration *because* they view their victims as their past lovers, or in other words, have a stronger transference of past lover to child victim. These results further support the injunction of Collins et al (2004) to consider motivation in attachment research, and provide evidence that nomothetic research in which classes of participants are not differentiated is insufficient, calling for a more informative idiographic approach, supporting earlier work (Reich, Tuskenis, Slutzky, Siegel, 2000; Pelham, 1993).

IWM Maintenance and Change Modeled: Transference and Priming

The work of Brumbaugh & Fraley (2006, 2007) suggests that the IWM is perpetuated or maintained by transference, when a novel person is seen to resemble an attachment figure in some way. As mentioned, this transference is represented by lines connecting others together within the relationship plane, with thicker lines representing stronger transference. For example, relationships with employer and parent may be strongly related as evidenced by a transference reaction which occurs when a particular self interacts with his employer, who is similar in many ways to his parent. Relationships with self and parent are strongly related, since the way in which a person relates to himself is related to the way in which his parent relates to him through what is referred to as introjects in the psychoanalytic literature (Enright, 1970).

Thickness of the line connecting self to a particular person represented in the relationship plane indicates level of attachment involvement, such that a thin line indicates a non-attachment relationship as seen with self and new dating partner, for example, while a thick line connecting self with another indicates a strong well-rehearsed

attachment relationship, as seen with the line connecting self to mother. It is entirely possible that relationship with a particular person may be a strong attachment relationship yet at the same time, a relationship with this person may be less important to the person, as would occur with a thick line connecting self with a representation of another placed relatively further from the self and occurs with those higher in attachment avoidance (Rowe & Carnelley, 2005).

The dotted arrows extending up from the relationship plane to the unconscious plane illustrate bottom-up effects of any particular attachment relationship on the IWM, by which involvement in that particular relationship— including mental involvement as occurs via priming (for a review, see Mikulincer & Shaver 2007a)—activates that particular IWM. Even non-attachment or nascent attachment relationships with no corresponding developed IWM may have an effect on expression of the IWM by transference. For example, a new dating partner may remind a person of their relationship with a particular attachment figure associated with a particular IWM. This transference is illustrated with a line connecting the attachment figure and new dating partner. The IWM associated with the attachment figure is then activated in transference with the new dating partner (Brumbaugh & Fraley, 2006) in a top-down effect, represented by a solid arrow extending from the activated IWM in the unconscious plane to the line connecting the self with the new person in the relationship plane.

This top-down processing reflects the global (i.e., Pierce & Lydon, 2001) or prototype (Fraley, 2002) IWM which is more frequently accessible. In the proposed model, a new friend is represented farther from the self, with no dotted arrow projecting towards a particular IWM in the unconscious plane illustrating bottom-up processing, but

a relationship which is influenced by the most accessible global IWM, which arises from a relationship with a primary attachment figure, or the most accessible frequently activated IWM. However, bottom-up processing representing relationship-specific IWMs occurs as well. For example, Mikulincer & Arad (1999) demonstrated that when availability and accessibility of a particular IWM associated with a specific relationship was primed, participants processed information about a new person in a way consistent with the primed IWM (rather than processing information in accordance with the global IWM). When primed by secure attachment prior to meeting a new friend, for instance, a person would have more positive self-views and more optimistic expectations of response from the other (Carnelley & Rowe, 2007). Thus, the IWM associated with the new friend would be more secure than if a person were merely to operate with transference towards this new person and top-down processing of the global IWM.

While transference has been demonstrated in attachment (Brumbaugh & Fraley, 2006), it is an empirical question whether the converse is true, i.e., that increased attachment security will result in attenuated transference of insecure IWMs to novel people similar to significant others but not to novel people who are dissimilar.

Dynamic Systems Theory and Willpower. In illustrating the effects of priming and the process of transference on the expression of the IWM, the proposed 3-dimensional model demonstrates a theory of change based on dynamic systems theory (Thelen & Smith, 1994; Thelen, 2005). Indeed, Sroufe & Sampson (2000) have argued in response to Coleman & Watson (2000) that attachment theory is not simplistically linear, with adults expressing the attachment style that reflects the way in which they were treated as

infants, but represents a dynamic systems theory. In fact, the closed system described by Thelen & Smith (1994) with its "attractor state" represents a more rigid IWM that does not accommodate to discrepant attachment related information, whereas an open system allows for change because of energy put into the system. This energy in terms of IWM change is the "intention and attention" (Devine, 1989, p16) that one directs towards their behavior as well as that of others. Indeed, change may involve self-control insofar as a person needs to monitor their behavioral responses, inhibit their habitual responses, and behave in a contrary way.

In reviewing research on the self, Baumeister (1998) states that of the three parts comprising the self – reflexive consciousness, interpersonal being, and executive function – executive function, or self-control, is the aspect of the self that is least understood, and Baumeister (2005) reviews extensive research supporting the theory that "willpower" is the way in which a person exerts self control rather than self regulation being merely a cognitive process or a skill. Because willpower involves great effort in overcoming habitual responses, Baumeister argues, a person conserves their resources and is more likely to behave habitually. Of course, the effect of such conservation—and failure to put energy into the system (Thelen & Smith, 1994) — is maintenance of the attractor state, the IWM, and the current functioning of interpersonal relationships. It is noteworthy that it matters if a person believes that change is possible, and the self is not predetermined, as evidenced by a study in which participants who read an essay that free will is illusory and determinism is true, subsequently *cheated more on a test* than participants who read an essay unrelated to free will (Vohs & Schooler, 2008).

Self Identities and IWM. Any particular person has many different identities. For example, a person might be a son, a husband, a father, an employer, an employee, a patient, a violinist, and a champion chess player. The IWM is more likely to change during times of transition involving a change in identity: men who become fathers (Simpson et al, 2003) as well as those who are newlywed (Davila, Karney, & Bradbury, 1999) have been demonstrated to become more secure over time. After all, an identity is based, not on "internal states" of a person, but rather on their "performances in society" (Gee, 2000). Therefore, it is necessary to include a representation of identities and their involvement in the mechanism of IWM change. In Figure 8, identities (here labeled ID1 through 6 for the sake of simplicity) are represented in an identity plane perpendicular to the relationship and unconscious planes. Among other triggers, relationships within the relationship plane are able to prime various identities, which then activate particular IWMs. Another trigger activating the identity plane is life transition, such as occurs when a person gains a new identity or role (Caspi & Bem, 1990), such as occurs when an adolescent begins attending college, becoming an undergraduate or parent, or desists from a life of crime or converts or becomes ill. Specifically, for a person with a history of high attachment anxiety, becoming ill and having the identity of a sick person, for example, might activate an IWM of negative view of self. Conversely, while beginning university might cause this person to question their competence, it may also make salient their possibilities, increasing their perception of themselves as more competent, and activate a more secure IWM.

Priming by relationship with a person within the relationship plane associated with a particular identity should activate that particular identity, making accessible the

particular IWM associated with that identity, via bottom up processing. Including identities in the attachment network model is important because identity transformation is seminal in any sort of change, such as that from illness to health, addiction to abstinence, or criminal to law-abiding citizen (Veysey, Martinez, & Christian, 2009), and the IWM is comprised of one's view of oneself, which presumably is affected by one's self-perceived identity or role. When a person high in attachment anxiety actualizes their potential, for example, then the self has a sense of importance and accomplishment, being heard and achieving results, which may then activate a more secure internal working model. Conversely, a victim identity will be activated by the self when primed by internal or external events related to being victimized, which will then activate a fearful IWM. While these are hypothetical examples, evidence from the field of criminology provides evidence supporting the effect of relationships on identity.

Because repudiating his or her former identity helps a criminal acquire a new identity and desist from crime (Veysey, Heckman, Mazelis, Markoff & Russell, 2007; Maruna, 2001), priming of relationships associated with the criminal identity might re-activate the former identity, making it more difficult to maintain the new identity. Indeed, Maruna, LeBel, Mitchell & Naples (2009), in discussing the Pygmalion (Rosenthal & Jacobson 1992) and Golem (Babad et al, 1982) effects on criminal rehabilitation, review studies supporting a sociological theory, labeling theory (Lemert, 1951; Becker, 1963),which is slightly different than internalization theory (Tice, 1992) insofar as labeling theory refers to the label given to a person affecting their behavior, while internalization theory refers to the *perception* a person has of how they *think* others view them. Thus both the way a person is labeled by others as well as the way in which a

person thinks others see him will perpetuate his behavior, whether criminal or reflective of insecure attachment.

Motivation: The Focus Plane. It has been argued that researchers consider motivation in attachment research (Collins et al, 2004). Motivation, after all, is crucial in shaping as well as maintaining the IWM, and thus necessarily different motivations will underlie different attachment styles. Specifically, those with high attachment anxiety are motivated to attain felt security, and keep attachment figures close. They may be motivated to gain attention and love. Conversely, those with high attachment avoidance who have been rejected by attachment figures are motivated by the need for autonomy, and to avoid being aware of dependency needs, and will engage in defensive exclusion from awareness of their own attachment needs as well as those of others. On the other hand, those who are securely attached, who have felt security because their attachment needs have been met (Sroufe & Waters, 1977), are able to explore and achieve: they are motivated to accomplish and engage in caregiving behavior. Once the attachment system is deactivated and attachment needs are met, then the caregiving and exploring systems (Bowlby, 1969/1982) may be active. Therefore, the securely attached are able to be "other focused," whereas the insecurely attached are "self focused." Indeed, making felt security salient by priming increases self-transcendent values (Mikulincer, Gillath, Sapir-Lavid, Yaakobi, Arias, Tal-Aloni, & Bor, 2003) as well as compassion and caregiving (Mikulincer, Shaver, Gillath, & Nitzberg, 2005). Perhaps the converse is true as well: that becoming more focused on the needs of others will increase attachment security. Indeed, being other focused, or having an "ecosystem motivation" is demonstrated to be more

adaptive than the more self-focused "egosystem motivation," both intrapersonally (Garcia & Crocker, 2008) as well as interpersonally (Crocker & Garcia, 2009).

The challenge, of course, is to *maintain awareness* and mentally and emotionally live within the third dimension, rather than be defined by the second dimension and its transferences in the relationship plane. Thus, to Devine's succinctly stated conclusion that stereotype change takes "intention, attention, and time," (Devine, 1989, p16) would be added "and effort:" change is hard work. Indeed, "significant effort in renegotiating interpersonal interactions" is required to attain a change in self-identity (Veysey et al, 2009, p3).

However, while Devine (1989) was referring to a change in stereotypes, the IWM cannot be reduced to a cognitive schema as some seem to have suggested (viz., Baldwin, 1995), because the IWM involves both an inborn need for a response from another initially for purposes of survival, as well as motivation to satisfy that need and subsequent others, and motivation thus affects behavior. In fact, in one study, motivation affected behavior to such an extent that despite obstacles or enticing distractions, participants persisted in achieving primed non-conscious goals even more until the goals were achieved (Bargh, Gollwitzer, Lee-Chai, Barndollar, & Trotschel, 2001). Similarly, Lakin & Chartrand (2003) demonstrated that when primed affiliation goals were unfulfilled during interaction with a first non-responsive confederate, participants engaged in greater efforts to achieve their goal in interacting with a subsequent confederate. Thus, those with high attachment anxiety would increase their efforts in persisting to achieve proximity or felt security until they perceive it has been achieved.

Indeed, it may be that this chronically accessible motivation to achieve security contributes towards increased self-focus. The question then arises, what happens to this motivation when a person becomes more secure, or a change in the attachment network as manifest by change in behavior, especially under stress, is achieved?

From the perspective of the psychoanalytic tradition, it may be that this motivation is sublimated, or redirected into other activities. In fact, because certain characteristics that were useful for crime, such as anti-authority attitudes and risk taking, are also useful in non-criminal pursuits such as entrepreneurship (Maruna, 2001), it is suggested that these characteristics be channeled productively (Veysey et al, 2009). Such sublimation is illustrated within the proposed three dimensional model with change in the attachment network by either the development of a new identity represented in the identity plane, or a change in focus represented in a parallel focus plane (Figure 8).In fact, IWM change in self concept may occur when one finds meaning in one's life through a new role (Maruna, 2001; Maruna, LeBel, Mitchell, & Naples, 2004) or converts to another religion to compensate for their insecure attachment with human attachment figures (Kirkpatrick & Shaver, 1990).

It is an empirical question whether making one's focus salient by consciously focusing on the needs of others rather than on the needs of oneself will make a person more securely attached, and one which was tested in Studies 3 and 4 of this dissertation. Such other focus may be seen when reformed criminals engage in advocacy for their peers, and it has been suggested that such advocacy helps to prevent recidivism among the advocates, reinforcing their new identities (Maruna & LeBel, 2003, as cited in Christian, Veysey, Herrschaft, & Tubman-Carbone, 2009). Indeed, because advocacy and

crime have been demonstrated to be incompatible, it is suggested that advocacy be a means to integrate ex-criminals into society (LeBel, 2009).

Within the proposed model, such an effect of change in focus is illustrated by an arrow extending from the focus to the opposite and parallel identity plane, passing over the perpendicular relationship plane, with conscious change in focus activating a different or new identity (see Figure 8). Thus, by focusing on the needs of others, a person may activate an identity of self as advocate or teacher, being unaffected, or at least less affected, by transference in passing over the relationship plane. When a person is thus other focused, the responses from others will be different, and this may alter the IWM.

For example, a person high in attachment anxiety is clearly focused on attaining their attachment needs, and may tend to be clingy, demanding, and controlling in conversation. However, such a person might become aware of his self-focus and learn to be more other focused, thinking about the needs of others, not just himself, and become more considerate of the boundaries, time, and needs of others. Conversely, a person high in attachment avoidance will defensively exclude awareness not only of their own needs, but those of others as well. With awareness of this type of self-focus, its alienating and hurtful effects on others as well as its perpetuation of rejection, such a person might learn to become other focused and change his behavior for the sake of others with whom he is in relationship, if not for himself.

Furthermore, once a person realizes how his own habitual attachment-related behavior is responsible for perpetuating his attachment insecurity as well as eliciting predictable responses from others, a person's self-agency increases. This increase in

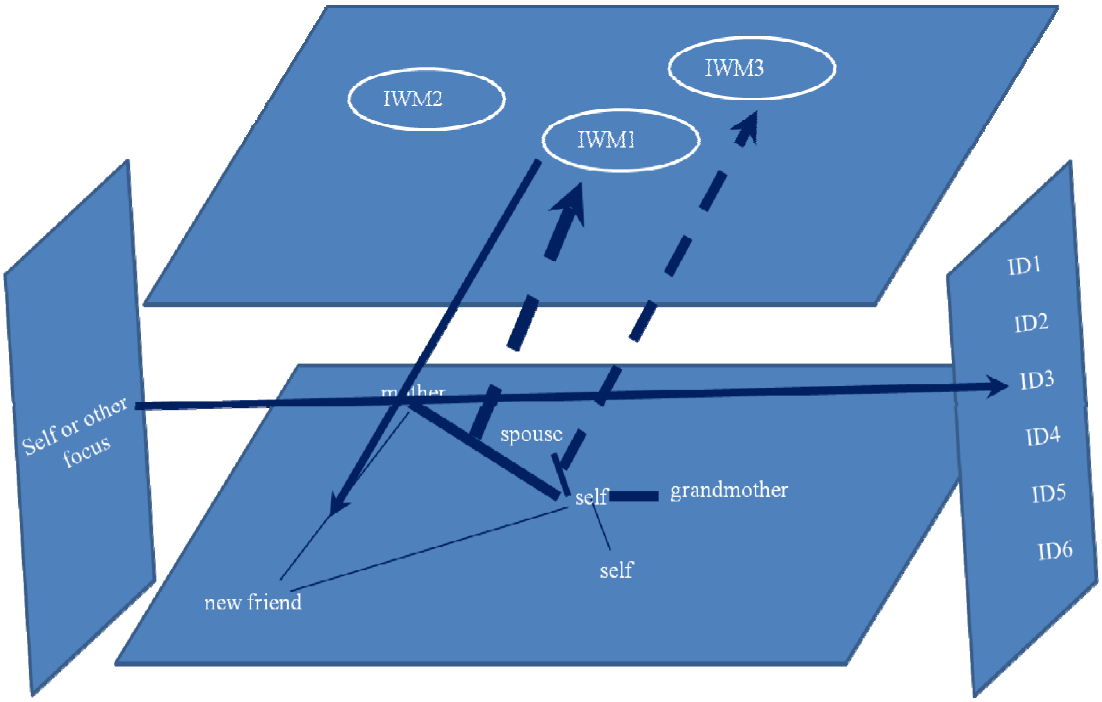

Figure 8. Bypassing transference in relationship plane by activating identity in identity plane with other focus.

internality of locus of control necessarily coupled with the knowledge that attachment can change, as well as consciously exerting self control to become more other focused rather than self focused as well as practicing new behaviors, all might effectively contribute towards altering the expression of the IWM.

It is important to emphasize that change involves "altering the expression of the IWM," but not "changing" the IWM, because once a person has a particular IWM, it is not erased or morphed from one to another, but becomes less *chronically accessible* (Baldwin, 1992; Collins & Read, 1994), and thus less influential on current relationships and effects on the self-image. Under conditions of stress in which the attachment system is activated and a person has fewer resources to self-monitor and exert executive control over learned and habitual behaviors, however, a person may revert to expressing the

"old" IWM. Nonetheless, even under such conditions, it has been demonstrated that among women who have "earned security" the "new" IWM can predominate (Pearson, Cohn, Cowan, & Cowan, 1994).

However, it is also important to note that the term "earned security" may be a misnomer: it may be possible that those who "become more secure" are in actuality making more accessible a secure IWM *they already have present in their attachment network.* In their 23 year longitudinal study comparing prospectively and retrospectively defined security of children born to disadvantaged young mothers getting prenatal care at Minneapolis health clinics, Roisman, Padron, Sroufe & Egeland (2002) found that "earned security" is a misnomer; the retrospectively defined earned secures had had good mothering and had not been classified as insecure as children. However, the prospectively defined earned secures had actually been classified as insecure during infancy and as young adults were classified as secure; these subjects had had less maltreatment at 13 years old than the continuous insecures. These authors conclude that retro-or prospectively defined earned secures are coherent, and thus classified as secure on the AAI because of "consistent or ameliorative support in childhood." These subjects hadn't earned their security; they hadn't become secure by "will" alone; they had actually had some secure experiences, and the more secure IWM associated with such experiences evidently became more chronically accessible.

A Place for God? This model is also useful in elucidating the "compensation hypothesis" (Kirkpatrick & Shaver, 1990), which maintains that insofar as a person's need for felt security is not satisfied by their human attachments, a person in effect compensates with

their attachment to their deity. The compensation hypothesis cannot be explained adequately by the existing hierarchical network, which can only explain the "correspondence hypothesis," which maintains that a person develops the same attachment with their deity as they have with others (Kirkpatrick, 1998; for a review, see Kirkpatrick, 1999). While Kirkpatrick vaguely hypothesizes, "I suggest that for many individuals, mental models of Gọd (or perceived relationships with Gọd) hold an important place somewhere in this hierarchy." (Kirkpatrick, 1999, p809), the proposed three dimensional attachment hierarchy models a relationship with Gọd.

In the proposed model, Gọd is simply represented as another with whom one is in relationship, to a greater or lesser extent (as illustrated by distance from the self in the relationship plane) and serves as one's attachment figure, to a greater or lesser extent (as illustrated by the thickness of line connecting Gọd to self represented in the center of the relationship plane). Thus, the attachment network of a recent convert, for example, would differ from that of an avowed atheist with regards to the representation of the relationship with Gọd in the relationship plane, as well as the correspondence between the relationship plane and the unconscious plane. Specifically, the more a person perceives Gọd as an attachment figure from the perspective of the compensation hypothesis, the more accessible the underlying secure IWM associated with relationship with Gọd, represented by a thicker arrow projecting from the relationship plane to the unconscious plane in bottom-up processing.

For those who are neither atheists nor agnostics and do not invest energy into the system (Thelen & Smith 1994), such as by thinking about Gọd, for example, and their attendant obligations and responsibilities (rather than being self-focused, by being other

focused on Gọd in this case) their relationship with Gọd will be supportive of the correspondence hypothesis, illustrated in the present model by lines connecting Gọd with others in the relationship plane (insofar as one creates Gọd in his own mind by projections and transferences) and no arrow projecting upwards to another IWM in the unconscious plane from the line connecting self to Gọd in the relationship plane.

Summary of the Proposed 3-Dimensional Attachment Network

The three dimensional model of the attachment network put forth herein illustrates how and why a pre-existing IWM is maintained: by default (unless a person is primed by a specific relationship IWM or exerts effort), the global IWM will be activated in new relationships by transference, perpetuating and strengthening the global IWM, increasing its availability and accessibility. The three dimensional model also explains why IWMs with which a person has more experience are more chronically accessible. More importantly, and unlike prior models of the attachment network, this model illustrates how change may occur. Further, this model accounts for empirical findings in the field of attachment as well as other fields, and it is consonant with several theories other than attachment theory, including dynamic systems theory (Thelen & Smith, 1994; Thelen, 2005), self verification theory (Swann, 1997), identity negotiation theory (Swann & Bosson, 2008), internalization theory (Tice, 1992), labeling theory (Lemert, 1951; Becker, 1963), and cognitive dissonance theory (Festinger and Carlsmith, 1959).

That change is more likely during times of transition or change in identity (such as may occur when freshmen begin attending university) is represented by connections between attachment relationships, IWMs, and the new identity in the identity plane.

Metacognitive awareness, in which a person sees the system in its entirety from a different perspective, becoming aware of the system as well as their operation within the system, permitting an awareness of a new self concept, is illustrated insofar as connections with the focus and identity planes are present. Thus, a person is not merely operating within the confines of the first plane in the "second dimension," in which their original IWM is accessible and activated, but that the person has "broken into the third dimension." Finally, this model answers the calls of prior researchers to consider both motivation as well as an idiographic approach to research.

Given both research and theory, it is proposed that change in the attachment network may be better conceptualized in a three dimensional, rather than a two dimensional space. The novel three dimensional theoretical attachment network model addresses the shortcoming of the current hierarchical model by illustrating a) the connection between a particular IWM and its corresponding relationship; b) how change might occur; and c) how the IWM is maintained, according to several theories, including attachment theory.

Support for the New Attachment Network: Motivational Transformation May Effect Change.

As suggested by the new theoretical model, results overall indicate that a change in focus from self to other may lead to an increase in attachment security and related variables, validating the calling of others that motivation be studied in attachment research (Collins et al, 2004).

Findings of Study 2 indicating that the Reading Group is the stronger control group than the Prejudice Group, with the Prejudice and Attachment Groups behaving similarly with regards to several outcome variables, may be partially due to the *differential in focus* that was similar across both the Attachment and Prejudice Groups. In both conditions, different focus was emphasized: in the Attachment Group, attachment anxiety was presented as involving self focus whereas attachment security was presented as involving other focus, while in the Prejudice Group, prejudice was presented as involving focus on external differences differentiating people rather than focusing on internal similarities shared between people, which attenuate prejudice (Sherif et al, 1961) as illustrated by Dr. Seuss' *Sneetches*. Those in the Reading Group, on the other hand, were not afforded an understanding of attachment filtered by differential in focus on self or other.

Indeed, anecdotally, one participant in Study 3, in writing her autobiographical attachment essay, stated that while she realizes she is dismissively attached, she has no desire to change, because attachment avoidance is beneficial in that it permits a person to be focused on their work, and accomplish more without being distracted by interpersonal issues and feelings. Another participant, on the other hand, similarly acknowledged being dismissively attached, but realized through the intervention how attachment avoidance negatively impacts others and is striving to change. The differences in motivation clearly illustrated by these two participants suggests further research into how motivation differentially impacts change in attachment: it may be that those who change are motivated to change by focusing on how their attachment insecurity affects others in contrast to those who do not change because they may be more self focused, seeing how

their attachment insecurity *benefits themselves* by reinforcing their views of self and other.

The current hierarchical model of attachment cannot possibly model change, because it merely allows for differentiation. The new theoretical 3-dimensional model proposed herein models change and is supported by results from Studies 3 and 4 for all participants regardless of attachment style: changing one's focus can lead to a change in attachment security.

By becoming other focused rather than self focused, a person may effect change in their interpersonal relationships, which then leads to change in their IWM, perhaps by their change in focus eliciting more sensitive responses from others, which serve to decrease attachment insecurity. In fact, motivational transformation may effect change in the IWM without requiring the activation of a new identity (see figure 9). This can be empirically tested by priming the focus, or motivation of participants, prior to interaction with a confederate by perhaps having some read an altruistic essay and others a narcissistic essay, and then assess their attachment behaviorally and by self report, as well as implicitly.

Limitations and Suggestions for Future Research

Although the attachment IAT was not properly validated and therefore conclusions based on findings involving implicit security must be interpreted with caution, to date there have been no published studies using another measure of implicit security (Dewitte et al, 2008) in research, and trends as well as significant effects of condition across Studies 2, 3, and 4 suggest that more research is needed to examine the

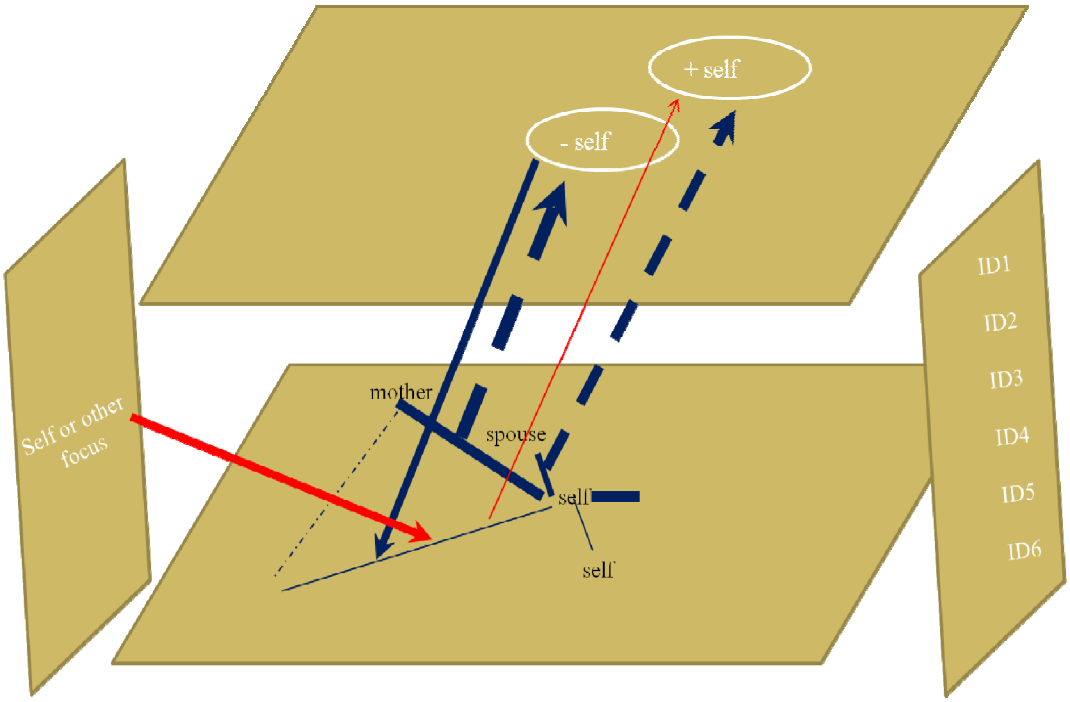

Figure 9. IWM change by motivational transformation without involvement of new identity.

differential changes between implicit and explicit security.

Finally, the IAT assesses cognition only, and the IWM involves not just cognitions, but associated motivations. It is an assumption that attachment related motivations would differ along with changes in cognition. An instrument assessing attachment motivation has not yet been developed, and is suggested. Such an instrument might assess the extent to which a person engages in defensive exclusion of attachment related matters, signifying attachment avoidance, as well as the extent to which a person engages in behaviors designed to keep an attachment figure near, or ingratiate oneself to an attachment figure, signifying attachment anxiety. Further, such a measure might

differentiate between the approach motives of the securely and anxiously attached: while those who are anxiously attached may be likely to help others, their actions are motivated by self interest, unlike the motives of those who are securely attached, who are able to genuinely care about the welfare of another in an I-Thou as opposed to an I-It relationship (Buber, 1958). For example, Erez et al (2008) demonstrated that self focus moderated anxiety and volunteering to help others. Similarly, the securely attached are attentive to improve the well being of their partners because they enjoy helping their partners in contrast to the anxiously attached who are attentive for egoistic reasons, including to create closeness, to make the partner dependent, or to feel in control (Feeney & Collins, 2003).

It is not known which parts of the intervention are contributing to the results. However, it is likely given results of Study 2 that the interactive nature of the class is essential, and given the findings of effect of condition on reflective function as well as prior research on reflective writing suggesting positive change occurs through reflective writing (Pennebaker et al, 1997, Study 2; Hubbs & Brand, 2005), it is likely that another key component to the study involves reflective writing exercises. Certainly it is likely that the novel reconceptualization of attachment along the dimension of focus may be responsible for the significant findings. While certainly experiments may be conducted isolating the effects of these factors (by for example, running the intervention with one control group that has no reflective writing exercises), it may be that the synergistic effects of several components of the intervention are contributing towards its effects.

It is noteworthy that Kilmann et al (1999) demonstrated a decrease in fearful attachment and increase in security among participants six months after participating in

an attachment intervention which included modeling and role play of effective relating as well as instruction in active listening, while the later attachment intervention (Kilmann et al, 2006) did not include these three components. However, these components were part of the relationship skills intervention in the later study, and participants in this condition demonstrated a significant decrease in interpersonal problems at the first posttest, as assessed by the Inventory of Interpersonal Problems (IIP) (Horowitz et al, 1988). Because interpersonal problems as assessed by the IIP have been demonstrated to significantly correlate with different attachment styles (Horowitz, Rosenberg, & Bartholomew, 1993; Haggerty, Hilsenroth, & Vala-Stewart, 2009) and dimensions (Chen & Mallinckrodt, 2002; Haggerty et al, 2009), the attenuation in interpersonal problems likely indicates an attenuation in attachment insecurity as well, although Kilmann et al (2006) do not detail which IIP subscales demonstrate change, but only report a significant decrease on the total score. Taken together with findings from the interventions conducted as part of this dissertation, it is suggested that these three components—role play, modeling, and active listening instruction – contribute towards the improvement in attachment and related constructs.

Despite the empirical and theoretical foundations upon which it rests, the intervention of Study 4 is only suggestive, and cannot be generalized for several reasons. First, sample sizes of all studies were small. Second, samples were not taken from the general population: in Study 2, participants were preselected from Rutgers-Newark undergraduates taking psychology classes based on attachment classification, while in Studies 3 and 4 participants were recruited from incoming Rutgers-Newark EOF freshmen. Third, there was a high rate of attrition in Studies 3 and 4, not only from post

test to follow up, but also several weeks into Study 4, and significant differences were demonstrated comparing those who completed this study and those who did not.

The extended attrition time which occurred for Study 4 not only caused dyads to be formed with suboptimal partners since many participants did not show up to the class during which the interpersonal closeness exercise was conducted, but also dyads were not consistent throughout the experiment, since several participants dropped out subsequent to participating in the interpersonal closeness generating exercise. Further, because of the collaborative nature of Study 4, both conditions were not conducted in a similar manner. For example, no quizzes or tests were given in the control condition. More fundamentally, those who dropped out of the study were significantly different than those who remained in the study, although separate analyses suggest the results of completers are generalizable to those who dropped out as well.

Individual Differences and Pathways towards Security. First, although Studies 3 and 4 had more participants than Study 2, more participants are needed to better elucidate how change may potentially differ for those who are high in attachment anxiety and those who are high in attachment avoidance. It must be recalled that typically those with preoccupied attachment make up a very small proportion of attachment styles. Without enough participants, outcomes for those high in attachment anxiety and those high in attachment avoidance cannot be compared.

Additionally, gender effects cannot be examined without a larger amount of participants, and the findings of this work overall suggest differences in gender as well as attachment. Specifically, for example, in Study 4 attachment anxiety moderated the effect

of gender on change in a latent variable represented by empathic concern, perspective taking, and personal distress, with those high in attachment anxiety demonstrating a significant effect of gender on significant change in this latent variable, with those in the experimental condition improving significantly relative to those in the control condition. It could greatly advance our understanding of how attachment changes and how to better design interventions if perhaps several interventions could be conducted across different cohorts to potentially aggregate data into a larger data set. Further, it might be fruitful to conduct the intervention with participants who do not all know each other, as occurred with the EOF sample of Studies 3 and 4: a sample of people who are not already familiar with each other may be more likely to engage in the role play, and also be more open to one another than people who already have preconceived notions about each other.

Further, studying the effect of change in focus on attachment change in children may be a viable option, since prior research from the cognitive developmental literature provides evidence that children's minds are wired like those of adults with regards to preferring assimilation over accommodation (Chi, Hutchinson & Robin,1989; Mandler, 2003)as well as differentiation of objects within a superordinate category (Mandler, 2003) anticipating the process of subgrouping (Richards and Hewstone, 2001).However, unlike adults, children are not as resistant to change, with the attachment of children being more malleable than that of adults (Bowlby, 1973). Perhaps an intervention could be designed for preschoolers, teaching them to attend to the feelings of others as well as the effects of self focused vs. other focused behaviors on responses from playmates, assessing attachment before and after the intervention. Granted, children of this age have not yet attained the age of metacognitive monitoring; however, by scaffolding, role play,

and observational learning (Bandura, 1977), children would be likely to change their focus and perhaps change in their attachment may be effected. Using Rovee-Collier's (1995) concept of time windows, repeated sessions may be conducted, reinforcing the memory related to attachment security, strengthening the availability and accessibility of a more secure IWM. This study could be conducted with both low and high risk children, comparing the long term effects of the intervention, and exploring whether it could lead to greater long term security despite inadequate caretaking, or whether caretaking environment mediates or moderates the effect of this type of intervention.

Additionally, further research should take a more idiographic approach as suggested by these findings as well prior research (Reich et al, 2000; Pelham, 1993). Specifically, not only did attachment anxiety and avoidance moderate the effect of condition on several outcome variables as discussed above, but also considering the findings of Study 2, compared to those in the Attachment Group, while every single participant in the Reading Group decreased in attachment avoidance, the increase among participants in the Prejudice Group represented an overall increase rather than increase among each participant. It would be interesting to further explore what individual difference variable(s) might make some increase in avoidance in response to engaging in prejudice-reducing exercises while others decrease. Such individual difference(s) might moderate prejudice reduction, similar to need for cognition, another individual difference demonstrated to moderate decrease in prejudice among college students in response to a college level race and gender course (Mallott & Hogan,2003).

Indeed, examining and changing one's own maladaptive behavior, which can be seen to reflect negatively on oneself, would necessitate motivation to think; most likely,

one who does not enjoy thinking would likely not demonstrate as much change, for they would not be aware of the need for, or possibility of, change, or ability to monitor and analyze their behavior.[5] Those with high need for cognition were demonstrated to be more conscientious as well as more open to new experiences than those with low scores (Sadowski & Cogburn, 1997), qualities which would seem helpful in achieving change. Notably, one study demonstrated that openness to experience was associated with secure, and inversely associated with insecure, attachment (Mickelson et al, 1997).

SES and Attachment. In comparison to the attachment breakdown of Rutgers undergraduates (n= 694) in a 2008 online prescreening, it becomes evident that the difference between the attachment breakdown of the EOF sample in Study 3 and that found in the Lopez & Gormley (2002) study may not be only due to the sample being from EOF per se, but also to the fact that the sample in this study are Rutgers undergraduates: the 2008 online prescreening demonstrated that, by the RQ forced choice, 39.7% were secure, 15.9% were preoccupied, 19.3% were dismissive, and 25.1% were fearful compared to the attachment breakdown of the sample in Study 3 (40.3% secure; 4.8% preoccupied; 22.6% dismissive, and 32.3% fearful) and that of students in another university (46% secure, 15% preoccupied, 19% dismissive, and 20% fearful) (Lopez & Gormley, 2002). More research is needed to determine if the Rutgers undergraduate population differs from the typical undergraduate population with regards to socioeconomic status, but it is plausible, since Rutgers is a less costly state school, not

[5] Of course, it is not assumed that need for cognition is the only factor moderating change, but these other factors were not considered. For example, capacity in executive function including self-control might be one such factor (Baumeister, 2005), which incidentally, is also affected by one's attachment (see Schore, 2000 for a discussion).

an Ivy League school with an exorbitant price tag, unaffordable by those from a lower SES. It would be interesting to compare the SES and attachment breakdowns of various universities to confirm findings correlating attachment avoidance with lower socioeconomic status (van IJzendoorn & Bakermans-Kranenburg, 1996; 2010; Schmitt, 2008).

Conclusion

Overall, this work suggests that explicit and implicit attachment and related constructs such as reflective function are amenable to change through a psychosocial intervention which uses attachment as pedagogy and reconceptualizes attachment along the dimension of focus: those who are insecurely attached, whether involving attachment anxiety or avoidance are self focused, whereas those who are securely attached are not, but are rather other focused. This work corroborates prior research and theory, and supports the proposed new three dimensional theoretical model of the attachment network which explains how change in attachment might occur by modeling not only different attachments associated with different relationships, but also different underlying IWMs.

Although the findings are promising and provocative, inconsistencies and unanswered questions urge further research into the viability of a preventive intervention that may be applied on a wide scale, potentially as a class for incoming freshmen, to alter likely unhappiness based on insecure attachments and ignorance. This research would inform educational policy and may help increase understanding about how to decrease prejudice and inter-class and interracial conflict. The applications of such research could

have far reaching consequences for society as a whole, given the intergenerational transmission of attachment (Fonagy et al, 1991).

It is hoped that the proposed three dimensional attachment network and studies supporting it described herein might shed some light on the dynamics and mechanism of IWM change, encourage discussion and debate, and inspire continued applied and theoretical research to further our understanding and improve our collective lot for generations to come.

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Appendix A
Demographic Questions (Study 1 AND 2)

Thank you for participating in this attachment pilot test. Please choose 4 numbers which you will remember, and write them as your "identifying number." They may be digits of your social security number, the birthday of someone important to you, or any four numbers that has meaning to you: **identifying number: ____ ____ ____ ____**

Next week, you will need to recognize the number you had chosen today. When answering the questions below, please be as honest and accurate as you can, because the information you provide today will be used in the second part of this test next week. **This information will in no way be identifiable to you, nor will your instructor see it.**

1. What color is your hair? _____

2. What color are your eyes? _____

3. What is your religion? _____

4. Do you consider yourself religious? _____

5. What is your ethnicity? _____

6. Do you identify yourself as a vegetarian? _____

7. Are you male or female? _____

8. Do you identify yourself as a sports fan? _____

9. If so, what sports team? _____

10. Are you married? _____

11. Do you smoke? _____

Appendix B:AIAT
(Study 1, 2, 3, 4)

Flowers Good		Insects Bad
	Horrible	
	Daisy	
	Terrible	
	Mosquito	
	Excellent	
	Tulip	
	Nasty	
	Daffodil	
	Joyful	
	Bugs	
	Wonderful	
	Roach	

Flowers Good		Insects Bad
	Nasty	
	tulip	
	Excellent	
	roach	
	Terrible	
	daisy	
	Horrible	
	Daffodil	
	Wonderful	
	Bugs	
	joyful	
	Mosquito	

Flowers Bad		Insects Good
	Horrible	
	Daisy	
	Terrible	
	Mosquito	
	Excellent	
	Tulip	
	Nasty	
	Daffodil	
	Joyful	
	Bugs	
	Wonderful	
	Roach	

Flowers Bad		Insects Good
	Nasty	
	tulip	
	Excellent	
	roach	
	Terrible	
	daisy	
	Horrible	
	Daffodil	
	Wonderful	
	Bugs	
	joyful	
	Mosquito	

Self Accepted		Other Rejected
	Loved	
	Unworthy	
	Respected	
	Liked	
	Unloved	
	Abandoned	

Self Accepted		Other Rejected
	Unworthy	
	Respected	
	Unloved	
	Liked	
	Loved	
	Abandoned	

Self Rejected		Other Accepted
	Loved	
	Unworthy	
	Respected	
	Liked	
	Unloved	
	abandoned	

Self Rejected		Other Accepted
	Unworthy	
	Respected	
	Unloved	
	Liked	
	Loved	
	abandoned	

Appendix C
Relationship Questionnaire (RQ)
Bartholomew & Horowitz (1991)
(Study 1, 2, 3)

Following are four general relationship styles that people often report. Place a checkmark next to the letter corresponding to the style that best describes you or is closest to the way you are.

____ A. It is easy for me to become emotionally close to others. I am comfortable depending on them and having them depend on me. I don't worry about being alone or having others not accept me.

____ B. I am uncomfortable getting close to others. I want emotionally close relationships, but I find it difficult to trust others completely, or to depend on them. I worry that I will be hurt if I allow myself to become too close to others.

____ C. I want to be completely emotionally intimate with others, but I often find that others are reluctant to get as close as I would like. I am uncomfortable being without close relationships, but I sometimes worry that others don't value me as much as I value them.

____ D. I am comfortable without close emotional relationships. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on others or have others depend on me.

Now please rate each of the relationship styles above to indicate how well or poorly each description corresponds to your general relationship style. For each style, circle the number that most closely describes your feelings.

Style A: It is easy for me to become emotionally close to others. I am comfortable depending on them and having them depend on me. I don't worry about being alone or having others not accept me.

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

Style B: I am uncomfortable getting close to others. I want emotionally close relationships, but I find it difficult to trust others completely, or to depend on them. I worry that I will be hurt if I allow myself to become too close to others.

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

Style C: I want to be completely emotionally intimate with others, but I often find that others are reluctant to get as close as I would like. I am uncomfortable being without close relationships, but I sometimes worry that others don't value me as much as I value them.

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

Style D: I am comfortable without close emotional relationships. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on others or have others depend on me.

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

Appendix D: Half of (ECR-r)(Fraley, Waller, & Brennan, 2000)
(Study 1, 2, 3)

The 18 items below concern how you generally feel in emotionally close relationships. Respond to each statement by indicating how much you disagree or agree with it by placing a number from 1 to 7 in front of the item.

1----------2----------3----------4----------5----------6----------7

NOT TRUE SOMEWHAT TRUE VERY TRUE

_____1. It's easy for me to be affectionate with my partner.

_____2. My romantic partner makes me doubt myself.

_____3. I am very comfortable being close to romantic partners.

_____4. I rarely worry about my partner leaving me.

_____5. It's not difficult for me to get close to my partner.

_____6. I'm afraid that once a romantic partner gets to know me, he or she won't like who I really am.

_____7. I worry a lot about my relationships.

_____8. I feel comfortable sharing my private thoughts and feelings with my partner.

_____9. I often worry that my partner will not want to stay with me.

_____10. I find it easy to depend on romantic partners.

_____11. I tell my partner just about everything.

_____12. I find it difficult to allow myself to depend on romantic partners.

_____13. I often worry that my partner doesn't really love me.

_____14. I worry that I won't measure up to other people.

_____15. I'm afraid that I will lose my partner's love.

_____16. I don't feel comfortable opening up to romantic partners.

_____17. Sometimes romantic partners change their feelings about me for no apparent reason.

_____18. I am nervous when partners get too close to me.

Appendix E: AIAT Instructions (Study 1, 2, 3, 4)

I am going to ask you to participate in a brief task that involves classifying words related to insects and flowers. We are interested in how people categorize words. For this task, when I say go, you will have 20 seconds to classify as many of the items you can running down the page into the categories they belong to at the top of the page.

Work as quickly and accurately as possible. Try to avoid making the mistake of misclassifying a word, but if you do, continue without stopping. Do not skip any items, but work your way down the column of words, indicating with a check in which column the word in the center column belongs.

For this first page you will notice that there are 2 categories on each side. For every item that is a flower (daffodil, daisy, or tulip) or a word that means 'good' (excellent, joyful, or wonderful) you will put a check in the left side. In contrast, for every item that is an insect (bugs, mosquito, or roach) or a word that means 'bad' (nasty, terrible, or horrible), you will put a check in the right side. Remember that there are 4 categories so you are not deciding if you think flowers and insects are good or bad, you are just putting flowers into the Flowers group, insects into the Insect group, words that mean good in the Good group and words that mean bad in the Bad group. As you can see here, horrible goes in the Bad group, which is in the right column, and daisy goes in the Flowers group, which is in the left column. Terrible goes in the Bad group and mosquito goes in the Insects group, which are both in the right column. The words are in random order, so you will need to look at each one and then check the appropriate column. *(pause)* Any questions?

So when I say go classify the items as fast as you can. Try not to make mistakes though - if you do make a mistake, don't stop to correct an error, just keep going. It is important not to skip any items - you have to go in order, and just make a quick check in the appropriate column.

I will give you twenty seconds to complete as many items as you can and I'll let you know when to start and stop. Begin at the top of the list and work your way down; if you finish the first table begin the second table. Very few people complete the first table, though – this is meant to be difficult so please don't feel frustrated!

(pause) Any questions?

OK, please GO*...conduct task for 20 seconds…*
Please turn the page.
OK, now the instructions are the same except 2 of the categories have switched sides. Notice that now insects and good words go to the right side and flower and bad words go to the left. So here, horrible goes in the Bad group in the left column, and daisy goes in the Flowers group in the left column. Terrible goes in the Bad group in the left column and mosquito goes in the Insects group in the right column. Same instructions as on the

previous page - go as fast as you can and make as few mistakes as possible, and don't skip any items. *(pause)* Any questions?

OK, please GO*...conduct task for 20 seconds…*
Now that you understand how this task works, I would like to run you through the same procedures but have you complete the task that looks at word associations with self and other. For every word that definitely describes yourself, put a check in the Self group which is in the left column, and for every word that does *not* describe yourself, put a check in the Other group which is in the right column.
The instructions are the same as we did with the flower/insect task, but now we have new categories so take a minute to get used to what words go where by looking at the top of your page. For each page, remind yourself of which items belong to which categories by looking at the top. (*pause)* Any questions?
Conduct task for 20 seconds...

Thank you. We're going to do one more pairing. Please turn the page and you'll see that you now have the categories switched around. Again, take a moment to get used to the new classification before the timing starts.

conduct task for 20 seconds…

Appendix F: Scenarios-Anxious Attachment (Studies 2, 3, 4)

Choose one scenario to act with your partner. Then switch roles. Notice how it feels to behave anxiously attached and how it feels to interact with someone who is anxiously attached.

1.

It's Tuesday night before finals week and Ruben has been studying hard. He was too busy with his girlfriend Maria all semester. If he doesn't do well on finals his grade point average will be severely hurt and he will be asked to quit the football team. He had told Maria that he'd call her to go out this weekend but that he needed to study this week for finals.

Maria has called Ruben seven times since Sunday afternoon when they last saw each other. It's now Tuesday night and he hasn't returned her calls! Maria wonders if Ruben is mad at her. Did she hurt his feelings? Maybe he wants to break up with her. She just *knew* this wouldn't last. They're supposed to be going out this weekend and they need to talk to make plans! She wants to know where he will be taking her, and when. It's really important because she needs to know if she should do her colored laundry or white laundry; of *course* she can't wear white if they're going, out at *night*…And if they're going someplace really nice at night, she needs to pick up her little black dress from the dry cleaners, and she has to plan her day, because the cleaners closes early...

The phone rings. Ruben picks it up, expecting a call from a friend he's studying with for a final tomorrow. It's Maria.

2.

After working for many years together at the local Target store, Ivette and Tonia have become close, especially since Ivette showed Tonia the ropes and really pitched in and helped her keep the job when things were tough at home. Though they now go to different universities and no longer work at the same Target, they speak frequently on the phone.

One night, Tonia calls Ivette to chat, and before she can say anything about her band practice or her new boyfriend, Ivette blurts out that she is *so glad* Tonia called, because she really needs to talk to her. She can't believe what just happened! Tonia wonders what could it be? (She's used to there always being a crisis with Ivette; she's always so anxious about everything, especially her friendships.)

Ivette gushes that she's been excluded (again) from her friends at school. When she went to class the day after the last exam to sit where she *usually* sits, with Tiffany and Amanda, the available seat next to Amanda was occupied with Amanda's backpack. And Amanda and Tiffany were talking to each other and *totally ignored* her! What's *worse* is

they didn't even move the backpack! That means they didn't want her to sit with them! They're *mad* at her, Ivette wailed.

Tonia, trying to be patient and understanding, says that it must feel awful to be ignored, and then asks how Ivette did on the exam. Ivette is caught off guard: oh, she aced it. Tonia replies that's terrific!

Yes, but Tiffany and Amanda practically flunked, Ivette continued. She double-checked after class on the posting outside the classroom, just to be sure. So they're probably *mad* at her because she did well! That isn't *fair;* why should they *ignore* her, just because she did well? What did she do to deserve the silent treatment? She even studied with them! Maybe they're mad at her because she didn't help them enough! *That's* it. Ivette is crushed! She can't believe they're mad at her. She suspects they're talking about her, too. She tells Tonia it's not *fair*, because she stayed up studying with them and now they're not even talking to her!

Tonia says it must be rough to be ignored by your friends, but at least you did well on the exam! It feels good when you succeed at something; Tonia offers that her band practice is really improving. Ivette agrees it's nice to do well, but you need friends! What is a successful exam without *friends* to share it with?

Tonia starts to wonder what kind of a friend Ivette is. It's obvious that Ivette is so wrapped up in her own upset about being ignored by Tiffany and Amanda that she can't even hear Tonia. Tonia becomes irritated; despite Tonia listening to Ivette and advising her to concentrate on her work and not on what she thinks her friends are thinking about her, Ivette continues to complain about her social life. Tonia needs to concentrate on her own work; she tells Ivette she has to go study for a midterm next week in her own psych class, but Ivette doesn't hear Tonia and has a hard time hanging up. Every time Tonia tries to hang up, Ivette keeps her on the phone by asking her what she should do about Tiffany and Amanda. Finally, Tonia has to practically hang up.

3.

Roberto and Justin are eating pizza one Sunday, talking about what they're doing this summer. Before Roberto can say anything, Justin blurts out that he isn't sure *what* he's doing at this point. He had been invited by his mother to visit her in Florida where she now lives with her new husband, and he's never yet been to Florida, so he was excited to go. He'd already started planning his trip. But then last night, she called to tell him that it wouldn't work out after all; they're going to her stepson's med school graduation in Philly! Justin, angry and upset with his mother, vents at Roberto. She *always* does this, letting him down at the *last minute,* after he got his *hopes up*. The *same thing* happened when he was seven and she promised to take him to Sea World! They never went! Why doesn't she mean what she says? Why does she *habitually* let him down like this? And it's so *typical* of her to put *everyone else* before him; of *course* he's not as important to her as her stepson, Mark. Maybe she really loves Mark more than she loves him! His mother doesn't love him, Justin rants, because he's just not perfect enough for her. She

didn't even go to his high school graduation! And she's not really interested in what he has to say; she doesn't care how much she disappointed him! Why, after she cancelled their summer plans, she said she had to go to because she didn't want to be late to her tennis game! He doesn't even rank up there with tennis!

Roberto has already heard—to many times to count— all about how inconsiderate Justin's mother is and how hurt Justin feels by her. He's tried to tell Justin to forget having a relationship with his mother. Don't get your hopes up; you just get disappointed. Why do you even try? You *know* how she operates. Just forget it. Roberto finds himself getting irritated with Justin who can't seem to see his mother for who she is and accept the situation. Roberto tries inviting Justin to join him and a bunch of the guys who are renting a condo at the beach, but Justin is so upset that he can't really hear Roberto. He insists that he wants to go to *Florida* to visit his *mother.* Roberto decides that he'll wait until Justin cools down before asking him again; he's used to Justin getting so upset when his mother lets him down.

Appendix G: Scenarios – Secure Attachment (Studies 2, 3, 4)

Now, act out the same scenario with your partner that you'd chosen before, then switch roles. Notice how different it feels this time to behave securely attached and to interact with someone who is securely attached.

1.

It's Tuesday afternoon before finals week and Ruben has been studying hard. He was too busy with his girlfriend Maria all semester. If he doesn't do well on finals, his grade point average will be severely hurt and he will be asked to quit the football team. He calls Maria to tell her that he'd call her to this weekend to get together, but that he needed to study this week for finals and couldn't talk until then.

Maria is reading in her apartment on Tuesday afternoon when Ruben calls her to tell her he needs to study and they couldn't talk until this weekend, and please not to call him until he calls her this weekend. Maria responds that she understands this is a really rough week, and reassures Ruben she knows how important it is to him to keep his grade point average up. She tells Ruben no problem; though she'll miss him, she's glad he called and suggested they take a break from each other this week until finals are over. She knows how important it is that he does well on his finals. She doesn't want his grade point average to fall so he has to quit the team! Maria tells Ruben she doesn't want him to lose something he loves so much. She knows it would really crush him.

Ruben expresses his relief that Maria is not upset and doesn't feel neglected or hurt that he can't speak with her for the rest of the week, and that she's so understanding. He's dated other women who were much more clingy, and they were difficult to be in relationship with because he never had any time to do what he needed to do. He really appreciates Maria's understanding.

Maria reassures Ruben that she's had a great time with him this semester – he's really fun to be with and interesting to talk with. In fact, he is one of the greatest guys she has ever known. But now she respects him even more for being honest about his needs and taking care of himself. She agrees it's good that he spend this week studying; she needs to study for finals, too! She tells Ruben that they'll have something to look forward to – spending time with each other after finals week is over! She wishes him luck on his finals and offers to make dinner for them Saturday night after finals – his favorite pasta. Ruben accepts gratefully, and they agree to talk Friday night to plan their weekend. She hangs up, thinking how lucky she is to have such a hard-working well-rounded boyfriend who balances sports and school, and who cares so much about her. She really hopes he does well on his final exams.

2.

After working for many years together at the local Target store, Ivette and Tonia have become close, especially since Ivette showed Tonia the ropes and really pitched in and

helped her keep the job when things were tough at home. Though they now go to different universities and no longer work at the same Target, the two friends speak frequently on the phone.

One night, Tonia calls Ivette to chat. Ivette is happy to hear from her friend and asks her what's going on: how's jazz band practice and is she still dating her new boyfriend. Tonia then asks Ivette how she did on the latest psych exam, and Ivette excitedly replies that she aced the test! Tonia's glad for Ivette and curious how Ivette's friends Tiffany and Amanda did.

Ivette remarks that since grades are posted outside the classroom after an exam, she could see that Tiffany and Amanda practically flunked. So they didn't need to say anything to her. Tonia remarks they must have felt terribly; what did they say when she saw them in class?

Ivette explained that they said nothing to her: when she went into the classroom to sit where she usually sits with Tiffany and Amanda, they were so busy talking to each other, they didn't even see her, and the seat next to Amanda where Ivette usually sits was occupied with Amanda's stuff. So Ivette sat with some other friends in class.

Tonia expresses concern for Ivette's feelings; it must be really rough to be treated like that by your friends. Tonia suggests that they're jealous of Ivette for doing so well; maybe they're mad at her and ignored her. Ivette reassures Tonia that she doesn't take it personally; they were probably too busy talking to notice her; they're probably anxious about their grade point average, since that exam was a large part of the course grade.

Tonia wants to know if Ivette has spoken to her friends since then, and Ivette responds that, come to think of it, they haven't! She'd been so busy with play practice and studying…but she hadn't yet connected with these friends, though she's been meaning to…Ivette says she'll ask them if they want to study together for the final; she'd be glad to try to help them bring up their grades. The friends talk some more before Ivette says she has to hang up because her date is at the door; they're going out with friends tonight.

3.

Roberto and Justin are eating pizza one Sunday, talking about what they're doing this summer. Roberto says he's getting together with a few of the guys to rent a condo at the beach, and tells Justin he could join them, but he remembers Justin was planning to visit his mom and step-dad in Florida. He asks Justin if he's going to go to Sea World while he's there. Justin replies that his mom called last night to cancel the trip; it wouldn't work out after all because they're going to her stepson's med school graduation in Philly.

Roberto feels terrible for Justin. It's really awful to have a trip cancelled like that. Didn't they know about the graduation before they invited him to join them in Florida?

Justin laughs, realizing that Roberto doesn't know his mom so well, so he probably didn't realize that when he said he's going to Florida, the plans were subject to change. Justin explains he's used to his mom doing stuff like this, and now that he doesn't expect anything from her, he's not disappointed. He knows by now how his mom operates, he explains to his new friend Roberto: since he was a kid, she's been breaking her promises to him. He's used to it. That's the way she is: she's really self-focused. As a matter of fact, Justin explains to Roberto, she really *hates* going to graduations; she never graduated from college, and so it's probably hard for her when other people graduate; she didn't even go to Justin's high school graduation. Roberto is shocked.

She's probably just going to make a good impression on her new family, Justin laughs. It's good that she's going, though, because his stepbrother really needs the attention. His stepbrother would really be crushed if his stepfather and mom didn't go to his stepbrother's graduation from med school. Medicine is that guy's life, his identity. What's really funny, Justin continues, is that after his mom cancelled their plans, she said she had to run to a tennis game and hung up without waiting to hear anything Justin had to say.

Roberto can't believe Justin's mother is too self-involved to have consideration for Justin's feelings!

Justin replies that she's probably just ashamed of hurting his feelings and she doesn't really know how to be in a relationship with him. Maybe she feels guilty: guilty for canceling the trip, for getting divorced, for all the things she's done that she's not proud of. Justin imagines his mother's disorganization and inability to really connect may have had something to do with his parents' divorce, though he adds that he knows his mother loves him in her own way. So actually, Justin finishes, he's available this summer and would love to join Roberto and the others.

Appendix H: *Are You my Mother* Handout (Study 2)

Missing feeling secure → the baby bird's thinking (he is obsessed and consumed with finding his mother),
→feeling (he is determined, then frantic)
→and acting (he runs after anyone he meets, asking if they are his mother).

Ambivalently attached are motivated to make others into their attachment figures, because they don't feel secure. Get secure feeling from AF when you're little, from romantic relationships when older, etc. The securely attached feel secure, so they do not need to (sometimes frantically) reach out to others to feel secure.

How might the baby bird feel and behave if he knew his mother would return to him?

How might the baby bird's behavior be ineffective and even unsafe?
Puts himself into potential danger, approaching much larger animals
Assumes others are well intentioned, his mother
Snort picks him up and takes him away

Through no fault of their own, ambivalently attached (Ambivalent) people at times can tend to feel insecure and may think, feel and act in ways similar to that of the baby bird. These modes of thinking, feeling, and acting in the world are natural and expected given Ambivalent people's experiences with their attachment figure(s) (AF), and the expectations to which these experiences led.

Possible endings to the story

	→ Security	→ Insecurity
reunited; mom returns	mom available, sensitive, responsive; happily ever after	mom not totally present; maybe physically available, maybe not. NOT sensitive/responsive
find substitute	sensitive/responsive	insecure thoughts/feelings/behavior →feared abandonment. (people behave like baby bird, running after others, desperate and clingy.)
mother never returns b/c unable/unwilling to change (mental faculties, mental illness, unaware, proud), abandonment, death	find sensitive/responsive substitute; other solutions? acceptance? G0d?	no substitute; inadequate substitute; obsess over mother; try to change mother

Where we go from here:
helpful to know the *why* for our feeling/thinking/acting

the lack of consistent sensitive and responsive availability when we needed it eliminates blaming: puts you in victim-role, increases thoughts and feelings of helplessness and desperation → behavior likely to lead to abandonment.
blaming does not improve/help yourself or others.
blaming self: for feeling somehow deficient
blaming others: for their inadequacy

As small children, the behavior patterns of ambivalently attached were adaptive; such Ambivalent behavior kept AF close when Ambivalent was dependent child.
Such success shows Ambivalents are capable of dealing with tough situations and are survivors.
But Ambivalent behavior now: don't need; doesn't work, hurts relationships

CHANGE IS POSSIBLE

relationship with another (good friend, good therapy, good marriage - all long-term, stable supportive relationships.)

Other possibilities may include
accepting, loving, and always available god or a Higher Power (good for health)
talking to yourself *as if* you're parenting yourself. May be done in writing,
ie keeping a journal (good for health.)
imaginary friend/good parent

How your expectations affect your behavior:

self characteristics	You think: I will be heard/respected	You think: I won't be heard/respected
other characteristics		

You can control your behavior; can't control others
Your behavior:
→ responses from others
→ messages to yourself that reinforce or change self-opinion

You CAN control how you respond to/interact with others and whether or not you choose to deal with them/what expectations you have/don't have of them

How might secure versus insecure attachment behavior → different responses from others?
How might that behavior of others, in turn, affect you?

your behavior ⟷ behavior of other

Suggestions towards increased awareness:

Write 15 minutes before going to sleep about your ideal self.
Write how a situation could have been handled more securely.
Write a letter to yourself of acceptance and self-compassion.

Appendix I: *What about Bob?* Handout (Study 2)

What About Bob:
a comic and extreme example of ambivalently attached behavior.

Bob Wiley goes to see his nth psychiatrist, Dr. Leo Marvin, who labels him a "multiphobic personality." At the first session, Leo gives Bob his newly released book, "Baby Steps," and tells him he's going on vacation.

<u>Bob is desperately motivated to keep contact with Leo and doesn't consider Leo's feelings.</u>

scene Bob panics: what if I *need* you, what if I need to talk while you're on vacation? It's hard for him to leave the office; he keeps looking back at Leo.

scene Bob, desperate for security, calls the exchange many times to make contact with Leo and feel secure. Leo is annoyed to be disturbed so many times and in such underhanded ways while on vacation.

1. Bob asks exchange for Leo's number, then to talk with Leo, although during their visit Leo had told him someone else is covering for him.
2. Bob hires a prostitute to pretend to be Leo's sister urgently calling just so Bob can get Leo on the phone. "Please don't be angry," he tells Leo; he knows his behavior is inappropriate.
3. Bob goes to the exchange pretending to be a detective reporting Bob's suicide, and gets Leo's mailing address.

<u>Difficulty acting independently, getting bad attention by being loud, invasive, sick.</u>

scene Getting on the bus, Bob is indecisive. He needs pills, a security blanket. Gets the bus-driver's attention – she is annoyed/impatient with him.

scene On the bus, Bob introduces himself to a passenger and asks to be knocked out. Passenger moves away.
He has a "false alarm" in a barf bag; people avoid him – everyone is in the front of the bus, near the driver, away from him, and they cheer when he gets off the bus.

scene "I need, I need, I need. Gimme, gimme, gimme," Bob begs. He gets what he wants (short term) but not long-term: Leo says he'll call him, and at the same time, tells him to buy a ticket home. Bob isn't maintaining the relationship; Leo doesn't *want* to be with him, he just says he'll make contact so Bob will go away.

<u>Violates boundaries, intrusive</u>

scene Bob goes to Leo's house after Leo specified he'd *call* Bob *at the diner*.

Bob treats Leo and interacts with others the way he was probably treated: intrusively. Bob can't empathize with Leo, can't see he's intruding on Leo's space during his vacation, because Bob didn't get empathy when he needed it; he doesn't know how. Usually a person treats others the way a person was treated; it's what a person learned and is used to. A person needs to *not* treat others the way he or she *doesn't* want to be treated.

scene Bob is sailing tied to the boat. Leo drops his son into the water too soon. When you're intruded upon, you can't concentrate, and lose focus. (Attentional deficit)

scene Bob tells Leo's daughter in the car what he tells himself when he meets someone who doesn't seem to like him: "This one's *temporarily* out of order. Don't hang up, *just keep trying*."

Why is it difficult for Bob to change?

1. Intermittent positive reinforcement (Leo sometimes *is* available, ie in session) –> hyper-vigilant, hyper-reaching out: maybe *this* time he'll be available again! Bob wants Leo to always be available to him.
2. Bob can't see that he's controlling; he sees himself as weak and needy. Relationship with Gil the fish: Controlling. Fish is there for him, a captive pet that can't make demands. Paradox: Bob is needy and insecure yet controlling.
3. He does get what he wants to an extent: attention. But is it good attention? Does it help him? Do Leo and the people on the bus really *want* to be with him?
4. He is very anxious; doesn't have security within himself and reaching out to Leo alleviates his insecurity. Leo is like his drug.

What are some things Bob (and fellow ambivalents) can do to change?

1. "Pass the salt." Focus on the needs of others, be empathetic. (Leo works hard; needs a vacation.)
2. Listen when people talk, respect their wishes. (Don't call Leo.)
3. Don't intrude. ie: on the bus the fellow passenger doesn't want to "knock Bob out." If Bob is anxious (which he most often is) then he needs to deal with his own anxiety. How can he do this?
4. See other people as having their *own* problems. Other people aren't demigods.
5. Looking at attachment from a continuum, bend far to the other side – avoidance – in order to find the golden mean. Some exercises:
    - fill out the ECR-R as an avoidant: http://www.psych.uiuc.edu/~rcfraley/measures/ecrritems.htm
    - When need to reach out to someone, consider them first.
    - Make a verbal fast: no talking for a day. See how it feels to be quiet and silent.
    - Act and speak as if you are secure, or how a secure person would act and speak.

- **A person who does things that increase their self-respect builds up their self. This leads to self-esteem and security. What could Bob do?**
- What else can *you* think of for Bob and fellow ambivalents?

Several important things to keep in mind:

- No two ambivalents are alike, just like no two people are alike.
- There is no "pure" ambivalent, just like there is no "pure" secure or "pure" avoidant. Every person is made up of different measures of the types. We *all* have had experiences being, to one degree or another, secure, ambivalent, or avoidant. So becoming more secure may simply be remembering how it felt to behave securely and then "fake it until you make it."
- There can be said to be a continuum of ambivalence, from slightly ambivalent to extremely ambivalent. Similar to a person trying to lose weight, there may be a difference in how easy it is to lose weight for a person who has much more weight to lose than a person who only has a little bit to lose.

Appendix J: *Antwone Fisher* Handout (Study 2)

Antwone Fisher is in the navy and has been referred to a psychiatrist for his anger problem; he's gotten into several fights while in the navy. Antwone feels badly about himself, his body, and intimacy because of the way he was treated in a foster home where he was sexually abused. He needed to prove/assert himself. (Person who doesn't feel they have a self needs to prove/assert it. What are some ways this is done?) Antwone does in both negative and positive ways:

negative ways Antwone proves/asserts self: Antwone gets angry. Reacts to defend himself. Doesn't have secure enough self inside, needs to prove to others who he is/isn't.

1. scene (perceived) racial slur -> beats up white guy. can't stop even when others break up the fight. (he *is* black)
2. scene another guy suggests publicly that he's gay when he doesn't want to be involved with a woman at a party -> beats up the guy. (he *is not* homosexual)

positive ways Antwone proves/asserts self:

1. scene learns another language - Japanese
2. joined navy; belong to positive productive organization – gives meaning/identity.
3. scene finds his family; his roots. accepts some/rejects others
4. scene has morals. says to his mother who gave him up after he finds her: I'm a good person, I don't drink, smoke, haven't fathered any children, learning a third language, traveled the world.

Shows relationship insecurity:

scene Antwone "stalks" the girl he likes because he's too shy to speak with her. Doesn't know how to approach her.

scene Antwone asks psychiatrist for help with how to talk to girl, what to do on date. Psychiatrist encourages him.

Towards security:

scene At the lighthouse: girlfriend models secure behavior, becomes secure base for him.

1. "If there's anything I can do to help, I'm here." *offers to be there: secure base*
2. She responds: "I know what you mean" when he says "I come here to be alone." *listening, empathizing*
3. When he says he was afraid of talking to her, she responds, "Would you believe I was afraid of talking to you?" *self-disclosing*

4. When he tells her, ashamed, that he sees a psychiatrist, she responds that her dad was a Vietnam vet and saw a psychiatrist; seeing a psychiatrist is no big deal. *validating*
5. He leans on her, is calmed, feels accepted, understood, felt security, fundamentally okay.

Metaphor for security: leaning on another. We all get security from others – people are interdependent. People need each other and it is normal and healthy. Ambivalents tend to lean too heavily on others for identity & security. Because they don't have security, they can't give to others, either. A person must *have* to *give*. A person can get security from relationships with others, but the eventual goal to work towards: giving security to one*self,* feeling you're fundamentally okay, accepting yourself. A person then doesn't need to posture or fight/prove themselves.

A person needs to accept and love themselves first, before a person can truly love others and accept their love. If a person is too needy and without a sense of self, they can't give to another**. Can see how ambivalence can perpetuate: parents have a low self identity –> kids who have a low self-identity. Sometimes parents are unavailable (as here) or they use their kids for security. Either way, insecure parents can make insecure children.**

Appendix K: Prejudice Scenarios (Study 2)

Prejudice Scenarios

1.

The Shopper: You went to the mall straight after your late morning class, and you only have an hour to find the perfect gift for your best friend's surprise birthday party tonight before you have to get to work. You're feeling kind of edgy because you haven't eaten yet. You skipped lunch to shop because this is the only time you have to get her the gift. You're really nervous because you don't want to be late to your job; you know those white people probably *already* think you're lazy and slacking just because you're not white. They judge you even before you do anything wrong. It seems so unfair, you think to yourself as you rush for the accessories section at Macy's. (You know you want to buy something that is light and easy to carry – you don't want to lug anything around the rest of the day. Your books are heavy enough!) Ahh…this is really gorgeous, you think as you finger some costume jewelry. It's really expensive, you hesitate, but your friend is worth it and she'll *love* it! But which one? you agonize. Before you know it, a white security guard appears before you and he does not look happy!

The White Security Guard: This is your first week on the job and you want to prove yourself. Only yesterday you caught a teenager attempting to steal some costume jewelry, and your boss was really pleased with your good work. Wait – here's another one going for the expensive costume jewelry again! You can't believe these people – they're just incredible! This one looks really nervous and rushed, and carrying a big heavy bag, too! Who *knows* what's already in there! Maybe you've missed something and this one could walk out of the store with a bag full of merchandise! Then you'd really get in trouble when they do inventory and notice some things weren't paid for…You rush up to the shopper.

2.

Student 1: You were awarded a minority partial scholarship to your state university in Iowa, where you worked very hard for four years while holding down a part-time job, and you were accepted at several graduate schools around the country. You decided on Princeton because they offered you the best package, and let's face it, who wouldn't want to go to Princeton? You know how important names are on the little piece of paper you put on your wall, and you're a little insecure about having gone to Iowa State, but it's what you could afford and where the scholarship let you go. You're glad to be at Princeton, which attracts the best and the brightest, but you're insecure about being a minority member among so many white people. You hope that the students will accept you for who you are, and not think that you're the token minority member. You're looking forward to having some good conversations with fellow students.

Student 2: You have worked very hard as an undergrad at Harvard, and there was no doubt you'd go to Princeton for grad school, where both your parents went. Both *their*

parents went to Princeton as undergrads. You enjoy the intellectual challenge of school, but of course you want to get married (and so do your parents), and you're on the lookout for a nice, good-looking fellow grad student with whom you have something in common. You know how important it is to make the *right* friends, to meet the *right* guy/girl…

It's the first day of school, and there are no classes. The school has organized some mixers for new students to get to know each other. Student 1 arrives at the lunchroom where a few students have already gathered, and walks over to meet Student 2.

3.

The candidate: You're really nervous about this job interview at Macy's. You've put on your best outfit and spent half an hour putting on makeup. You really want this job because you need the money for school and Macy's gives great perks to its employees. You arrive 10 minutes early for the interview and are told to wait with the other interviewees until your turn. You look around the room and begin to despair. Each person is more good-looking than the next. These girls don't *need* make-up. Macy's would *never* hire you, with all this good-looking competition. Of course they would rather hire someone naturally beautiful, which you know you are not. When you're out with friends, guys never notice you; in fact, they seem to *avoid* talking to you. It's just not fair. Just because I don't have a perfectly shaped face or eyes or body…just because I don't fit *the* look…and no matter what I do, it's not enough. People just like to talk with good-looking people. Good looking people get all the breaks, you think bitterly, and wonder why you came.

The interviewer: You're under a lot of pressure to find a hire who will actually work the hours, show up on time, and not quit after building up enough hours to get the clothing allowance perks. And your manager is telling you what a high-profile position sales is – working with the public, presenting the Macy's image. You know the type of look you're looking for, and when you meet the candidate you force a smile and prepare to go through the motions of the interview though you know you would never hire her, because she just doesn't fit the image. Not enough in the looks department.

The candidate: You try to impress upon the interviewer what a hard worker you are, describing past positions, referring to your grades and school attendance, and in general let the interviewer know you really want this job.

4.

Act out your own example of prejudice or discrimination – it could be one that you discussed with your partner or that came up in discussion in previous weeks.

Appendix L: Dr. Seuss' *Sneetches* Handout (Study 2)

a simplistic metaphor for prejudice and discrimination

There's a visible difference between Star-belly and Plain Belly Sneetches: the star on the belly. Star-bellies have it; Plain Bellies don't. Star-bellies (in-group) think they're better, and snub Plain Bellies, who want to be like the Star-bellies, and be accepted (out group).
The Star-bellies:

say we're the best
walk with their noses in the air, attitude
don't talk to Plain Bellies
kids exclude Plain Bellies from games
adults exclude Plain Bellies from picnics, parties, don't invite
don't let them near

The Plain Bellies "mope and dope alone"

though they're together with *each other*
but not included with OTHER (in-group), so they *feel* alone
wish they had stars

When Plain Bellies become like Star-bellies and get stars, the Star-bellies are upset, because they don't have a visible way of showing that they're different (and so, they think, better) because they now all look the same.
How do we know we're better than you if you look like us?
They then removed their own stars so they could see a difference between the two groups.

The star is only desirable if not everyone has it; if it's exclusive. If out-group can have it too, it's no longer desirable.

What does the Star-bellies' behavior say about how they think and feel?

- Need to feel superior; really feel insecure
- Need to *show* themselves and others that they're different
- Others can't have what they have, can't be like them
- Value things (star) because of what it says *about* them, not for the star itself (proof: when out-group gets the star, in-group no longer wants it)

Why do you think the Star-bellies want so badly to look different than the Plain bellies? Do you think the Star-bellies feel good about themselves?

Are there ways that people behave similarly? What visible things do people use to prove to themselves and others that they're better?

The star as symbol of status: only works if *both* groups agree (that the in-group is better *because of* the star, and the out-group *wants the star* to be accepted by/similar to the in-group.)

Once the Plain Bellies have stars, they feel included, the same as the Star-bellies *until* the Star-bellies get rid of their stars. Just as the Fix-it-Up Chappie put stars on the Plain Bellies, for a fee he can take stars off the Star bellies.

The insecure ones are the ones who put others down. But why do others buy into it? What would happen if the Plain Bellies didn't care? Would the star still have so much importance? Would the Star-bellies still feel superior?

What if the Plain bellies *didn't* feel alone on beaches and made their own parties? Would that bother the Star-bellies and make them feel less special? Do you think it's possible for the Plain bellies not to care what the Star-bellies think about them?

In the end, after giving all their money to the Fix-it-Up Chappie, "the Sneetches got really quite smart on that day:" the Sneetches realize it doesn't matter if they have a star or not on their belly.

What are some other possible endings?

What might prevent the Plain bellies from not buying into the idea that Star-bellies are better? [What if the in-group has money, power, or resources that the out-group doesn't but needs, and the out-group cannot do what the in-group can do.]

possible solutions: don't focus on the outside (as in end of this story)
focus on the *inside*; we're all Sneetches; we all have feelings, fears, & needs; more alike than different
[recategorization]: Sneetches vs. Fix-it-Up Chappies instead of Star-Belly Sneetches vs. Plain Belly Sneetches. We won't give all our money to those who use our insecurities to get rich.
common goals: accepting each other so Fix-it-Up Chappies can't use our insecurities for power and money

Can you think of historical examples when Fix-it-Up Chappies used people's insecurities?
[Hitler and Nazi Germany –stars identified
KKK's white supremacy]

By refusing to favor outward appearances or differences, we don't give power to would-be Fix-it-Up Chappies, who can't use our differences to divide us and take advantage of us.

Story: people in a communal bath; one kept a red string on his finger to identify himself. The string slipped off and he saw it on another's finger. He said to the man who now had the red string on: I know who you are; can you tell me who I am? The man who lost the red string defined himself by the outside, by what can be seen and identified.

Similar to the attitude of the Sneetches. Is this a productive and happy way to live? Is there a way to have an identity without needing to rely on what can be seen and noticed by others?

Appendix M: *CRASH* Handout (Study 2)

People act in a way to assert themselves, reinforcing stereotype.
Focus is on the externals, not on the inner person.

scene White cop picks up black hitchhiker in LA; at first he's friendly & not prejudiced. But as scene develops, he fears hitchhiker is going to hurt him. Hitchhiker is laughing; cop thinks he's laughing at him maniacally; only then notices hitchhiker's sneaker is bloody, there's what looks like a knife in his pocket. When cop asks hitchhiker what's so funny, and hitchhiker reaches into his pocket, saying I'll show you what's so funny! You want me to show you? Cop feels threatened and kills him, feeling it's in self-defense.

Hitchiker's [*behavior* + *appearance*] +Cop's [*attention* + *motivation* + *thoughts*] –> prejudiced *behavior* = murder of innocent man.

How may the hitchhiker's death been prevented? Benefit of the doubt, etc…

Cop never dreamt that the hitchhiker was a fellow traveler and believer in St. Christopher, traveler's saint. Didn't look deeper, see black man as a *person* like *himself.* Saw differences, not similarities.

Stereotype resistant to change because you see how the cop relies on past experience to define the situation. Once the hitchhiker laughs and cop misinterprets, cop doesn't look at the black man for his own merits: maybe something is really *funny* and I'll laugh too. Instead he relies on past experience as cop in LAPD/what he's heard/seen about black men.

scene Two black car thieves talking represent two different ways of seeing: one's world view is that people are prejudiced and takes it personally (self-focused). The other gives benefit of the doubt and doesn't believe people are prejudiced against him (other-focused).

1. Waitress doesn't serve them because they're black and she knows blacks don't tip *or* she's really busy and doesn't serve others well either; they just didn't notice others because too involved in their own situation.
2. White woman walking links her arm in her husband's because she's afraid of them *or* she is cold.

Based on their feelings of being in the "out-group" and needing to prove themselves as not being scared, they react with their guns and hijack the couple's car.

White woman's [*behavior* + *appearance*] +Black men's [*attention* + *motivation* + *thoughts*] –> prejudiced *behavior* = carjacking car at gunpoint.

scene The Self-focused carjacker tells the other-focused carjacker that buses are for embarrassing blacks who can't afford cars.
(If he actually *looked* from the outside, he might see people riding the bus aren't all black- but we only see things from our own perspective, we're on the inside looking out, not the outside looking in.)

scene Later, the more self-focused carjacker has *a stereotype disconfirming experience* when he rides a bus and sees that not everyone on it is black, and there's a black lady knitting, doing something productive and non-shameful. Maybe through one or many such experiences, his feelings will change; it's *not true* that buses are designed with big windows just to embarrass black people who ride them.
For such events to have an affect you need to be *aware* and *think,* be open to *stereotype disconfirming experiences.*

scene Carjacked woman talking to husband at home after the incident about changing the locks because she sees the lock-changer as a prison-tattooed gang member who will share the keys with his "gang-banging friends." She felt invalidated, got progressively louder. External focus: painting of faceless naked woman behind her the entire scene. No focus on internals, and her feelings – did you check on James etc.

scene *Stereotype* may be *disconfirmed:* He respectfully and quietly puts all the keys on the counter and leaves. *Stereotype disconfirmed* but she doesn't see it: he is a caring father protecting his little girl.

The carjacked woman has a stereotype of blacks. Although as she says, she didn't run in the other direction, she still showed fear by her behavior.

Why her stereotypes may be hard to change:

1. She doesn't interact with minority members so she can't see who they really are (lock changer is a caring and protective father)
2. Minority members behave in stereotype confirming ways (because of their reaction to their own stereotypes about themselves and her), reinforcing her prejudice (carjackers steal their car at gunpoint)

scene Persian father and shop-owner (another minority member) has a stereotype about the lock-changer. When the lock-changer tells the shop owner that he changed the lock but the door needs to be fixed, the shop-owner accuses the lock-changer of getting business for his friends and asks if he has a friend who fixes doors.

Difficulty with stereotype change: communication gap, shop-owner doesn't give benefit of the doubt. The lock-changer shows goodwill by not charging shop-owner.

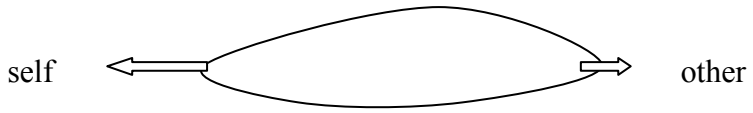
scene After his store is trashed and he learns insurance will not cover it, the store-owner gets the bill from the trash where the lock-changer had thrown it –> find man and kill him. *Assumes* the lock-changer trashed his store; jumps to conclusions.

scene *Disconfirming stereotype*: After seeming to have shot a little girl, the shop-owner sees the lock-changer as a caring protective father trying to make a living, just like himself.

What are some ways people change stereotypes in the film?

1. *Benefit of the doubt*: maybe it's not me, the focus isn't me. This person has other reasons for acting as they do. (i.e. the hitchhiker is not laughing at the cop, the hitchhiker is not a crazy maniac about to kill the cop)
2. *Don't jump to conclusions*: maybe things are not what they seem. (i.e. the Middle Eastern man wants to buy a gun for self-defense, not to commit a jihad against anyone)
3. *We're really more alike than different*: maybe there isn't a them, but we're all US. (i.e. the shop-owner and lock-changer are both trying to make a living, both caring and protective husbands and fathers)

What are some difficulties in changing stereotypes?



1. Other's actions reinforce your judgments/stereotypes.
2. You notice things based on past experience (the bloody sneaker, knife in pocket noticed *after* hitchhiker laughed). *Memory* and *thoughts* and *feelings* affect *motivation* and *attention* and finally *action.* Although the cop gave the hitchhiker a ride and was not prejudiced (he helped a black man earlier in the film, and wanted to not be teamed with a racist cop), he ended up killing a black man based on circumstantial evidence, because of his stereotype and fears.
3. Although you may control your actions, your feelings betray you. (The carjacked white woman didn't turn and run, but she looked at the two black men and got closer to her husband, thus reinforcing the stereotype in her mind and those of the black men's.)

<u>Possible ways to change prejudice/discrimination as seen in movie:</u>

get new experiences with out-group

don't show fear or anger

see the good

memory –> thoughts –> feelings –>motivation + attention –> action.

give benefit of the doubt
other-
don't be self-focused
be other focused

don't jump to conclusions
there is no THEM; there's only us
we're more alike than different

I want to understand you/
get to know you
not: I must defend vs. you/

hurt you before you hurt me

helpful,
self- and
respecting,
don't reinforce
stereotype

Appendix N: Reading Group Instructions (Study 2)

Session __ Date_____ 5 Digit Personal Pin #_____

Please list below 3 or 4 major points of what you have just read today, no more than 1 sentence each.

1.

2.

3.

4.

---

page you were up to at end of session:_____

Appendix O: Additional Instruments Used in Study 2

ECR-R posttest(Fraley et al, 2000) (used in Study 2 and 3)

The 18 items below concern how you generally feel in emotionally close relationships. Respond to each statement by indicating how much you disagree or agree with it by placing a number from 1 to 7 in front of the item.

1----------2----------3----------4----------5----------6----------7

NOT TRUE SOMEWHAT TRUE VERY TRUE

_____1. I find it relatively easy to get close to my partner.

_____2. I do not often worry about being abandoned.

_____3. I often wish that my partner's feelings for me were as strong as my feelings for him or her.

_____4. My partner really understands me and my needs

_____5. It helps to turn to my romantic partner in times of need.

_____6. I talk things over with my partner.

_____7. My desire to be very close sometimes scares people away.

_____8. I worry that romantic partners won't care about me as much as I care about them.

_____9. I prefer not to be too close to romantic partners.

_____10. I prefer not to show a partner how I feel deep down.

_____11. When my partner is out of sight, I worry that he or she might become interested in someone else.

_____12. I find that my partner(s) don't want to get as close as I would like.

_____13. I usually discuss my problems and concerns with my partner.

_____14. It makes me mad that I don't get the affection and support I need from my partner.

_____15. When I show my feelings for romantic partners, I'm afraid they will not feel the same about me.

_____16. I feel comfortable depending on romantic partners.

_____17. My partner only seems to notice me when I'm angry.

_____18. I get uncomfortable when a romantic partner wants to be very close.

Modern Racism Scale (McConahay, 1986). (Study 2, 3)

Below you will find statements that deal with some attitudes about people. Read each statement carefully and decide how much you agree or disagree with it. Using the numerical scale below, write the number which indicates your feelings about that statement. Try not to spend too long on any one statement.

1= Strongly Disagree 2=Disagree 3= Neither disagree nor agree 4= Agree 5= Strongly Agree

____1. Over the past few years, the government and news media have shown more respect to
Blacks than they deserve.

____ 2. It is easy to understand the anger of Black people in America.

____ 3. Discrimination against Blacks is no longer a problem in the United States.

____ 4. Over the past few years, Blacks have gotten more economically than they deserve.

____ 5. Blacks have more influence upon school desegregation plans than they ought to have.

____ 6. Blacks are getting too demanding in their push for equal rights.

____ 7. Blacks should not push themselves where they are not wanted.

NPI (Raskin & Terry, 1988). (Study 2, 3)

Instructions: In each of the following pairs of attitudes, choose the one that you **MOST AGREE** with. Mark your answer by writing **EITHER A** or **B** in the space provided. Only mark **ONE ANSWER** for each attitude pair, and please **DO NOT** skip any items.

_____ 1. A I have a natural talent for influencing people.
B I am not good at influencing people.

_____ 2. A Modesty doesn't become me.
B I am essentially a modest person.

_____ 3. A I would do almost anything on a dare.
B I tend to be a fairly cautious person.

_____ 4. A When people compliment me I sometimes get embarrassed.
B I know that I am good because everybody keeps telling me so.

_____ 5. A The thought of ruling the world frightens the hell out of me.
B If I ruled the world it would be a better place.

_____ 6. A I can usually talk my way out of anything.
B I try to accept the consequences of my behavior.

_____ 7. A I prefer to blend in with the crowd.
B I like to be the center of attention.

_____ 8. A I will be a success.
B I am not too concerned about success.

_____ 9. A I am no better or no worse than most people.
B I think I am a special person.

_____ 10. A I am not sure if I would make a good leader.
B I see myself as a good leader.

_____ 11. A I am assertive.
B I wish I were more assertive.

_____ 12. A I like having authority over other people.
B I don't mind following orders.

_____ 13. A I find it easy to manipulate people.
B I don't like it when I find myself manipulating people.

_____ 14. A I insist upon getting the respect that is due me.

B I usually get the respect that I deserve.

_____ 15. A I don't particularly like to show off my body.
B I like to show off my body.

_____ 16. A I can read people like a book.
B People are sometimes hard to understand.

_____ 17. A If I feel competent I am willing to take responsibility for making decisions.
B I like to take responsibility for making decisions.

_____ 18. A I just want to be reasonably happy.
B I want to amount to something in the eyes of the world.

_____ 19. A My body is nothing special.
B I like to look at my body.

_____ 20. A I try not to be a show off.
B I will usually show off if I get the chance.

_____ 21. A I always know what I am doing.
B Sometimes I am not sure what I am doing.

_____ 22. A I sometimes depend on people to get things done.
B I rarely depend on anyone else to get things done.

_____ 23. A Sometimes I tell good stories.
B Everybody likes to hear my stories.

_____ 24. A I expect a great deal from other people.
B I like to do things for other people.

_____ 25. A I will never be satisfied until I get all that I deserve.
B I take my satisfactions as they come.

_____ 26. A Compliments embarrass me.
B I like to be complimented.

_____ 27. A I have a strong will to power.
B Power for its own sake doesn't interest me.

_____ 28. A I don't care about new fads and fashions.
B I like to start new fads and fashions.

_____ 29. A I like to look at myself in the mirror.

B I am not particularly interested in looking at myself in the mirror.

_____ 30. A I really like to be the center of attention.
B It makes me uncomfortable to be the center of attention.

_____ 31. A I can live my life in any way I want to.
B People can't always live their lives in terms of what they want.

_____ 32. A Being an authority doesn't mean that much to me.
B People always seem to recognize my authority.

_____ 33. A I would prefer to be a leader.
B It makes little difference to me whether I am a leader or not.

_____ 34. A I am going to be a great person.
B I hope I am going to be successful.

_____ 35. A People sometimes believe what I tell them.
B I can make anybody believe anything I want them to.

_____ 36. A I am a born leader.
B Leadership is quality that takes time to develop.

_____ 37. A I wish someone would someday write my biography.
B I don't like people to pry into my life for any reason.

_____ 38. A I get upset when people don't notice how I look when I go out in public.
B I don't mind blending into the crowd when I go out in public.

_____ 39. A I am more capable than other people.
B There is a lot that I can learn from other people.

_____ 40. A I am much like everybody else.
B I am an extraordinary person.

RSE (Rosenberg, 1965) (Study 2 and 3)

The statements below describe different ways that people think about themselves. Please read them carefully and then use the scale shown to indicate how much you agree with each of them.

1	2	3	4
strongly disagree	disagree	agree	strongly agree

____ 1. I feel that I'm a person of worth, at least on an equal plane with others.

____ 2. On the whole, I am satisfied with myself.

____ 3. I wish I could have more respect for myself.

____ 4. I certainly feel useless at times.

____ 5. At times I think I am no good at all.

____ 6. I feel that I have a number of good qualities.

____ 7. All in all, I am inclined to feel that I am a failure.

____ 8. I am able to do things as well as most other people.

____ 9. I feel that I do not have much to be proud of.

____ 10. I take a positive attitude toward myself.

(Self-Compassion Scale) (Neff, 2003b) (Study 2 and 3)

HOW I TYPICALLY ACT TOWARDS MYSELF IN DIFFICULT TIMES

Please read each statement carefully before answering. To the left of each item, indicate how often you behave in the stated manner, using the following scale:

Almost never				**Almost always**
1	**2**	**3**	**4**	**5**

_____ 1. I'm disapproving and judgmental about my own flaws and inadequacies.

_____ 2. When I'm feeling down I tend to obsess and fixate on everything that's wrong.

_____ 3. When things are going badly for me, I see the difficulties as part of life that everyone goes through.

_____ 4. When I think about my inadequacies, it tends to make me feel more separate and cut off from the rest of the world.

_____ 5. I try to be loving towards myself when I'm feeling emotional pain.

_____ 6. When I fail at something important to me I become consumed by feelings of inadequacy.

_____ 7. When I'm down, I remind myself that there are lots of other people in the world feeling like I am.

_____ 8. When times are really difficult, I tend to be tough on myself.

_____ 9. When something upsets me I try to keep my emotions in balance.

_____ 10. When I feel inadequate in some way, I try to remind myself that feelings of inadequacy are shared by most people.

_____ 11. I'm intolerant and impatient towards those aspects of my personality I don't like.

_____ 12. When I'm going through a very hard time, I give myself the caring and tenderness I need.

_____ 13. When I'm feeling down, I tend to feel like most other people are probably happier than I am.

_____ 14. When something painful happens I try to take a balanced view of the situation.

_____ 15. I try to see my failings as part of the human condition

_____ 16. When I see aspects of myself that I don't like, I get down on myself.

_____ 17. When I fail at something important to me I try to keep things in perspective.

_____ 18. When I'm really struggling, I tend to feel like other people must be having an easier time of it.

_____ 19. I'm kind to myself when I'm experiencing suffering.

_____ 20. When something upsets me I get carried away with my feelings.

_____ 21. I can be a bit cold-hearted towards myself when I'm experiencing suffering.

_____ 22. When I'm feeling down I try to approach my feelings with curiosity and openness.

_____ 23. I'm tolerant of my own flaws and inadequacies.

_____ 24. When something painful happens I tend to blow the incident out of proportion.

_____ 25. When I fail at something that's important to me, I tend to feel alone in my failure.

_____ 26. I try to be understanding and patient towards those aspects of my personality I don't like.

Demographics (Study 2)

1. Gender: a) male
   b) female

2. Age: _____years _____months

3. Are you married?
   a) yes
   b) no

4. Are you currently involved in a romantic relationship?
   a. yes
   b. no
   c. If yes, for how long have you been dating? _____years _____months

5. If you are not currently in a romantic relationship, have you ever been involved in a romantic relationship?
   a. yes
   b. no

6. Are you familiar with attachment theory? y/n
   a. yes
   b. no

7. If yes, how?
   a. class (specify):
      _____
   b. books/articles (specify):
      _____
   c. talking to people
   d. other, please specify:
      _____

8. Do you believe there is what may be referred to as a Higher Power, G0d, or Deity?
   a. I believe there is
   b. I believe there can be/I'm not sure
   c. I believe there isn't

9. My Higher Power, G0d, or Deity is (please circle the number that best applies):

1	2	3	4	5	6	7
not punishing			somewhat punishing			very punishing

10. My Higher Power, G0d, or Deity is (please circle the number that best applies):

1	2	3	4	5	6	7
not loving			somewhat loving			very loving

11. My Higher Power, G0d, or Deity is (please circle the number that best applies):

1	2	3	4	5	6	7
rejecting			neither accepting nor rejecting			accepting

12. If you affiliate with an organized religion, please identify:
_____

13. What is your ethnicity?
___African American (country of origin):_____
___Arabic (country of origin):_____
___Asian (country of origin):_____
___Hispanic (country of origin):_____
___White (Not Hispanic) (country of origin):_____
___Other (country of origin):_____

Please provide us with your contact information so that we may reach you if you are eligible for the second part of the study, as well as a chance to win a $25 gift certificate, should you complete the 2-month study in fulfillment of your entire R-point requirement for the semester.

14. Phone number: _____
15. Email Address: _____

Please indicate on the sheet below **all** the periods during which you would be available to meet in the event that you are contacted to participate in the second session. Because we need to coordinate with others, we will need to know all the possible times you can meet. Please indicate on the schedule below times that you anticipate to *always* be available with an A in the box. Thank you.

Period	Monday	Tuesday	Wednesday	Thursday	Friday
1. 8:30 am – 9:50 am					
2. 10:00 am – 11:20 am					
3. 11:30 am – 12:50					
4. 1:00 pm – 2:20 pm					

5. 2:30 pm – 3:50 pm					
6. 4:00 pm – 5:20 pm					

RDEES (Kang & Shaver, 2004) (Study 2 and 3)

INSTRUCTIONS: Read each item carefully. Using the scale to the right of each item, indicate how well each of the following statements describe you.

		Does not describe me very well				Describes me very well
1.	**I don't experience many different feelings in everyday life.**	1	2	3	4	5
2.	I am aware of the different tones or subtleties of my various emotions.	1	2	3	4	5
3.	I have experienced a wide range of emotions throughout my life.	1	2	3	4	5
4.	Each emotion has a distinct and unique meaning for me.	1	2	3	4	5
5.	***I usually experience a limited range of emotions.***	1	2	3	4	5
6.	I tend to draw fine distinctions between similar feelings (such as depressed vs. blue; or annoyed vs. irritated).	1	2	3	4	5
7.	I experience a wide range of emotions.	1	2	3	4	5
8.	I am aware that each emotion has a completely different meaning.	1	2	3	4	5
9.	**I don't experience a variety of feelings on an everyday basis.**	1	2	3	4	5
10.	If emotions are viewed as colors, I can notice even small differences within one color (emotion).	1	2	3	4	5
11.	**Feeling good or bad—those terms are enough to describe most of my feelings in everyday life.**	1	2	3	4	5
12.	I am aware of the subtle differences in the feelings that I have.	1	2	3	4	5
13.	I tend to experience a broad range of different feelings.	1	2	3	4	5
14.	I am good a distinguishing subtle differences in the meaning of closely related emotion words.	1	2	3	4	5

Items in bold are reverse coded.

Factor 1 = Range = items 1, 3, 5, 7, 9,11, 13
Factor 2 = Differentiation = items 2,4, 6, 8, 10, 12, 14

TMMS (Salovey et al, 1995) (Study 2 and 3)

Instructions: Please read each statement and decide whether or not you agree with it. Place a number in the blank line next to each statement using the following scale:

1	**2**	**3**	**4**	**5**
Strongly Disagree	Somewhat Disagree	Neither Agree or Disagree	Somewhat Agree	Strongly Agree

____ 1. I try to think good thoughts no matter how badly I feel.
____ 2. People would be better off if they felt less and thought more.
____ 3. I don't think it's worth paying attention to your emotions or moods.
____ 4. I don't usually care much about what I'm feeling.
____ 5. Sometimes I can't tell what my feelings are.
____ 6. I am rarely confused about how I feel.
____ 7. Feelings give direction to life.
____ 8. Although I am sometimes sad, I have a mostly optimistic outlook.
____ 9. When I am upset I realize that the "good things in life" are illusions.
____ 10. I believe in acting from the heart.
____ 11. I can never tell how I feel.
____ 12. The best way for me to handle my feelings is to experience them to the fullest.
____ 13. When I become upset I remind myself of all the good things in life.
____ 14. My belief and opinions always seem to change depending on how I feel.
____ 15. I am often aware of my feelings on a matter.
____ 16. I am usually confused about how I feel.
____ 17. One should never be guided by emotions.
____ 18. I never give in to my emotions.
____ 19. Although I am sometimes happy, I have a mostly pessimistic outlook.
____ 20. I feel at ease about my emotions.
____ 21. I pay a lot of attention to how I feel.
____ 22. I can't make sense out of my feelings.
____ 23. I don't pay much attention to my feelings.
____ 24. I often think about my feelings.
____ 25. I am usually very clear about my feelings.
____ 26. No matter how badly I feel, I try to think about pleasant things.
____ 27. Feelings are a weakness people have.
____ 28. I usually know my feelings about a matter.
____ 29. It is usually a waste of time to think about your emotions.
____ 30. I almost always know exactly how I am feeling.

IRMS (Hoge, 1972) (Study 2 and 3)

Please use the following scale to indicate your response to each statement listed below.
The word "Divine" in item 5 below refers to something that is "of, relating to, or proceeding directly from Gσd or a god."
There is no consensus about right or wrong attitudes on these items.

1 = strongly disagree 3 = moderately agree
2 = moderately disagree 4 = strongly agree

___ 1. It doesn't matter so much what I believe as long as I lead a moral life.

___ 2. My faith involves all of my life.

___ 3. My faith sometimes restricts my actions.

___ 4. One should seek Gσd's guidance when making every important decision.

___ 5. In my life I experience the presence of the Divine.

___ 6. Although I am a religious person, I refuse to let religious considerations influence my everyday affairs.

___ 7. Nothing is as important to me as serving Gσd as best I know how.

___ 8. I try hard to carry my religion over into all my other dealings in life.

___ 9. Although I believe in my religion, I feel there are many more important things in life.

___10. My religious beliefs are what really lie behind my whole approach to life.

NCS (Cacioppo, Petty, & Kao,1984). (Study 2, 3, and 4)

For each statement below, please indicate to what extent the statement is characteristic of you. If the statement is extremely uncharacteristic of you (not at all like you), please write a "1" to the left of the statement; if the statement is extremely characteristic of you (very much like you), please write a "5. Of course, a statement may be neither extremely uncharacteristic nor extremely characteristic of you; if so, please use a number in the middle of the scale that best applies to you.

1=extremely uncharacteristic 2= somewhat uncharacteristic 3= uncertain

4=somewhat characteristic 5= extremely characteristic

_____ 1. I would prefer complex to simple problems.

_____ 2. I like to have the responsibility of handling a situation that requires a lot of thinking.

_____ 3. Thinking is not my idea of fun.

_____ 4. I would rather do something that requires little thought than something that is sure to challenge my thinking abilities.

_____ 5. I try to anticipate and avoid situations where there is likely a chance I will have to think in depth about something.

_____ 6. I find satisfaction in deliberating hard and for long hours.

_____ 7. I only think as hard as I have to.

_____ 8. I prefer to think about small, daily projects to long-term ones.

_____ 9. I like tasks that require little thought once I've learned them.

_____ 10. The idea of relying on thought to make my way to the top appeals to me.

_____ 11. I really enjoy a task that involves coming up with new solutions to problems.

_____ 12. Learning new ways to think doesn't excite me very much.

_____ 13. I prefer my life to be filled with puzzles that I must solve.

_____ 14. The notion of thinking abstractly is appealing to me.

_____ 15. I would prefer a task that is intellectual, difficult, and important to one that is somewhat important but does not require much thought.

_____ 16. I feel relief rather than satisfaction after completing a task that required a lot of mental effort.

_____ 17. It's enough for me that something gets the job done; I don't care how or why it works.

_____ 18. I usually end up deliberating about issues even when they do not affect me personally.

Reverse score: 3,4,5,7,8,9,12,16,17

Appendix P: Detailed Primary Analyses for Study 2

There was no significant difference between the groups on change in attachment anxiety among groups in the first sample (χ^2= 2.35; p = .31, 2df), or among groups in both samples together (χ^2= 3.14; p = .21, 2df).

While no significant differences were demonstrated in the first sample on change in avoidance by group (χ^2= 3.54; p = .17, 2df), with the increase in participants, this statistic almost reached significance, with the majority of subjects in the Attachment Group (n = 6) again demonstrating the highest change in avoidance as assessed by the ECR-r compared to subjects in either the Prejudice Group (n = 6) or the Reading Group (n = 4) (χ^2= 5.90, p = .05, 2df), with subjects in the Attachment Group again increasing in avoidance and subjects in the prejudice and reading groups again decreasing in avoidance. A Wilcoxon rank sum test was performed examining differences in change in avoidance between the Attachment Group and each of the control groups. A trend almost reaching a significant difference between the groups on change in avoidance was demonstrated (χ^2= 3.68; p = .055, 1df), with participants in the Attachment Group demonstrating an overall increase while all participants in the Reading Group demonstrated a decrease (see Table 3). A Wilcoxon rank sum test demonstrated that compared to the Prejudice Group, those in the Attachment Group were significantly different in change in avoidance (χ^2= 4.33; p = .037, 1 df), with the majority of those in the Attachment Group increasing and the majority of those in the Prejudice Group decreasing. Wilcoxon rank sum tests were run comparing the Attachment Group with each of the control groups considering the first sample only, and a trend towards significance was demonstrated between the Attachment Group and the Reading Group

(χ^2= 3.00; p = .083, 1df), with those in the Attachment Group demonstrating an increase, and every participant in the Reading Group demonstrating a decrease. No significant difference was demonstrated between the Attachment and Prejudice Groups (χ^2= 3.00; p = .083, 1df).

There was no significant difference in change in attachment security between the groups either with the first sample only (χ^2= 2.42; p = .30, 2df), or with the addition of the second sample (χ^2= 1.71; p = .43, 2df). There was no significant difference in change in preoccupied attachment from pre to posttest, considering the first sample only (χ^2= 1.75; p = .42, 2df), as well as with the inclusion of the second sample (χ^2= 1.65; p = .44, 2df).

There was no significant change in fearfulness, either with the first sample only (χ^2= 0.03; p = .98, 2df), or with the inclusion of the second (χ^2= .63; p = .73, 2df).

While there was no significant difference in change in dismissiveness among the groups in the first sample (χ^2= 3.76; p = .15, 2df), with an increase in participants, a trend was demonstrated, with subjects in the Prejudice Group again demonstrating the highest change in dismissiveness as assessed by the RQ compared to subjects in either the Attachment Group or the Reading Group (χ^2 = 5.19; p = .07, 2df), with participants in both the Attachment and Prejudice groups again increasing, while participants in the Reading Group again demonstrated a decrease. A Wilcoxon rank sum test was performed examining differences in change in dismissiveness between the Attachment Group and each of the control groups. While no significant difference was demonstrated in change in dismissiveness between the Attachment Group and the Prejudice Group

(χ^2= .46; p = .50, 1df), a trend towards a significant difference was demonstrated for change in dismissiveness (χ^2= 3.14; p = .0765, 1df), with those in the Attachment Group increasing and those in the Reading Group decreasing. Wilcoxon rank sum tests were conducted examining differences between the Attachment Group and each of the control groups, and no significant differences were demonstrated.

There was a near significant difference among the groups on change in self esteem (χ^2= 5.74; p = .057, 2df), with those in the Attachment Group demonstrating an increase overall and those in the Prejudice Group demonstrating an increase overall, while those in the Reading Group all demonstrated a decrease *(M* = 3.00; SD = -2.31). A Wilcoxon rank sum test was performed examining differences in change in self-esteem between the Attachment Group and each of the control groups. While no significant difference was demonstrated in change in self-esteem between the Attachment Group and the Prejudice Group (χ^2= 0.02; p = .88, 1df), a significant difference was demonstrated for change in self-esteem (χ^2= 5.53; p = .019, 1df), with those in the Attachment Group increasing and those in the Reading Group decreasing.

However, a Kruskall-Wallis demonstrated the near-significant trend towards a significant difference between the three groups on change in self-esteem was lost with the inclusion of the second sample (χ^2= 3.81; p = .15, 2df), with those in the Attachment Group increasing, those in the Prejudice Group increasing, and all those in the Reading Group decreasing. Wilcoxon rank sum tests were performed between the Attachment Group and each of the control groups and a significant difference was demonstrated between the Attachment Group and the Reading Group on change in self-esteem

(χ^2=-4.63; p = .031, 1df), with participants in the Attachment Group increasing overall, while every participant in the Reading Group decreased. No significant difference was demonstrated between the Attachment Group and the Prejudice Group (χ^2= 0.03; p = .87, 1df).

There was no significant difference between the groups on change in self-kindness, neither considering the first sample alone (χ^2= 0.35; p = .84, 2df), nor with the inclusion of the second sample (χ^2= 1.48; p = .48, 2df).

There was no significant difference in change of common humanity in the first sample (χ^2= 1.52; p = .47, 2df), nor with the addition of more participants (χ^2= 2.01; p = .37, 2df),

There was no significant difference among groups in change of mindfulness in the first sample (χ^2= 0.57; p = .75, 2df), nor with the addition of more participants (χ^2= 2.60; p = .27, 2df).

There was no significant difference between the groups on change in self-judgment, either before (χ^2= 0.13; p = .94, 2df), or after the inclusion of the second sample (χ^2= 0.13; p = .94, 2df).

There was no significant difference between the groups on change in over-identification, considering the first sample only (χ^2= 4.51; p = .10, 2df), although a Wilcoxon rank sign demonstrated a trend towards significant change comparing the Attachment Group (n = 4) and the Reading Group (n = 3) (χ^2= 3.43; p = .064, 1df), with all participants in the Reading Group demonstrating a decrease and most of the participants in the Attachment Group demonstrating an increase. There was no significant difference between the groups on change in over-identification with the inclusion of the

second sample (χ^2= 3.29; p = .19, 2df), although a Wilcoxon rank sign test demonstrated a trend towards significant change comparing the Attachment Group (n = 6) and the Reading Group (n = 3), with the Attachment Group increasing overall (*M* = 6.08, SD= 1.63) and the Reading Group (*M* = 2.83, SD= -1.63) decreasing overall (χ^2= 3.10; p = .078, 1df).

There was no significant difference between the groups on change in isolation, either before (χ^2= 0.36; p = .83, 2df) or after (χ^2= 0.02; p = .99, 2df) inclusion of the second sample.

There was no significant difference between the groups on change in total self-compassion, either considering the first sample only (χ^2= 1.14; p = .56, 2df), or with the inclusion of the second sample (χ^2= 1.26; p = .53, 2df).

There was no significant difference between the groups on change in prejudice, either considering the first sample only (χ^2= 0.25; p = .88, 2df), or with the inclusion of the second sample (χ^2= 0.23; p = .89, 2df).

There was no significant difference between the groups on change in attention, either considering the first sample only (χ^2= 0.19; p = .91, 2df), or with the inclusion of the second sample (χ^2= 0.05; p = .98, 2df).

No significant difference between the groups was demonstrated for change in clarity considering the first sample alone (χ^2= 1.66; p = .44, 2df), and a Wilcoxon rank sum test did not demonstrate any significant difference between the Attachment Group and Reading Group. A Kruskall-Wallis demonstrated no significant difference for change in clarity of emotions among the groups with the inclusion of the second sample

(χ^2= 3.45; p = .18, 2df), although a trend towards a significant difference was demonstrated in clarity of emotions, with those in the Attachment Group demonstrating an overall increase and every participant in the Reading Group demonstrating a decrease (χ^2= 3.30; p = .069, 1df).

No significant difference was demonstrated between the groups on change in repair, either considering the first sample only (χ^2= 4.27; p = .12, 2df), or with the inclusion of the second sample (χ^2= 3.12; p = .21, 2df).

While no significant difference was demonstrated on change in range of emotions as assessed by the RDEES scale between the groups in the first sample (χ^2= 4.28; p = .12, 2df), with the addition of the second sample, a trend was demonstrated (χ^2= 5.38; p = .068, 2df), with the Attachment Group increasing overall with almost all participants in this group increasing, while the Prejudice Group likewise again demonstrated an increase while every participant in the Reading Group demonstrated a decrease.

A Wilcoxon rank sum test was performed examining differences in change in range of emotions between the Attachment Group and each of the control groups. While no significant difference was demonstrated in change in range of emotions between the Attachment Group and the Prejudice Group (χ^2= 0.03; p = .87, 1df), a significant difference was demonstrated for change in range of emotions between the Attachment Group and the Reading Group (χ^2= 5.78; p = .016, 1df), with every participant in the Reading Group decreasing and most of the participants in the Attachment Group increasing.

Wilcoxon rank sum tests were performed comparing the Attachment Group to each of the control groups considering the first sample only, and while no significant difference was demonstrated in change in range of emotions between the Attachment Group (n = 4) and the Prejudice Group (n = 4) (χ^2= 0.09; p = .77, 1df), a trend towards a significant difference in range of emotions was demonstrated between the Attachment Group (n = 4) and the Reading Group (n = 4) (χ^2= 3.00; p = .08, 1df), with those in the Attachment Group demonstrating an overall increase and every participant in the Reading Group demonstrating a decrease.

No significant difference was demonstrated between the groups on change in differentiation, either considering the first sample only (χ^2= 1.79; p = .41, 2df), or with the inclusion of the second sample (χ^2= 1.22, p = .54, 2df).

No significant difference was demonstrated between the groups on change in authority, either considering the first sample only (χ^2= .79; p = .67, 2df), or with the inclusion of the second sample (χ^2= 1.66, p = .44, 2df).

No significant difference was demonstrated between the groups on change in self-sufficiency, either considering the first sample only (χ^2= 0.83; p = .66, 2df), or with the inclusion of the second sample (χ^2= 0.41, p = .81, 2df).

No significant difference was demonstrated between the groups on change in superiority, either considering the first sample only (χ^2= 2.99; p = .22, 2df), or with the inclusion of the second sample (χ^2= 1.10, p = .58, 2df).

No significant difference was demonstrated between the groups on change in exhibitionism, either considering the first sample only (χ^2= 0.76; p = .68, 2df), or with the inclusion of the second sample (χ^2= 1.21, p = .55, 2df).

No significant difference was demonstrated between the groups on change in exploitation, either considering the first sample only (χ^2= 2.09; p = .35, 2df), or with the inclusion of the second sample (χ^2= 0.67, p = .71, 2df).

No significant difference was demonstrated between the groups on change in vanity, either considering the first sample only (χ^2= 3.62; p = .16, 2df), or with the inclusion of the second sample (χ^2= 1.63, p = .44, 2df).

While comparing the groups in the first sample only, no significant difference was demonstrated for change in entitlement (χ^2= 3.10; p = .21, 2df), with the inclusion of the second sample, a trend towards significance was demonstrated (χ^2= 5.23; p = .073, 2df), with most participants in the Prejudice Group increasing in entitlement, while those in both the Attachment Group and Reading Group decreased in entitlement overall.

Wilcoxon rank sum tests were performed comparing the Attachment Group to each of the control groups. Compared to those in the Prejudice Group (n = 6), those in the Attachment Group (n = 6) were not significantly different in change in entitlement (χ^2= 2.13; p = .14, 1 df), with the majority of those in the Attachment Group decreasing and the majority of those in the Prejudice Group increasing. Compared to the Reading Group (n = 4), those in the Attachment Group (n = 6) were not significantly different in change in entitlement (χ^2= 2.35; p = .13, 1 df).

No significant difference was demonstrated between the groups on change in total narcissism, either considering the first sample only (χ^2= 0.62; p = .74, 2df) or with the inclusion of the second sample (χ^2= 0.99; p = .61, 2df).

Considering the first sample only, there was a trend towards a significant difference between the groups on change in implicit security (χ^2= 5.63; p = .06, 2df), with

all those in the Attachment Group (n = 4) demonstrating an increase while all those in the Prejudice Group (n = 3) demonstrated a decrease and overall, those in the Reading Group (n = 4) demonstrated a decrease as well.

A Wilcoxon rank sum test was performed examining differences in change in implicit security between the Attachment Group and each of the control groups considering the first sample. While a trend toward a significant difference was demonstrated in change in implicit security between the Attachment Group (n = 4) and the Reading Group (n = 4) (χ^2= 3.07; p = .0796, 1df), with every participant in the Attachment Group (n = 4) increasing and participants in the Reading Group demonstrating an overall decrease, a significant difference was demonstrated for change in implicit security (χ^2= 4.67; p = .031, 1df), with every participant in the Attachment Group (n = 4) increasing and every participant in the Prejudice Group (n = 3) decreasing.

However, this trend towards significance in change in implicit security disappeared with the inclusion of the second group (χ^2= 1.86; p = .39, 2df), with most of those in the Attachment Group (n = 6) increasing while most of those in the Prejudice Group (n = 5) decreased, and 3/5 of the Reading Group decreased while 2/5 increased. Wilcoxon rank sum tests were performed comparing differences between the Attachment Group and each of the control groups, and no significant differences were demonstrated either between the Attachment Group and the Prejudice Group or the Attachment Group and the Reading Group.

No significant difference was demonstrated in change in intrinsic religiosity as assessed by the IRMS either before (χ^2= 1.47; p = .48, 2df) or after the inclusion of the second sample (χ^2= 2.07; p = .36, 2df).

No significant difference was demonstrated in change on the intrinsic subscale of the IRMS either before (χ^2= 0.51; p = .78, 2df) or after the inclusion of the second sample (χ^2= 0.76; p = .68, 2df).

No significant difference was demonstrated in change on the extrinsic subscale of the IRMS before the inclusion of the second sample (χ^2= 4.11; p = .13, 2df), but a significant difference was demonstrated between the groups after the inclusion of the second sample (χ^2= 6.20; p = .045, 2df). This significant difference between the groups on change in the extrinsic subscale demonstrated the Attachment (n = 6) and Prejudice Groups (n = 6) increasing overall, and the Reading Group (n = 6) decreasing.

A Wilcoxon rank sum test was performed examining differences in change in the extrinsic subscale of the IRMS between the Attachment Group and each of the control groups. While no significant difference was demonstrated in change in the extrinsic subscale of the IRMS between the Attachment Group and the Prejudice Group (χ^2= 2.13; p = 1.45, 1df), a significant difference in change in the extrinsic subscale of the IRMS was demonstrated comparing the Attachment Group to the Reading Group (χ^2= 4.77; p = .03, 1df), with participants in the Attachment Group increasing overall and participants in the Reading Group decreasing overall.

Wilcoxon rank sum tests were conducted comparing differences between the Attachment Group and each of the control groups considering the first sample only. A trend towards a significant difference between the Reading Group and the Attachment Group on the extrinsic subscale of the IRMS was demonstrated with the Attachment Group (n = 4) increasing overall and the Reading Group (n = 4) decreasing overall

(χ^2= 3.04; p = .08, 1df). No significant difference was demonstrated between the Attachment Group and the Prejudice Group (χ^2= 1.37; p = .24, 1df).

Appendix Q: Revised Demographics (studies 3 and 4)

Identification code:_____
Class (circle one day): Tuesday Wednesday Professor:_____date:_____

When answering the questions below, please be as honest and accurate as you can, because the information you provide today will be needed later during this experiment.

1. Gender: a) male b) female

2. Age: _____years _____months

3. What color is your hair? _____

4. What color are your eyes? _____

5. Do you identify yourself as a vegetarian? a) yes b) no

6. Do you identify yourself as a sports fan? a) yes b) no

7. If so, what sports team? _____

8. Do you smoke? a) yes b) no
9. Are you married? a) yes b) no

10. Are you currently involved in a romantic relationship? 1) yes 2) no
    3) If yes, for how long have you been dating? _____years _____months

11. If you are not currently in a romantic relationship, have you ever been involved in a romantic relationship? 1) yes 2) no

12. Are you familiar with attachment theory? 1) yes 2) no

13. If yes, how?
    1) class (specify): _____
    2) books/articles (specify): _____
    3) talking to people
    4) other, please specify:
    _____

14. Do you believe there is what may be referred to as a Higher Power, G0d, or Deity?
    1) I believe there is
    2) I believe there can be/I'm not sure
    3) I believe there isn't

15. My Higher Power, G0d, or Deity is (please circle the number that best applies):

1	2	3	4	5	6	7
not punishing			somewhat punishing			very punishing

16. My Higher Power, G0d, or Deity is (please circle the number that best applies):

1	2	3	4	5	6	7
not loving			somewhat loving			very loving

17. My Higher Power, G0d, or Deity is (please circle the number that best applies):

1	2	3	4	5	6	7
rejecting			neither accepting nor rejecting			accepting

18. If you affiliate with an *organized religion*, please identify:_____

19. Do you consider yourself religious (*following the rules* of a religion)?
    a) yes
    b) no

20. Do you consider yourself spiritual?
    a) yes
    b) no

21. What is your ethnicity?
    a) ___African American (country of origin):_____
    b) ___Arabic (country of origin):_____
    c) ___Asian (country of origin):_____
    d) ___Hispanic (country of origin):_____
    e) ___White (Not Hispanic) (country of origin):_____
    f) ___Other (country of origin):_____

Appendix R: Scales Added to Study 3

LCS Rotter (1966)

Instructions: In each of the following pairs of attitudes, choose the one that you **MOST AGREE** with. Mark your answer by writing **EITHER A** or **B** in the space provided. Only mark **ONE ANSWER** for each attitude pair, and please **DO NOT** skip any items.

_____ 1. a. Children get into trouble because their parents punish them too much.
b. The trouble with most children nowadays is that their parents are too easy with them.

_____ 2. a. Many of the unhappy things in people's lives are partly due to bad luck.
b. People's misfortunes result from the mistakes they make.

_____ 3. a. One of the major reasons why we have wars is because people don't take enough interest in politics.
b. There will always be wars, no matter how hard people try to prevent them.

_____ 4. a. In the long run people get the respect they deserve in this world.
b. Unfortunately, an individual's worth often passes unrecognized no matter how hard he tries.

_____ 5. a. The idea that teachers are unfair to students is nonsense.
b. Most students don't realize the extent to which their grades are influenced by accidental happenings.

_____ 6. a. Without the right breaks one cannot be an effective leader.
b. Capable people who fail to become leaders have not taken advantage of their opportunities.

_____ 7. a. No matter how hard you try some people just don't like you.
b. People who can't get others to like them don't understand how to get along with others.

_____ 8. a. Heredity plays the major role in determining one's personality.
b. It is one's experiences in life which determine what they're like.

_____ 9. a. I have often found that what is going to happen will happen.
b. Trusting to fate has never turned out as well for me as making a decision to take a definite course of action.

_____ 10. a. In the case of the well prepared student there is rarely if ever such a thing as an unfair test.

b. Many times exam questions tend to be so unrelated to course work that studying is really useless.

_____ 11. a. Becoming a success is a matter of hard work, luck has little or nothing to do with it.
b. Getting a good job depends mainly on being in the right place at the right time.

_____ 12. a. The average citizen can have an influence in government decisions.
b. This world is run by the few people in power, and there is not much the little guy can do about it.

_____ 13. a. When I make plans, I am almost certain that I can make them work.
b. It is not always wise to plan too far ahead because many things turn out to be a matter of good or bad fortune anyhow.

_____ 14. a. There are certain people who are just no good.
b. There is some good in everybody.

_____ 15. a. In my case getting what I want has little or nothing to do with luck.
b. Many times we might just as well decide what to do by flipping a coin.

_____ 16. a. Who gets to be the boss often depends on who was lucky enough to be in the right place first.
b. Getting people to do the right thing depends upon ability, luck has little or nothing to do with it.

_____ 17. a. As far as world affairs are concerned, most of us are the victims of forces we can neither understand, nor control.
b. By taking an active part in political and social affairs the people can control world events.

_____ 18. a. Most people don't realize the extent to which their lives are controlled by accidental happenings.
b. There really is no such thing as "luck."

_____ 19. a. One should always be willing to admit mistakes.
b. It is usually best to cover up one's mistakes.

_____ 20. a. It is hard to know whether or not a person really likes you.
b. How many friends you have depends upon how nice a person you are.

_____ 21. a. In the long run the bad things that happen to us are balanced by the good ones.
b. Most misfortunes are the result of lack of ability, ignorance, laziness, or all three.

_____ 22. a. With enough effort we can wipe out political corruption.
b. It is difficult for people to have much control over the things politicians do in office.

_____ 23. a. Sometimes I can't understand how teachers arrive at the grades they give.
b. There is a direct connection between how hard 1 study and the grades I get.

_____ 24. a. A good leader expects people to decide for themselves what they should do.
b. A good leader makes it clear to everybody what their jobs are.

_____ 25. a. Many times I feel that I have little influence over the things that happen to me.
b. It is impossible for me to believe that chance or luck plays an important role in my life.

_____ 26. a. People are lonely because they don't try to be friendly.
b. There's not much use in trying too hard to please people, if they like you, they like you.

_____ 27. a. There is too much emphasis on athletics in high school.
b. Team sports are an excellent way to build character.

_____ 28. a. What happens to me is my own doing.
b. Sometimes I feel that I don't have enough control over the direction my life is taking.

_____ 29. a. Most of the time I can't understand why politicians behave the way they do.
b. In the long run the people are responsible for bad government on a national as well as on a local level.

Score one point for each of the following:
2.a, 3.b, 4.b, 5.b, 6.a, 7.a, 9.a, 10.b, 11.b, 12.b, 13.b, 15.b, 16.a, 17.a, 18.a, 20.a, 21.a, 22.b, 23.a, 25.a, 26.b, 28.b, 29.a.
A high score = External Locus of Control
A low score = Internal Locus of Control

CSW (Crocker, Luhtanen, Cooper, & Bouvrette, 2003)

1. I don't care what other people think of me.

1	2	3	4	5	6	7
Strongly Disagree			Neutral			Strongly Agree

2. When I don't feel loved by my family, my self-esteem goes down.

1	2	3	4	5	6	7
Strongly Disagree			Neutral			Strongly Agree

3. My self-esteem depends on the opinions others hold of me.

1	2	3	4	5	6	7
Strongly Disagree			Neutral			Strongly Agree

4. My self-esteem is influenced by how attractive I think my face or facial features are.

1	2	3	4	5	6	7
Strongly Disagree			Neutral			Strongly Agree

5. I can't respect myself if others don't respect me.

1	2	3	4	5	6	7
Strongly Disagree			Neutral			Strongly Agree

6. My self-worth is not influenced by the quality of my relationships with my family members.

1	2	3	4	5	6	7
Strongly Disagree			Neutral			Strongly Agree

7. I feel bad about myself whenever my academic performance is lacking.

1	2	3	4	5	6	7
Strongly Disagree			Neutral			Strongly Agree

8. I don't care if other people have a negative opinion about me.

1	2	3	4	5	6	7
Strongly Disagree			Neutral			Strongly Agree

9. When I think I look attractive, I feel good about myself.

1	2	3	4	5	6	7
Strongly Disagree			Neutral			Strongly Agree

10. When my family members are proud of me, my sense of self-worth increases.

1	2	3	4	5	6	7
Strongly Disagree			Neutral			Strongly Agree

11. My sense of self-worth suffers whenever I think I don't look good.

1	2	3	4	5	6	7
Strongly Disagree			Neutral			Strongly Agree

12. My self-esteem is influenced by my academic performance.

1	2	3	4	5	6	7
Strongly Disagree			Neutral			Strongly Agree

13. My self-esteem does not depend on whether or not I feel attractive.

1	2	3	4	5	6	7
Strongly Disagree			Neutral			Strongly Agree

14. Knowing that my family members love me makes me feel good about myself.

1	2	3	4	5	6	7
Strongly Disagree			Neutral			Strongly Agree

15. I feel better about myself when I know I'm doing well academically.

1	2	3	4	5	6	7
Strongly Disagree			Neutral			Strongly Agree

16. My self-esteem is unrelated to how I feel about the way my body looks.

1	2	3	4	5	6	7
Strongly Disagree			Neutral			Strongly Agree

17. It is important to my self-respect that I have a family that cares about me.

1	2	3	4	5	6	7
Strongly Disagree			Neutral			Strongly Agree

18. My opinion about myself isn't tied to how well I do in school.

1	2	3	4	5	6	7
Strongly Disagree			Neutral			Strongly Agree

19. What others think of me has no effect on what I think about myself.

1	2	3	4	5	6	7
Strongly Disagree			Neutral			Strongly Agree

20. Doing well in school gives me a sense of self-respect.

1	2	3	4	5	6	7
Strongly Disagree			Neutral			Strongly Agree

Weekly Questions

1. What is your current relationship status? (Circle all that apply.)
   a) unchanged
   b) current relationship ended
   c) began seeing someone else

2. If your current relationship status is unchanged from last week, please rate your satisfaction with the relationship (circle one number):

1……2……3……4……5……6……7
dissatisfied extremely satisfied

3. Please circle one: I am experiencing a) more b) less or c) the same amount of satisfaction in my current relationship this week as I was last week.

Post Test Assessment

Please answer the following questions:

1. ***During the course of this experiment***, did anyone to whom you felt close die? y/n
2. If yes, please specify:
3. ***During the course of this experiment***, did your parents divorce? y/n
4. ***During the course of this experiment***, did you, your parents or siblings have any children? y/n
5. If yes, please specify:
6. Please note any accomplishments or failures that are of significance to you that you experienced ***during the course of this experiment***. (some examples might be: acing or failing an important test; getting a promotion at work/getting hired or getting fired; getting complimented or insulted by someone very significant in your life.)

Appendix S: Manualized Protocol (Study 3)

Get results from academic counseling professors first day of classes. Note which of Attachment Awareness subjects are anxious, avoidant, secure.
Match subjects for interpersonal closeness exercise, not matching those scoring high on anxiety with those scoring high on avoidance, or matching highly avoidant subjects with each other or highly anxious subjects with each other.

Session 1 Introduction: Attachment Theory Class
Goals:

1) *Psychoeducational:* To didactically convey basic concepts of attachment theory in a college-like course on attachment theory.

2) *Motivational:* To clearly state expectations and goals of the class and outline the class and generate interest and enthusiasm.

Content of Module

*(slide 1) I'm going to take you on a journey of discovery that other students *(slide 2) have found fun and informative. If you come to classes and do the assignments, I think you'll have a great experience. You'll let me know. My goal is for everyone to become aware of attachment, to think about attachment outside of class, and to get an A in this course. *Hand out syllabuses and subject recognition sheet to assess who knows who for the interpersonal closeness exercise dyad pairings.*

By the end of this semester, with an understanding about attachment theory you will better understand yourself and others. First a word about the grading: Class participation including coming to class on time, doing the homework and interacting with the material during class time, is crucial. There are no stupid or bad questions. Also, in this class we might be discussing things that you wouldn't talk about outside of here, so it needs to be understood that what's said in here, stays in here, and also no names.

Your grade is based on class participation, 2 little quizzes, midterm, and a paper. There will also be presentations in groups of 3, but you won't be tested on the material and you won't be graded on how you present, just that you do present. You'll need to be able to speak in front of people and this will help you in your academic career here at Rutgers.

Okay, I need volunteers in groups of 3. "Who volunteers for presenting articles? Come on…You're not graded on the presentations, but presenting an article in this class will give you practice and will help you in your college career because it is something you will be doing." …"if you don't choose groups, I will assign groups."

You'll notice the last sheet is a list of all the students in this class. Please indicate now if you know any of the students in this class. This information will be used in two weeks when we do an in class exercise.

*(slide 3) Okay, I'm going to begin with a brief overview of attachment theory and then fill in more information and show you how and why attachment theory is important. Please stop me for questions if you need to. Ask if anyone is aware of attachment theory? Hear responses. Say, okay, well you've come to the right class *smile.* In this class for the next 14 weeks, we're going to learn about attachment theory. You will learn a lot about the different people in your life, but if you're courageous, you'll also learn about yourself. It is most difficult to focus on yourself, and can be painful, but not if you do it the right way. It is my goal in this class that you learn a different type of self-focus, attachment awareness. Attachment is important, and I hope that by the end of this class you will see why and agree.

*(slide 4): What is attachment theory? Attachment theory was developed by John Bowlby, a British psychoanalyst who lived from 1907-1990. He was interested in the emotional problems of children as they were related to separation from parents. At the time, most people including the famous Freud believed that fantasy life was important in children; Bowlby said REAL experiences within the family were important. He went against the common view of the time, and a lot of people disagreed with him, but he held strongly to his own beliefs, and it's a good thing he was so courageous, because his views have since been proven by much research all over the world.

He first noticed the effects of maternal separation in young children when working at a clinic, and later wrote several papers and books. For this class you'll be reading from one of Bowlby's classic works, **A Secure Base.* His full theory is published in the trilogy **Attachment and Loss*. I don't expect you to read that for this class, but for those of you who are interested in pursuing a career in any type of psychology, it's a good idea. Also his writing and thinking is very clear.

*(slide 5): Relationships with parents or other caregivers can give a sense of security, affect our relationships with other children including siblings, other adults including teachers, and can affect cognitive abilities such as attention span, self-reliance, self-esteem. Our cumulative experiences with our parents create a mental model or picture – called an internal working model – of how we expect others to treat us and if we are worthy of love and attention.

This is the model we carry into later childhood, adolescence, and adulthood that affects our adult relationships including romantic ones, friendships, work, religion, how we experience loss and grief, and then we pass this onto our own children.

Attachment theory has much to say about our relationships or lack of them, how better to raise our children, all issues that affect us, as Bowlby said, "from the cradle to the grave."

*(slide 6): This class unlike others: don't just memorize; think psychologically.

*(slide 7): Okay, now for a little theory: initial psychological thinking was that we're programmed by nature to attach ourselves to the main caregiver who will provide us with

food. Bowlby's theory was different: he said that we are programmed by nature to create meaningful relationships, not just get food.

The power of Bowlby's theory is that it is strongly grounded in many other research-based fields, including cognitive psychology and animal studies. For example, Harry Harlow's experiment with infant rhesus monkeys demonstrated that warmth/cuddliness more important than food. Monkeys spent more time with soft mother-like dummies that offered no food than they did with dummies that provided a food source but were less cuddly. So attachment applies to various animals, not just human ones.

ASK: Why are relationships important, not just food? WAIT FOR ANSWERS.

*(slide 8): A helpless infant needs a caretaker to survive the cold, predators, hunger. So if you were a baby, what would you do to increase your chances of survival? Stay near bigger, stronger person, and who would that be? Most likely your parent. Explain points on slide.

*(slide 9): So we know proximity, or being close, is important for survival. *Ask how would you get close to your parent?* * (Reveal.) So we all have * inborn attachment behaviors that are designed to get responses from caretakers, or ATTACHMENT FIGURES. Without them, the individual and the species would not survive, because without attention from a caretaker, a helpless infant would die. But, though *.

Let's look at the different ways of parenting:

*(slide 10): Mary Ainsworth, an American researcher, had worked with Bowlby and studied mothers and babies in Uganda where mothers spent lots of time everyday in direct contact with babies. To study separation in America where mothers aren't in constant contact with their babies, she did one of most important studies in psychology. Two parts: year-long extensive observations of mother and baby in home, and the Strange Situation. *(slide 11) Describe Strange Situation. *(slide 12-18.) 7*

*(slide 19): So to summarize: Explain attachment behavioral cycle. Ask if anyone has hid their feelings, like on a date. You don't have to hide your anxiety about the question, just think about it to yourself. This isn't a confessional.

*(slide 20): this confident feeling is known as FELT SECURITY, a goal of the attachment behavioral system. When a person has felt security they are confident and feel good about themselves.

*(slide 21): So let's look at the way children behave when they're treated in these different ways by their caretakers, or ATTACHMENT FIGURES. *ASK how do you think a securely attached child would feel and behave?* Ambivalent? * Avoidant?**

*(slide 22): And then when the children grow up they behave similarly as adults: (describe table.) Does anyone know someone who behaves anxiously attached? Avoidantly attached? Securely attached?

*(slide 23): show cartoons of insecurely attached. ask what styles they describe. **

*(slide 24): review securely attached adults. empathetic is putting yourself in someone else's shoes. *emphasize these adults didn't start out this way: they were dependent babies and their parents loved them; loving is not spoiling. Can't spoil a baby. *
*(slide 25): Discuss no one is just a "style."

*(slide 26): so what is all this this based on?

9*(slides 27-35): describe the workings of attachment
AFFECT REGULATION =being able to control your feelings;
as an explanatory framework: ASK why is this useful?
and that it's possible to change

*(slide 36): Remember that Bowlby based his theory on many research supported fields including ethology, the study of the study of animal behavior with emphasis on the behavioral patterns that occur in natural environments.
Anyone heard of Konrad Lorenz? He illustrated "imprinting"

In fact human behavior is different from that of animals. Anyone here fast-not eat? Like for religious reasons? Or to diet to be healthier or look better for someone? WAIT FOR RESPONSES.

Noetic focus: self actual-ization, choice

*(slide 37): Do non-human animals fast? (WAIT FOR RESPONSE) Well, they don't eat, but not for any principle or religious reason or to improve themselves or look better to another animal; they refrain from eating if there's a bigger animal or predator nearby. They don't voluntarily not eat. They can't control themselves and choose as human animals can; they do not have the need or desire to improve themselves as humans do. So you can dress a cat as a waiter, but does anyone here think that if a mouse were to run across the floor, the cat dressed as a waiter would *not* drop his tray and chase the mouse?
So though non-human animals and human animals are similar, they are also different, and as the course progresses, I hope to show you how this difference is good for us if we want to change.

mission, gratitude, responsibility, internal locus of control

*(slide 38): Now everyone here was accepted by Rutgers University: an opportunity. RU wants YOU here. There are lots of people who could have been accepted this year; they weren't; you were. We all have opportunities, whether they come in the form of a job, or a relationship, or an education. It's what you *do* with the opportunities that come your way that make you who you are. You

take that opportunity and *you* make something of yourself with it. Nobody else does it. The choice is up to you. What's your goal? Why are you here? What do you plan to accomplish with your education at Rutgers? What's the next step?

no blame; lessen victim stance; forgiveness; empathy

Some attachment figures may have hurt us. It's important to keep in mind that parents had their own attachment history that made them who they are. This is not about blaming parents; they had their own attachment issues.

It's also important to remember that siblings may have different attachment styles; children were born into a family at different times and circumstances and so may have been treated differently. Any questions? See you next week!

<u>Session 2 Anxiety Module: "Are You My Mother?"</u>
Goals:

1. *Psycho educational:* To didactically convey through the reading and discussion of a children's classic book the basic concept of attachment anxiety and its relevance to personal development, including its origins and interpersonal effects.

2. *Insight:* To relate attachment anxiety to the student's own life history. To see that attachment anxiety involves self-focus.

3. *Behavioral:* To clarify that change is possible and introduce cognitive behavioral ways of being less anxious.

Content of Module

Write attendance question on the board: The internal working model is a) a schema underlying attachment style; b) description of how machines operate. Ask students to write their name and the answer on a piece of paper and pass to the front. Ask if everyone handed in their question.

(Open with *slide 1) (Ask students if they were aware of attachment since we met last week? Did anyone think, feel, or behave any differently since learning about attachment? Did anyone think about attachment outside of class? Could you recognize attachment avoidance and anxiety in anyone around you? In yourself? Validate responses demonstrating awareness. Collect homework assignment 1, worksheet on describing and labeling two observed instances of attachment behavior in self or other.)*

*(*Slide 2)* Today we're going to read and discuss *Are You My Mother?* Explain that sometimes storybooks can explain very deep ideas very well. (Read P.D. Eastman's *Are You My Mother*.)

*(*Slide 3)* Ask if they know any kids, 4-8 years old, who behave as described by the book. Do you see this in your brothers or sisters? Ask: does anybody remember what the four attachment styles are? * *(Reveal types.)*

*(*Slide 4)* Ask: can anybody tell me what the baby bird's attachment style is? * *(Reveal description of style.) *(Reveal style.)* Ask for justification.

*(*Slide 5)* Review the underlying avoidance and anxiety dimensions. Explain that ambivalents are high in anxiety *and low in avoidance.* Ask: if the baby bird were fearfully attached, how might he behave? Distinguish fearful from ambivalent; explain they're both high in anxiety but different on avoidance dimensions.

So in the story *(*Slide 6)*, the baby bird does not have felt security; his mother is not available to him and cannot be sensitive and responsive to him***(emphasize situation).** In fact, no one is there for him, caring for him. How might the baby bird feel? (Elicit responses. ***(Show feelings)** Explain that these feelings cause the baby bird to think, be motivated, and act in certain ways. You can see how he becomes obsessed with finding his mother; he is very motivated and determined to find her, and he asks everyone and everything he meets if they are his mother.

*(*Slide 7)* When others are not available in response to his search * and he continues to not find what he is looking for, his feelings intensify, * leading to more attachment behavior, and as you can see, a positive feedback loop forms: these thoughts, motivations, and actions continue and become stronger as he continues to not find his mother.

Explain those high in attachment anxiety are motivated to get security from others because they don't feel secure within. You get secure feeling from AF when you're little; if not, it's lacking. * *(Slide 8)* How might baby bird act differently if he had security at the beginning? * Suggest confidently explore the nest without looking for his mother because he knows she'd return. Review SECURE BASE.

> The securely attached already feel secure/have secure base, so they do not *need* to seek security outside themselves by (sometimes frantically) reaching out to others.

Say: As adults we are not dependent on AF anymore, * how might Anxious get felt security?

> *After hearing their suggestions, suggest friendships, community including sports teams, religion or relationship with G0d, achievements like academics, performance.
>
> *(*Slide 9)* Say some attempts to feel secure are adaptive and helpful while others are maladaptive and unhelpful. Ask can anyone think of examples of unhealthy ways? *(Reveal examples: friends who encourage a person to do not good things,

gangs, feel-good harmful substitutes like drugs/alcohol). Ask can anyone think of examples of healthy ways? * (Reveal examples: healthy friends, activities that build a person).

*(*Slide 10)* Explain differences in stability among ways of feeling more secure: either short-term quick fix or long term, stable security. Security that doesn't last happens when another person is in control of the outcome and it's dependent on external, physical factors * (i.e. accumulating possessions or looking a certain way). Ask them how they think more stable security can be achieved then reveal that stable long term security is that which is within one's own control and involves intangible ideals, not external physical external factors * (i.e. living up to values).

Say we'll be watching and discussing the movie *Antoine Fisher* about a person who finds healthy ways of getting felt security he didn't have from AF when he was younger.

*(Slide 11) Explain people need people; it's normal to be interdependent; ask what's the difference then between securely attached and anxiously attached?

*Anxiously attached are too needy and thus too SELF FOCUSED. Thus, can't be there for others.

*(*Slide 12)* Ask what the baby bird thinks that motivates him to ask others if they are his mother. Wait for responses and if the following points not offered, cover them: *(Reveal points):

Assumes others are well intentioned and could be his mother

*A*ssumes others have the answer and are able to help

Ask how might his behavior be ineffective and even unsafe? Wait for responses and if the following points not offered, cover them: *(Reveal points):

Others may not be able to help (the dog says, I'm just a dog).

Others can hurt and exploit him (Puts himself into potential danger, approaching much larger even predatory animals (ominously the kitten "just looks and looks"; Snort picks him up and takes him away)

*(*Slide 13)* Ask why do you think the baby bird would think that others have the answer or are able to help? Wait for responses; *(Reveal): He's not confident that he can himself.

Ask how the AF of the anxiously attached behaved. *(Reveal).

Explain through no fault of their own, those who are high in attachment anxiety at times can tend to feel insecure and may think, feel and act in ways similar to that of the baby bird. These modes of thinking, feeling, and acting in the world are natural and expected given Anxious people's experiences with their attachment figure(s) (AF), and the expectations to which these experiences led.

*(*Slide 14)* Say so what's next for the anxiously attached?

Explain that it's helpful to know the *why* for feeling/thinking/acting:

The lack of consistent sensitive and responsive availability when needed eliminates BLAMING which puts a person in the role of victim, increasing thoughts and feelings of helplessness and desperation, which in turn lead to behavior likely to lead to abandonment. Blaming does not improve/help yourself or others.

blaming self: for feeling somehow deficient
blaming others: for their inadequacy
Rather accept and understand

*(*Slide 15)* As small children, the behavior patterns of anxiously attached were adaptive; such anxious behavior kept AF close when Anxious was dependent child. Ask what does this show about Anxious? * Such success shows Anxious are capable of dealing with tough situations and are survivors. Ask: Now if someone is unreliable to you, do you have to behave in the relationship like a dependent child? * Explain that anxious behavior now isn't necessary, doesn't work, and hurts relationships and self-concept.

*(*Slide 16)* Discuss possible endings to the story, first asking then showing. Ask if the mother returns to the baby bird, what would cause the baby to be insecure? * Ask: if the mother returns to the baby bird, what would need to happen for the baby to be secure? * Ask if the mother never returns, what would make the baby insecure? * Ask if the mother never returns, what would make the baby secure? *

* (*Slide 17)* Say CHANGE IS POSSIBLE Ask how? *(Reveal) Explain:

relationship with another (good friend, good therapy, good marriage - all long-term, stable supportive relationships.)

Other possibilities may include

accepting, loving, and always-available god or a Higher Power (good for health)

talking to yourself *as if* you're parenting yourself. May be done in writing, i.e. keeping a journal (good for health.)

imaginary friend/good parent

*(*Slide 18)* Say characteristics of both a person and others affects security. Ask what characteristics could a person have that would likely lead to attachment anxiety? *(Reveal; say here are some others) Ask what characteristics could a person have that would likely lead to attachment security? *(Reveal; say here are some others.)

What about other people? What characteristics could another person have that would likely lead to a person having attachment anxiety? **(Reveal; say here are some others)* Ask what characteristics could another person have that would likely lead to a person having attachment security? **(Reveal; say here are some others)*

*(*Slide 19)* Explain RELATIONAL CYCLE: A person's behavior gives rise to responses from others as well as messages to themselves that reinforce their self-image.

These responses from others and messages to themselves then reinforce the original behavior.

*(*Slide 20)* Say relational cycles can be changed; ask them how they think. Explain CHANGING the cycle: a person can change their behavior *, and thus change their own self-image but cannot change others. You *can* control how you respond to/interact with others and whether or not you choose to deal with them/what expectations you have/don't have of them.

*(*Slide 21)* Ask How might secure versus anxious attachment behavior lead to different responses from others?
Ask how might that behavior of others, in turn, affect you if you are secure or insecure?

*(*Slide 22)* Homework exercises towards increased awareness:

Write 15 minutes before going to sleep about your ideal self.
Write how a situation could have been handled less anxiously. (you or someone else)
Write a letter to yourself of acceptance and self-compassion.
Write a letter of forgiveness to your attachment figure(s) expressing understanding of them.

<u>Session 3 Anxiety Module Self-Disclosure Exercise</u>
Goals:

1. *Interpersonal:* To create interpersonal closeness with another participant by engaging in Aron's self-disclosure exercise. To begin to feel a sense of not aloneness and community.

2. *Insight:* To realize others are not so different; we share common humanity. To see oneself is just as good as someone else and validated (for anxiously attached) and not better than someone else, but accepted (for avoidantly attached).

Content of Module

Write attendance question on the board: P.D. Eastman's baby bird is an example of a) anxious attachment or b) avoidant attachment. Ask students to write their name and the answer on a piece of paper and pass to the front. Ask if everyone handed in their question.

So how did everyone find the homework? Was it easy? Difficult? So how did everyone find the homework? Was it easy to figure out how an attachment situation could have been handled less anxiously? How did you feel writing about your ideal self? How did it feel to write a letter of compassion to yourself and a letter of forgiveness to an attachment figure? Does anyone want to share their experience doing the exercises? Please hand in your homework assignments. (Collect 4-part homework assignment: 15 minute writing

done before going to sleep about participant's ideal self; writing on how an attachment situation could have been handled less anxiously: either one observed or experienced; a letter to oneself of acceptance and self-compassion, a letter of forgiveness to AF(s) expressing understanding of them.)

Say: Today we're going to do a little exercise in pairs of two. When I call your names, please find a place in the room where you and your partner can sit together to do the exercise. Feel free to move the chairs around; get comfortable. (Call out names of students, avoiding pairing highly anxious students with highly avoidant students and avoiding pairings of highly avoidant students with each other. Try to pair same-gender together if possible.)

Say: okay, does everyone have a seat? (Hand out self-disclosure exercise questions.)

Read instructions of exercise:

This is a study of interpersonal closeness, and your task, which we think will be quite enjoyable, is simply to get close to your partner. We believe that the best way for you to get close to your partner is for you to share with them and for them to share with you. Of course, when we advise you about getting close to your partner, we are giving advice regarding your behavior in this demonstration only, we are not advising you about your behavior outside of this demonstration.

In order to help you get close we've arranged for the two of you to engage in a kind of sharing game. Your sharing time will be for about one hour, after which time we ask you to fill out a questionnaire concerning your experience of getting close to your partner.

You have been given three sets of slips. Each slip has a question or a task written on it. As soon as you both finish reading these instructions, you should begin with the Set I slips. One of you should read aloud the first slip and then BOTH do what it asks, starting with the person who read the slip aloud. When you are both done, go on to the second slip—one of you reading it aloud and both doing what it asks. And so forth.

As you go through the slips, one at a time, please don't skip any slips—do each in order. If it asks you a question, share your answer with your partner. Then let him or her share their answer to the same question with you. If it is a task, do it first, then let your partner do it. Alternate who reads aloud (and thus goes first) with each new slip.

You will be informed when to move on to the next set of slips. It is not important to finish all the slips in each set within the time allotted. Take plenty of time with each slip, doing what it asks thoroughly and thoughtfully.

You may begin! Turn to Set I, slip 1.

(Set timer for 15 minutes; when it goes off, say: please stop and turn to set II, slip 1. It's okay if you didn't get to all the slips.)

(Set timer for 15 minutes; when it goes off, say: please stop and turn to set III, slip 1. It's okay if you didn't get to all the slips.)

When the timer goes off, say: okay, please stop. Quickly move to another location in the room as far away as possible from your partners, and complete the one page post-interaction questionnaire, which I will hand out. *(Hand out post-interaction questionnaire, RQ and 1st half ECR.)*

Now return all the slips to the envelopes, and I will collect them, and I'll hand out and explain the homework assignment. *(Collect envelopes and post-interaction questionnaires, exchanging them for two copies of the ambivalent, avoidant, and secure scenarios*.)

When everything has been exchanged and everyone sat down again, ask: okay, so does everyone have a copy of the handout? You'll notice that one is scenarios of Anxious Attachment, one of Avoidant Attachment, and one of Secure Attachment. Ask someone to read the first anxious scenario, and have them turn to the first page of the secure scenarios, and have someone else read the first secure scenario. Ask what is the difference between the two; discuss.

For the next five minutes, I'd like you to discuss with your partner how you're going to go about the term paper. *(Give 5 minutes.)* For homework, I'd like you to read the scenarios over and then practice behaving securely, the more the better, *with someone you do not already know.* This could be anyone: another student, or a librarian or cashier at the supermarket. The idea is to practice behaving as if you are securely attached. It is not necessary to practice with the same person in the same situation. Then, I'd like you to write about your experience: what you did, what the other person did, how you felt. Please bring the scenarios with you next time; we're going to need them in class. When you come to class next week, before coming into the classroom, wait for your assigned partner to arrive. If your partner is more than 5 minutes late, we'll start class without them and they will lose participation points. Does anyone have any questions? Thank you – we'll see you next week!

<u>Session 4 Anxiety Module Anxiety Films</u>
Goals:

1. *Psycho educational:* To convey the basic concept of attachment anxiety and its interpersonal effects through watching and discussion of movie clips from *What About Bob*, a comic and extreme example of anxious attachment behavior and *Antwone Fisher,* based on a real life story of an anxiously attached person who becomes secure.

2. *Insight:* To relate attachment anxiety to the student's own life. To see that attachment anxiety involves self-focus.

3. *Behavioral:* To clarify that change is possible and demonstrate ways of being less anxious modeled by a character portrayed.

4. *Noöetic*: Introduce the idea that a person has the choice to be self or other

focused.

Write attendance question on the board: When Maria can't stop calling Ruben even when he asks her to because he needs to study and can't talk, she is exhibiting: a) anxious attachment b). secure attachment. Ask students to write their name and the answer on a piece of paper and pass to the front. Ask if everyone handed in their question.

(Open with *slide 1)* Does anyone want to share their experience behaving securely with people you don't usually interact with? Discuss with partners. Please hand in your homework assignments.

"Today we're first going to watch some clips from the movie *What About Bob?* and *Antwone Fisher* *(read synopses on *slide 2)* Ask participants as they watch, to attend to Bob Wiley's and Antwone Fisher's attachment styles. (Show clips: 30½ minutes' duration.)

*(*Slide 3)* Ask if anyone can identify Bob Wiley's attachment style *(Reveal ambivalent) and Antwone Fisher's attachment style. * * (Reveal ambivalent and fearful). Review that a person doesn't have just one attachment style. Ask then explain Antwone shows fearful also by approach-avoidance: afraid of being hurt again.

*(*Slide 4)* So both Antwone Fisher and Bob Wiley both have high attachment anxiety *, but differing levels of attachment avoidance * (Reveal dimensions.)

Let's look at how this high attachment anxiety and low attachment avoidance manifests itself in motivation and behavior.
*(*Slide 5)* First ask then discuss the SELF FOCUS inherent in ambivalent attachment: Bob's lack of felt security makes him needy and disregards Leo's feelings and needs. ***

<u>*(*Slide 6)* Explain that the scenes in which Bob attempts to contact Leo through the exchange also illustrate VIOLATION OF BOUNDARIES and intrusiveness. First ask then reveal how. *</u>

*(*Slide 7)* Explain how Bob demonstrates lack of SELF CONTROL. Ask why Bob asks Leo not to be angry *(Reveal.)

*(*Slide 8)* Discuss Bob's SELF IMAGE. Ask how do you think Bob feels about himself when he acts this way? * (Reveal.)

*(*Slide 9)* Review RELATIONAL CYCLE: behavior affects others' behavior and both affect self-image. * *

<u>*(*Slide 10)* Discuss the effects of Bob's behavior on others: he gets NEGATIVE ATTENTION by being dependent, loud, invasive, sick; his behavior pushes people away just as he expects and fears.</u>

*(*Slide 11)* Discuss the paradox: Bob is needy yet CONTROLLING.

*(*Slide 12)* Discuss Bob's behavior from an attachment perspective, asking then revealing. 5*

*(*Slide 13)* Explain that Bob now causes a repetition of his past experience with attachment figure by his own behavior, thinking, and motivation: now others * are inconsistently available as well, making his insecurity and anxiety worse *.

*(*Slide 14)* Discuss the effects of intrusiveness on concentration. Review ability to explore from secure base.

*(*Slide 15)* Discuss ambivalence =preoccupied because the person's mind is not focused on their child; as adult not focused on present.

*(*Slide 16)* Ask if everyone's familiar with "the golden rule." Explain mothers often teach kids: treat others the way you want to be treated. Suggest the reversal of the golden rule: because Bob has not been treated respectfully he doesn't know what it is, so how can he treat others that way? But he can stop from treating others the way he doesn't want to be treated.

*(*Slide 17)* Review Bob's M.O.

*(*Slide 18)* Discuss what keeps Bob from changing. *

*(*Slide 19)* Discuss how Bob can earn security. First ask how do you think he can, then * reveal, say here are some ideas. **(Slide 20)*

*(*Slide 21)* Discuss that there's no prototypical type and people are mixes

*(*Slide 22)* Now let's discuss Antwone Fisher. Review: Antwone Fisher is in the navy and has been referred to a psychiatrist for his anger problem; he's gotten into several fights while in the navy. Antwone feels badly about himself, his body, and intimacy because of the way he was treated in the Tate foster home where he was sexually abused. He needs to prove/assert himself. (Person who doesn't feel they have a self needs to prove/assert it. Ask what are some ways this is done? Wait for responses.) Antwone does in both negative and positive ways:

*(*Slide 23)* Discuss negative ways Antwone proves/asserts self by getting angry and reacting in self-defense. * Reveal. He doesn't have secure enough self inside, needs to prove to others who he is/isn't. * Reveal positive ways Antwone proves himself.

*(*Slide 24)* Discuss how Antwone shows relationship insecurity.

*(*Slide 25)* First ask then reveal how do they think Antwone becomes more secure, focusing on the lighthouse scene where his girlfriend models a secure base. * If they can't get it, say we'll learn more in attachment and communication.

*(*Slide 26)* Discuss how leaning on others is normal and healthy. **(Play 22 sec clip from Bill Withers performing Lean on Me during a 1973 concert; move cursor to @2.39 above flag until if you just call me).* ASK: so what's wrong with it? What's wrong with Bob Wiley reaching out to Leo, or Antwone Fisher going to his psychiatrist's house?

*(*Slide 27)* Discuss that the difference between securely attached and those high in attachment anxiety is a matter of degree, among other things.

*(*Slide 28)* Discuss it's been said a person can't love someone else unless they love themselves. *Ask how would you feel if a person took your parking spot?* Upset, because you wanted it. It's not because you don't love yourself; you do. Ask what is it then? *Reveal a person doesn't have self-respect and thus can't respect others. Ask then reveal how increase self-respect? *By exerting self-control. *ASK.

**(Slide 29)* Discuss that a person can CHOOSE to change the relational cycle by how? *changing their own behavior. Explain cannot change others, only oneself. A person's behavior then causes change in both the behavior of others * as well as in the person's own self-image. Antwone can control himself from reacting to others then he won't see himself as a victim having to defend himself. Sometimes it may be as simple as learning behaviors that weren't known, i.e. how to talk to a girl on a date. The different responses from others then also effect change in a person's self image * and these changes effect change in a person's thinking * and eventually * IWM, which changes then reinforce * the different self image. Ask is everyone with me?

**(Slide 30)* Ask and then answer *No. Ask if a person can be giving without having security. *Yes. Ask them if they would get a million dollars if they could do it. Discuss that police/ doctors/firefighters may be tired/hungry/scared, but when there's an emergency they perform.

**(Slide 31)* Discuss perpetuation of anxiety. Explain that AF cannot be blamed; one can only change one's own behavior.

Say before I assign this week's homework, let's role play one scenario securely from the scenario handouts. *(Role play secure scenarios; 5- 10 minutes.)*

*(*Slide 32)* Homework exercises towards increased awareness.
Ask what can be done to increase security for Bob Wiley and other anxiously attached? *Reveal some ideas.

<u>Session 5 Empathic Listening</u>
Goals:

1. Psycho educational: To convey the basic concept of empathic listening through watching and discussion of a videotaped session of a demonstration of empathic listening, as well as its relation to attachment theory through discussion and lecture.

2. Insight: To relate listening style to the student's own life. To see that lack of empathic listening involves insecure attachment as well as self-focus.

3. Behavioral: To clarify that change is possible and practice in class with partners ways of being a more empathic listener.

Content of Module

Write attendance question on the board: Bob Wiley illustrates a) anxious attachment or b) avoidant attachment. Ask students to write their name and the answer on a piece of paper and pass to the front. Ask if everyone handed in their question.

*(Open with slide 1) So how did everyone find the homework? (Elicit responses: how did it feel to act avoidant if you usually aren't? Or secure? How did it feel to exert an act of self control – how did you feel afterwards?) Validate responses. Please hand in homework.

*(Slide 2) rationale for learning about communication. emphasize *.

(slide 3) Describe communication styles of anxiously*, avoidantly*, attached. Explain that insecure attachment involves self-focus and while anxious are obviously self focused, avoidant are no less self-focused, although it is not as apparent.

*(slide 4) Explain background of anxiously and avoidantly attached people. Explain that insecurely attached people are too self focused to communicate well.

*(slide 5) But securely attached were listened to as children and can speak and be heard.

*(slide 6) background of securely attached.

*(slide 7) Securely attached as adults can do empathic listening; explain empathic listening

*(slides 8 and 9) Discuss benefits of empathic listening for both the speaker and the listener

> The listener gains information because speaker encouraged to talk about more things in greater depth than he would be likely to do in simply responding to directive questions or suggestions. Such depth of discussion often exposes underlying problems, including ones the speaker had not recognized before. *(ASK IF ANYONE RIDES A BICYCLE OR SWIMS OR PLAYS AN INSTRUMENT OR A SPORT. explain it's a skill that needed practice, and *slide 10)*

emphasize that empathic listening is a skill that can be learned.

*(slide 11) Summarize some principles of empathic listening. *(ASK WHAT ATTACHMENT STYLES ARE DEMONSTRATED BY EACH RESPONSE.)*

*(slide 12) Explain reflective listening is like mirroring.

*(Slide 13) Empathic listening as secure base.

*(Slide 14) Empathic listening provides felt security.

*(Slide 15) Explain reflective listening and underlying orientation. *

*(slide 16) Discuss what empathic listening is not, including

- Long-windedness. Giving very long or complex responses. These emphasize the listener's massive effort to understand more than they clarify the other person's point of view. Short, simple responses are more effective.
- Overreaching. Ascribing meanings that go far beyond what the other has expressed, such as by giving psychological explanations or by stating interpretations that the other considers to be exaggerated or otherwise inaccurate.
- Under-reaching. Repeatedly missing the feelings that the other conveys or making responses that understate them.
- Violating expectations. Giving reflective responses when they are clearly not appropriate to the situation. For example, if the other person asks a direct question and obviously expects an answer, simply answering the question is often best.

*(slide 17) Explain that empathic listening includes non-verbal body language

*(slide 18) clues that you are not in reflective mode

*(slide 19) Discuss what to do if you notice you're not listening empathically and emphasize it takes practice and OTHER FOCUS.

*(slide 20) Discuss example of empathic listening: Antwone Fisher and girlfriend at the lighthouse *(Say now we're going to watch an example of empathic listening. As you watch, notice how Dr. Kressel responds to Manali and how she responds in turn.)*

(slide 21) Discuss challenges to effective listening. First ask them what they think might get in the way of effective empathic listening. Then reveal 6.

*(slide 22) (Ask someone to read.) *(ASK STUDENTS WHAT THEY WOULD SAY.)*

*(slide 23) *(Say here are some possible responses. Which responses demonstrate empathic listening and which don't? Explain why.)*

(Tell dyads to role play anxious i.e. talking about yourself when the other discloses, avoidant i.e. looking at watch or doing something else while the other discloses, and then secure communication, choosing one of the scenarios and incorporating what we've learned today. Ask if any partners are not there, and fill in for them or pair others together.) (10 minutes) How'd it feel being on the giving and receiving end of anxious attachment behavior? avoidant attachment behavior?

Say before I assign this week's homework, let's role play one scenario securely from the scenario handouts. *(Role play secure scenarios; 5- 10 minutes.)*

*(slide 24) Attachment communication exercises. Consciously practice empathic listening. Write about an instance when you practiced it and how it felt. Did the other person comment or respond differently than usual? Write about an instance when you felt really heard and another when you wanted to be heard but weren't. How did you feel in these situations? Did you respond differently in each situation?

<u>Session 6 Anxiety Writing Exercise and Discussion</u>
Goals:

1) *Insight:* To relate attachment anxiety to the student's own life history. To see that there is a more secure way to respond. To feel validated in being heard by partner.

2) *Behavioral:* To clarify that change is possible and introduce cognitive behavioral ways of being less anxious.

Content of Module

Write attendance question on the board: True or false: Empathic listening is a skill that can be learned. Ask students to write their name and the answer on a piece of paper and pass to the front. Ask if everyone handed in their question.

Ask how did everyone find the homework. (Elicit responses: How did it feel to consciously practice empathic listening? Did the other person comment or respond differently than usual? Did you notice being on the receiving end of empathic listening or non-empathic listening felt differently and caused you to respond differently? Validate responses. Collect homework assignment.)

Today we're going to write about an attachment experience that we recognize involved anxious attachment, and then share it and talk about it with our partners, and then rewrite it from a secure perspective.

Could involve you or someone else. Questions? I'm going to time your writing for 15 minutes.

(Give 15 minutes for writing.) Ask if anyone wants to share.
Okay, now share with your partner, and talk with your partner to make it more secure and then rewrite the situation from that person's perspective (if you didn't write about yourself); in other words, write in the first person (I did this or that). It's good when rewriting to use words like "I realize that," or "because of" or "the reason for this…" rather than emotional words, like "I felt abandoned, I felt rejected." *(Write phrases on the board for students to see.)*

(Give 15 minutes for writing.)
Share with your partner. Does anyone want to share with the class?

Say before I assign this week's homework, let's role play one scenario securely from the scenario handouts. *(Role play secure scenarios; 5- 10 minutes.)*

Okay, time for a little attachment quiz. Administer Quiz II.

Homework is posted on blackboard:
Write about a situation in which you or someone else behaved less anxiously than usual. If about yourself: How did you feel? How did others respond? If about another person: how did you feel about them when they behaved less anxiously? Did you respond differently than usual?

<u>Session 7 Avoidance Module: "Don't Need Friends"</u>

Goals:

1. *Psycho educational:* To didactically convey through the reading and discussion of a children's story book the basic concept of attachment avoidance and its relevance to personal development, including its origins and interpersonal affects.

2. *Insight:* To relate attachment avoidance to the student's own life history. To see that attachment avoidance involves defense and loneliness.

3. *Behavioral:* To clarify that change is possible and introduce cognitive behavioral ways of being less avoidant.

Content of Module

Write attendance question on the board: True or false: Those high in attachment avoidance tend to talk a lot and volunteer information freely. Ask students to write their name and the answer on a piece of paper and pass to the front. Ask if everyone handed in their question.

(Open with *slide 1)* How did everyone find writing about a situation in which less anxious behavior than usual was demonstrated? Did it feel different than the usual more

anxious behavior? Did you or the other people respond differently? Please hand in the assignment. Collect homework. Validate responses.)

*(*Slide 2)* "Today we're going to read and discuss Carolyn Crimi's *Don't Need Friends.* Explain that sometimes storybooks can explain very deep ideas very well. (Read Carolyn Crimi's *Don't Need Friends*.)

*(*Slide 3)* Ask if they know any kids, 4-8 years old, who behave as described by the book. Do you see this in your brothers or sisters? Ask: does anybody remember what the four attachment styles are? (Reveal types.) **** Ask: can anybody tell me what Rat's attachment style is? * (Reveal style.)

*(*Slide 4)* Remember what avoidant attachment means: (Read the RQ item for avoidant attachment.)

*(*Slide 5).* What about Dog's attachment style? * (Reveal style.) Ok, and what are the two underlying dimensions * of attachment? So Rat and Dog would be high in what and low in what? 4* Ask how does Rat show his avoidance? then show them…

*(*Slide 6).* Explain evidence of Rat's avoidance: he avoids others, their feelings, and his own.

**(Slide 7)* Ask then explain how Dog shows his avoidance.

#Discuss: Rat and Dog "accidentally" drop a French fry or two near smaller animals' homes. They say they hate French fries, who needs them; but do you think they really hate French fries? Maybe this is an indirect way of reaching out?

**(Slide 8)* So let's look at how avoidance happens with Rat. (Explain schematic diagram.) Rat's best friend moves away *, which leads him to feel what? *(Reveal that he feels sad, misses his friend, feels rejected, abandoned.) These feelings affect his thinking, motivation, and behavior, leading him to decide that he doesn't need friends, be determined not to interact with others, and reject their invitations and even sneer at their greetings.

**(Slide 9)* These thoughts, motivations and behaviors then cause others * to move away from Rat, which then causes Rat to defend * against his bad feelings, to push his feelings away, turn them off, so he doesn't feel them. He then continues to think, act, and behave as before, causing others to avoid him, and him to avoid his own feelings, repeating the cycle.

behavior affects others in expected way

**(Slide 10).* Let's look at how Rat's thinking and then behavior causes others to reject him as he expects: he keeps to himself; when others talk to him, he "just sneers." Then others stop inviting him to parties, asking him to share meals, or even saying hello. Can you see why others stop reaching out to him? Would you want to interact with someone if they

pushed you away and behaved like Rat? This then affects Rat's self image; he feels he's unworthy and rejected, and avoids people even more, while defending against these feelings and blocking them off, causing others to avoid him, creating a RELATIONAL CYCLE, in which Rat's behavior gives rise to responses from others as well as messages to himself that reinforces his self-image. These responses from others and messages to himself then reinforce the original behavior.

insecurely attached ucs elicits specific behavior from others

**(Slide 11).* Explain how it feels safe and comfortable to be able to anticipate how others will act, and so the Avoidant, like those high in attachment anxiety, unconsciously * causes others to act in anticipated ways by their own behavior through the IWM.

*(*Slide 12)*
Ask what Rat thinks that motivates him to reject others. Wait for responses and if the following points not offered, cover them: *(Reveal points):

thinking behind avoidant behavior

Ask why does he assume others will reject him or let him down? *because he doesn't have felt security (Remember: ambivalent baby bird didn't have felt security either but the Ambivalent's AF treated them differently than the Avoidant's AF, so the avoidant and ambivalent have different approaches to getting felt security: ambivalent hyperactivates feelings; avoidant deactivates feelings)*

Ask how might Rat's behavior be ineffective and even harmful to the Rat (cutting off his nose to spite his face)? Wait for responses and if the following points not offered, cover them: *(Reveal points):
–He doesn't benefit from what others have to share (food, warmth, companionship).
–He cannot take care of himself adequately.
•"A fierce wind whipped through the junkyard making Rat's fur stand on end." He's cold and lonely while the other animals are warm and together.
•Seen clearly with Dog (also avoidant) when he's sick and unable to move around and get food for himself.

*(*Slide 13)* Discuss that Rat's thinking may be wrong; maybe he's not rejected, introducing benefit of the doubt, and other focus. 2*

**(Slide 14)* Explain that Rat really does need friends; everyone has a motivation to be accepted by others, but Rat is defending against this need to protect himself from being hurt by rejection, as can be seen by: 1. his being sad when Possum, with whom he did everything together, leaves; and 2. his sighing while everyone's at the party having fun and he's alone in his crate, thinking about Possum. Although he says he doesn't need friends at all, it seems like he does need friends. Why say he doesn't? *(Elicit discussion about avoidant defense against being rejected and feeling badly.) Ask why people have a universal have a need to belong. *(Reveal).

**(Slide 15)* Ask students to listen to the lyrics of the avoidant "theme song" and write down phrases depicting avoidance as illustrated by item from RQ (Read item on slide.)

Play I am a rock by Simon and Garfunkel, first pause, then begin at 44 sec, end after *never cries* (2 minutes). Ask for phrases people wrote down.

**(Slide 16)* Explain that avoidantly attached really have feelings and are vulnerable to hurt, recalling avoidant babies in strange situation; ask how Rat shows he really wants friends and to interact. *(Reveal.)

*(Slide 17) Explain people need people; it's normal to be vulnerable; ask what are the two ways avoidantly attached differ from securely attached. ** (Reveal). Let's discuss this in more detail *(Reveal)…

*(Slide 18) Discuss evidence of difficulty with dependence in Rat and Dog.

*(Slide 19) –Explain that essentially the FOCUS (**) is different: *Those who are more avoidant focus on themselves, while * those who are more secure are able to focus on someone else.

*(Slide 20) Explain how difference in focus between securely attached and avoidantly attached makes avoidantly attached unable to do certain things like securely attached because avoidantly attached are too busy with their defense.

*(Slide 21) Let's look at how Rat and Dog became friends. Explain how Rat was able to connect with Dog and achieve felt security. Ask what allowed him to show his vulnerability? *Reveal

*(Slide 22) Discuss how awareness leads to action; the actions make the person. Rat's behavior gained him felt security, a friend. Discuss who Rat becomes is HIS CHOICE.

*(Slide 23) Discuss the avoidant paradox: they pride themselves on independence but are dependent on dictates of unconscious.

*(slide 24) Discuss that it wasn't easy for Rat to reach out to Dog, but the rewards for his effort were not being alone and lonely.

**(Slide 25)* Let's look at how Rat might behave if he were secure. Ask how he'd behave. Review SECURE BASE: The securely attached already feel secure/have secure base, so they feel they're okay and don't need to defend against feeling badly and anticipating being rejected by others. Then *(Reveal.)

**(Slide 26)* Ask why would Rat anticipate rejection. * Reveal. Ask How did AF treat Rat? * (Reveal.) Explain Rat's AF can't be blamed.

**(Slide 27)* Explain through no fault of their own, those who are high in attachment avoidance at times can tend to feel insecure behave like Rat, and its expected and adaptive, given experiences of avoidantly attached with their AF(s), and the expectations

to which these experiences led. Discuss (ask, then *reveal) what such adaptive response shows about avoidantly attached. Explain that *now* is different.

**(Slide 28)* Explain that it's helpful to accept and understand the *why* for feeling/thinking/acting: Discuss DEFENSIVE EXCLUSION. Ask what's the solution? *(Reveal.)

**(Slide 29)* So let's look at a person's choices; discuss avoidant and secure options. First ask, then reveal. **

**(Slide 30)* Discuss the outcome of those choices: constructive or destructive. First ask, then reveal. **Say we'll be watching and discussing some movie clips that demonstrate avoidant attachment and its interpersonal effects.

*(*Slide 31)* Discuss possible endings to the story, first asking then showing. Ask if Rat reaches out to Dog and brings him food, what would cause Rat to be insecure? * Ask: if Rat reaches out to Dog and brings him food, what would need to happen for Rat to be secure? * Ask if Rat does not reach out to Dog, what would make Rat insecure? * Ask if Rat does not reach out to Dog, how would Rat become secure? *

(*Slide 32)* Explain that CHANGE IS POSSIBLE by BREAKING the cycle. Ask how do you think? Explain that a person can change their behavior *, and thus change their IWM * which then reinforces behavior *. These changes affect a person's self-image-see self as accepted, not rejected; but a person cannot change others.

*(*Slide 33)* Ask what do you think would change a person *(Reveal) and how * (Reveal.)

*(*Slide 34)* Say characteristics of both a person and others affects security. Ask what characteristics could a person have that would likely lead to attachment avoidance? *(Reveal; say here are some others) Ask what characteristics could a person have that would likely lead to attachment security? *(Reveal; say here are some others) Ask What characteristics could another person have that would likely lead to a person having attachment avoidance? *(Reveal; say here are some others) Ask what characteristics could another person have that would likely lead to a person having attachment security? *(Reveal; say here are some others)

Say before I assign this week's homework, let's role play one scenario securely from the scenario handouts. *(Role play secure scenarios; 5- 10 minutes.)*

**(slide 35)* Homework exercises. Any questions? Ok, see you next week!

if they're cynical about smiling, ask: does anyone in the class do this? What do you experience when you do it.

Echo story: what you give out is what you get.

<u>Session 8 Avoidance Module Avoidant Film: Sabrina</u>
Goals:

1. *Psycho educational:* To convey the basic concept of attachment avoidance and its interpersonal effects through watching and discussion of movie clips from *Sabrina*, a fictitious story about a busy avoidant businessman who falls in love with the chauffeur's daughter while ostensibly trying to woo her away from his playboy brother to save his brother's upcoming arranged marriage and a lucrative merger.

2. *Insight:* To relate attachment avoidance to the student's own life. To see that attachment avoidance involves self-focus and is self-defeating, and how secure and avoidant behavior elicit different responses from others.

3. *Behavioral:* To clarify that change is possible and demonstrate less avoidant behavior modeled by a character portrayed, as well as the ensuing interpersonal changes.

4. *Noöetic*: Introduce the idea that a person has the choice to be self or other focused.

Write attendance question on the board: Rat demonstrates a) attachment anxiety b) attachment avoidance. Ask students to write their name and the answer on a piece of paper and pass to the front. Ask if everyone handed in their question.

*(Open with Slide 1, ask students if they have ever heard of Humphrey Bogart or Katherine Hepburn. Or seen Sabrina. * Say that the movie's so popular that there's recently been a remake with Harrison Ford;* we're seeing the original.)*

**(Slide 2. Read summary of Sabrina. Show clips from Sabrina lasting 36 minutes, pausing the scenes when noted to ask questions that relate the film to the students' own lives, ensure understanding, and explain key points outlined below.)*

Describe the first two scenes:

1. Linus rescues Sabrina from an attempted suicide
2. David interrupts Linus at a meeting *(#Pause to discuss)*

Discussion Points:

- Notice how Linus does not ask Sabrina any questions, how he avoids noticing it strange that she's checking spark plugs at night alone with all 8 cars running and the doors closed.
- What would you have done if you'd found someone like Linus found Sabrina? If someone came to you really upset, like David came to Linus?
- Notice how upset David is and how Linus responds. Have you ever been responded to like this? Linus reads while David talks, he doesn't respond to his feelings, he just says what is on his own mind. Then he says he thinks David will be happy. How can he say that? Have you ever experienced someone telling you how you will or should feel, without bothering to consider your feelings? Do you

think David feels good about himself when Linus treats him this way?
- Do you know anybody who is "married to their work"?
- **(Slide 3)* What is Linus' attachment style? **(here's a hint: Reveal RQ paragraph)*. then *(Reveal). Discuss why. **(slide 4)* 2*. Pay attention to the rest of the clips, noticing how Linus is avoidant.

Describe the next scene:

3. at the party, Linus goes instead of David to Sabrina who is waiting for David and Linus dances with her and kisses her *(#Pause to discuss)*

Discussion points:

- Why does David dance with Sabrina and kiss her? Was it necessary? Do you think David likes Sabrina? Why does he keep saying, "It's all in the family."

Describe the next scenes:

4. Linus is talking to his father while dressing for his boating date with Sabrina
5. Sabrina and Linus on a boating date
6. After the date, Sabrina talking to her father about Linus. *(#Pause to discuss)*

Discussion points:

- Did Linus *really* have to try to get Sabrina to fall for him? Was his dating her *only* because he wanted to save his deal and get her away from his brother David? Or maybe there was another reason he wanted to date her?
- Can you see how he might think during their date that Sabrina thinks *he* needs dusting, not the record? (Remember when talking with his father he said he felt old dating a 22 year old.)
- His father doesn't see him as someone who would date a woman, or remember how. Sabrina always thought of him as just a businessman. Important to see that the way others see us also affects the way we see ourselves, and the way we then act.
- When Sabrina plays another record, Linus asks her to turn it off "because," and doesn't want to talk about it.
- Can you see how during the date Linus keeps Sabrina from getting too close? They share similar experiences with each other but when Sabrina excitedly suggests Linus go to Paris, he dismisses the suggestion, saying "Paris is for lovers, maybe that's why I only stayed for 35 minutes." Did anyone ever feel cut off by someone like this when you're excited about something? Like you couldn't talk to someone or be understood by them?
- After the date, Sabrina is interested. She tells her father she likes Linus; "he's rather nice and quite human." Why does she like him? Would you? During their date, Linus had exposed his vulnerability during their mutual disclosure "Do you find it hard to believe that someone would want to block out everything for sentimental reasons?" and she saw that they are actually similar to each other. Did any of you ever experience this— liking someone after you see you're similar, or seeing their vulnerable side?

Describe the next scenes:

7. While being chauffeured to work, Linus tells Fairchild he's shipping Sabrina back to Paris.
8. Linus' secretary enters the office to give him his coat for his date with Sabrina. *(#Pause to discuss)*

Discussion points:

- Notice how Linus communicates with Fairchild:
    - He responds superficially: when Fairchild asks how are you sending Sabrina back to Paris, he says first class. He doesn't explain *how,* as what is his *plan.*
    - He reassures Fairchild about money; it doesn't occur to him that Fairchild is concerned about Sabrina's feelings.
    - He begins reading the paper even though Fairchild is still talking to him.
    - Have you ever had a conversation with someone like this? How did you feel? Does being responded to in this way make you feel close, or want to talk more? Or does it make you withdraw and not want to talk?
- Notice how Linus discourages closeness with his secretary by not responding to her.

Describe the next scenes:

9. On their dinner/dancing date Linus tells Sabrina that he cannot find himself someone really nice; that's not so easy.
10. While Linus and Sabrina dance, he asks her how to say some phrases in French
11. Linus and his father in Linus' office discussing Sabrina *(#Pause to discuss)*

Discussion points:

- Why do you think it's not so easy for Linus to find somebody nice? Could he have something to do with it? Do you think the way he acts could be making it difficult for him?
- Why do you think Linus asks Sabrina how to say my brother has a lovely girl and I wish I were my brother? Is it possible that he is indirectly complimenting Sabrina and expressing his feelings for her?
- Notice that Linus ignores his father's concern that David may not show up at his own wedding. Linus just talks into his Dictaphone.
- Notice Linus smashes the glass to get the stuck olive out and shoves it into his father's mouth, saying, "Eat it!" Why do you think he did this? He was showing very strong feelings over a little olive. Have you ever seen a person who is usually calm get so upset over a seemingly small thing? Have you ever gotten so upset over a small thing, when usually small things don't bother you? Why do you think you or the other person got upset? Was it really the olive that was upsetting?

Describe the next scenes:

12. Sabrina cooking for Linus in his office
13. Linus and his secretary talking *(#Pause to discuss)*

Discussion points:

- Linus notices Sabrina sniffles and when he makes a joke, she doesn't laugh. But then explains her crying as related to not having eaten all day, not to liking him. In response to Sabrina's saying, "I wanted to be so sure I wouldn't go out with you tonight and here I am, cooking for you; I should have worn an apron," he gets her an apron, ignoring her feelings, what else she said. So it's not that Linus doesn't notice emotions, it's that he blocks them off or interprets them differently.
- Linus is uncomfortable with feelings: "Now Sabrina, let's have none of those," when she starts crying in his office. Have you ever been upset and been told not to be? How does it make you feel? When Sabrina asks him to please say something he responds, "like what?" He doesn't know what to say. He's uncomfortable.
- Do you think Sabrina likes Linus? (*wait for their answers*) Do you think Linus thinks so?
- What would you do if you were Linus being hugged by Sabrina after she found the tickets? Would you tell her the truth—that you were going to send her alone to Paris?
- Notice Linus' response to his secretary. Do you notice that Linus' secretary wants to talk with him? How do you think his secretary feels when she tries twice to talk about her bad night and both times she's cut off? The first time Linus says, "I know just how you feel" (again underreaching) and changes the topic asking her to take notes; the second time he just ignores her. How do you feel when people respond to you that way? Do you think Linus really understands how she feels? Would you feel understood and heard if someone acted that way to you? Would you want to talk with such a person?

Describe the next scenes:

14. David and Linus talking
15. David crashes the board meeting
16. Linus sails off to meet Sabrina; they meet and embrace *(#Stop to discuss)*

Discussion points:

- When David agrees Sabrina loved him, but until Linus "came along in that Hamburg." Linus responds to the mention of his hat, ignoring what David had suggested: that perhaps Sabrina does like him, and telling David to straighten his hat and get going. Review: which empathic listening mistake is Linus making? Under-reaching. What's that? repeatedly missing the feelings that the other conveys or making responses that understate them.
- Why would Linus call off the merger, which would make him a lot of money? He is repressing his own feelings: not only will he send his brother off with Sabrina, but also destroy the $20 million plastics merger he'd worked so hard to achieve. Very expensive cost, this blocking of his feelings.
- Betrays his feelings when he punches David after David publicly insults Sabrina. Why'd he punch David if he doesn't care about Sabrina?
- How did Linus look when David said Sabrina had tears when she kissed him goodbye? Would he be sad if he didn't care about Sabrina? When David crashes the board meeting, Linus asks Where's Sabrina? When he learns she left without

David, he asks David "Why did you do it? She's all alone out there." How did Linus look when David says at the board meeting "you ARE in love with her!"

- Have you ever been attracted without knowing it until later? Or do you know anybody who has?
- What does Sabrina see in him? How can she relate to him? Let's see a show of hands: of all the women in the class, how many would be happy with this guy – one who is uncomfortable with feelings and dependency and doesn't listen to what you say? Have you ever dated someone like this?
- (Why did Linus hang his umbrella on the guy's belt? Sabrina had said "no umbrellas in Paris." So Linus' not hearing/noticing is selective: Linus is capable of listening carefully and also giving what is needed, just not *emotionally.)*
- "No man walks alone from choice." Why does Linus choose to walk alone? To protect himself from being hurt. What are the disadvantages? He is lonely and misses out on life. Advantage and disadvantage: he is rejected just as he expects to be: by being avoidant, he pushes others away. It feels safe and familiar.

Say before I assign this week's homework, let's role play one scenario securely from the scenario handouts. *(Role play secure scenarios; 5- 10 minutes.)*

Session 9 Avoidance Module Avoidant Film: Sabrina Reviewed
Goals:

1. *Psycho educational:* To convey the basic concept of attachment avoidance and its interpersonal effects through watching and discussion of movie clips from *Sabrina*, a fictitious story about a busy avoidant businessman who falls in love with the chauffeur's daughter while ostensibly trying to woo her away from his playboy brother to save his brother's upcoming arranged marriage and a lucrative merger.

2. *Insight:* To relate attachment avoidance to the student's own life. To see that attachment avoidance involves self-focus and is self-defeating, and how secure and avoidant behavior elicit different responses from others.

3. *Behavioral:* To clarify that change is possible and demonstrate less avoidant behavior modeled by a character portrayed, as well as the ensuing interpersonal changes.

4. *Noöetic*: Introduce the idea that a person has the choice to be self or other focused.

Content of Module

Write attendance question on the board: Linus Larrabee demonstrates a) attachment anxiety b) attachment avoidance. Ask students to write their name and the answer on a piece of paper and pass to the front. Ask if everyone handed in their question.

(Open with Slide 1, say let's first review what we learned last week from Sabrina.) Ask who remembers what the movie was about?

**(Slide 2. Read summary of Sabrina.)*

**(Slide 3 Ask then reveal* attachment style of Linus Larrabee.)*

**(Slide 4 review dimensions.)*

**(Slide 5 Ask then*reveal attachment style of Sabrina Fairchild.)*

**(Slide 6 review dimensions.)*

**(Slide 7 ask if they think the relationship will last.)*

**(Slide 8)* Discuss self-focus of avoidant Linus.

**(Slide 9)* Discuss that the mutual self-disclosure and exposure of vulnerability of Linus and Sabrina on their date led the two to different responses, and why.

It is normal to fall back to the old avoidant ways.

**(Slide 10)* Review relational cycle and explain that the change in behavior and response is clashes with * self-image, which then effects the behavior as with Linus on his date with Sabrina. This is one reason why it's difficult to change.

**(Slide 11)* Discuss discomfort with dependence. Ask how he violates empathic listening. **(Reveal).*

**(Slide 12)* Ask how do we know Linus likes Sabrina? **(reveal)*

**(Slide 13)* Explain that Linus *does* notice emotions; he doesn't have a perceptual problem. Ask for evidence then * (*reveal).* Ask how Linus responds to shows of emotion. **(reveal).* Ask how he'd respond if he were securely attached.

**(Slide 14)* Discuss that it's difficult for Linus to find someone really nice because he makes it difficult; he chooses to walk alone. Ask why? *(*Reveal).* Ask what are the disadvantages **(Reveal)* and mention there *ARE ADVANTAGES. Ask what they are? **(Reveal).*

**(Slide 15)* Discuss how Linus pushes others away.

(Slide 16)* Discuss how Linus represses others' feelings, asking students to explain how. ** review this demonstrates Linus under-reaching (=repeatedly missing the feelings that the other conveys or making responses that understate them.)
**(Slide 17).* Discuss how Linus represses his own feelings.

**(Slide 18)*. Discuss how Linus suppresses disconfirming information.

**(Slide 19)*. Discuss SELECTIVE ATTENTION.

**(Slide 20)*. Discuss COMMUNICATION STYLE.

**(Slide 21)*. Explain the etiology of Linus' behavior from an attachment perspective. 2*

**(Slide 22)* Explain perpetuation of the cycle now.

**(Slide 23)* Ask how Linus moves towards security. *(Reveal).

[**(Slide 24)* Explain that the difference between self and other focus is clearly shown in the contrast between two characters Peter and Anthony played by Larenz Tate and Chris "Ludacris" Bridges in *CRASH. (Show 2 clips illustrating self vs. other focus*). Discuss.]

Say before I assign this week's homework, let's role play one scenario securely from the scenario handouts. *(Role play secure scenarios; 5- 10 minutes.)*

<u>Session 10 Avoidance Movie and Discussion: Good Will Hunting</u>
Goals:

1. *Insight:* To relate attachment avoidance to the student's own life history. To see avoidant defenses and their interpersonal effects as well as more secure behaviors and their interpersonal effects through watching and discussing movie clips (33.5 minutes) from Academy award winning *Good Will Hunting.* To feel understood, accepted, and not alone.

2. *Behavioral:* To clarify that change is possible and introduce cognitive behavioral ways of being less avoidant.

Content of Module

Write attendance question on the board: Sabrina Fairchild demonstrates a) attachment anxiety b) attachment avoidance. Ask students to write their name and the answer on a piece of paper and pass to the front. Ask if everyone handed in their question.

*(*Open with slide 1. Ask students if they have ever seen the movie Good Will Hunting. Say that it's an academy award winning movie and suggest if they have time at some point they might want to see the whole thing, but the exam will only deal with what we discuss in class.)*

**(Slide 2. Read summary of Good Will Hunting. Show clips from Good Will Hunting lasting 33.5 minutes, pausing the scenes when noted to ask questions that relate the film to the students' own lives, ensure understanding, and explain key points outlined below.)*

Describe the first two scenes:

1. A math professor who discovered Will solving math problems he'd left for students visits Will in jail and tells him that the judge will release him under his supervision if Will does math and sees a therapist.
2. Will and the therapist, Sean, in session on a park bench STOP @ 6.15

Discussion Points:

- Will would rather do time in jail than see a therapist. Does anyone here feel talking is so painful? Do you know someone like this?
- Do you think you get anything more from experience than from book learning?
- Is it really better to have loved and lost than never to have loved at all?
- Sean says Will is not "an intelligent confident man," but a "cocky scared shitless kid." What's the difference?
- Sean says Will thinks he can understand him from a painting. Can you see how this is arrogant? And how Sean shows humility when he says he can't understand Will's experience being an orphan from reading about a famous orphan, Oliver Twist. You can only learn about someone if they choose to share of themselves.
- Suggest that as they watch, think about how Sean gets Will to share of himself?
- Says that Will is scared about what he'll say if he opens his mouth. What do you think Will is scared of? (being vulnerable?)

- **(Slide 3)* What is Will's attachment style? **(Reveal)*.
- **(Slide 4)* Discuss why. When you watch, notice how Will is avoidant.

Describe the next scenes:

3. Will calls Skylar in a driving rainstorm while his friends wait in the car.
4. Will starts talking in therapy by making a joke.

Discussion Points:

- Why does Will hang up before saying anything? He obviously wants to talk to her; he called her in a driving rainstorm keeping his friends waiting.
- He tells his friends he forgot the number. Why? Not comfortable with dependence; doesn't want to let them in. Have you or do you know anyone who keeps people away like this?
- Says nothing during therapy. Therapist is impressed; Will's showing he doesn't need to talk if he doesn't want to. (independence; not vulnerable)
- Notice how he talks about Skylar in a roundabout way, first telling a joke.
- Is that a way to live? Can you be happy going through life without knowing anybody, just to keep up the false front that you're perfect?
- Sean shares with Will about his dead wife. Says his wife farted when she was nervous, and farted in her sleep. They laugh about it and Sean said he misses her little imperfections, and she knew his. Key: WE CHOOSE who

to let into our worlds. Key: she was vulnerable and exposed but loved for who she was, as was he.

- You're not perfect, and this girl isn't perfect either. But the question is whether you're perfect for each other: that's what intimacy is about. The only way you find out is if you give it a shot.
- avoidant defenses:
    i. Sean asks why Will hasn't called Skylar, and Will says "Don't worry about me, I know what I'm doing." Does he? Needs to think he's self-reliant.
    ii. Projection "I'm afraid she won't be perfect when I know her" really he's afraid HE won't be perfect enough. Will asked Sean if he's going to get remarried. When Sean replied that his wife is dead, Will repeated Sean's criticism of him: that's a super philosophy then you can go through life without knowing anybody.
    iii. Notice Sean is avoidant as well in forming relationships after his wife's death, and in talking about it: time's up! stop @11:38

Describe the next scenes:

5. Will visits Skylar at her Harvard dorm after they'd gone out
6. Will and Skylar on a date at the races
7. In session, therapist tells Will that he doesn't regret missing the greatest World Series ball game because he was getting to know his wife. 17:30.

Discussion Points:

- Notice when Skylar says she can't go out, Will thinks she's rejecting him; he's about to leave. He expects and anticipates rejection. But she meant only that she couldn't go out *right then*; she really would like to go.
- Will's responses to Skylar's asking about his life and family. "It was normal, I guess. Nothing special." Can't back it up. Lies about his family. When Skylar wants to meet his family, he says sure, but doesn't make any plans. How do you think Skylar feels? Do you know anybody like this? How do you feel talking to them?
- Notice Will wants to know how Sean's friends "let him get away with missing the game" for being with a girl. Apparently, Will is not so independent; he's actually afraid to act independently separate from his friends; cares what people think about him.
- Sean the therapist says he's not talking about regretting not talking to the woman who became his wife, and doesn't regret missing the game, even though she later became sick, he gave up his practice, and she died. Does anyone have regrets about not taking a chance with someone?

Describe the next scene:

8. Skylar asks Will to join her when she goes to medical school in California. *(stop after girls twittering.)*

Discussion Points:

- Why doesn't Will want to go? He says because he has a job and he lives there. Do you think he's afraid? Why? He thinks she will discover him and then not like him; he can't believe he's lovable. Have you ever felt afraid and not admitted it?
- When she asks why doesn't he come, what he's scared of he turns it on her and asks her what *she* is scared of.
- He's scared, feels threatened, and so counterattacks her: saying she's rich and only wants to have a fling with him.
- *(slide 5) What's Skylar's attachment style? *(Reveal secure) *ask why.*
- *(slide 6) review underlying dimensions and discuss evidence: She admits she's afraid but wants to try. She cries when he leaves; feels the pain.
- Will's need for independence and not liking to depend on others: do I have a sign on my back that says help me? Doesn't want her help.
- She says she loves him and she's crying, and he can't believe her. "Don't bullshit me." He's scared to be vulnerable by accepting her love.
- Notice that Will is so afraid of vulnerability (showing he cares, getting close), that he tells her he doesn't love her, just to avoid feeling vulnerable. He runs out undressed, caring more about protecting himself from feeling vulnerable than being seen undressed.

Describe the next scene:

9. Another therapy session. *(stop when Will walks out)*

Discussion Points:

- Has anyone here ever felt alone? Felt that they have a "soul mate" who "challenges you?" "opens things up for you, touches your soul." Which is preferable?
- Will says he has soul mates: dead philosophers; typical for those high in attachment avoidance to live in books. Key: as therapist Sean says, "can't give back to them."
- Will avoids answering the real issue of why he's a janitor at Harvard, and talks instead about the honor of doing menial work.
- Have you ever not known why you're doing something, or rationalized about it like Will? He's commuting 40 minutes to work as a janitor at Harvard and sneaks around solving difficult math problems; can't he work as a janitor anywhere else?
- Avoidant defense: because Will feels vulnerable and rejected when Sean throws him out, he counterattacks Sean: what winds *your* clock; where's *your* soul mate.

Describe the next scenes:

10. Will calls Skylar to say goodbye.
11. Will and friend talking.
12. Sean explaining Will's problem to the math professor.

Discussion points:

- When Skylar says she loves Will, he smiles, yet he couldn't say it back and replies, bye. Can't express his feelings. She thinks he doesn't love her; how can she know how he feels if he doesn't tell her? Does anyone know anyone like this? How do they make you feel?
- Quick responses. she's gone. Like a week ago. No response to "that sucks." He didn't even mention for a week that he'd broken up with her. Have you ever experienced something big like a break up and not said anything to anybody until they later asked? Were you relieved to talk about it? Do you know anyone who has done this?
- Notice his friend's empathic response to learning of Skylar's leaving: "that sucks." What attachment style does this show? *(secure)*
- Will doesn't trust anyone because people who he needed to trust abandoned him.
- Do any of you or someone you know hang out with people because they're there for you?
- Defense mechanism: push people away before they have a chance to leave him. Can you see this in your own life with anyone you know?

Describe the next scene:

13. Therapist and Will in session discussing Will's abuse and that Sean has to report their progress to the judge.

Discussion points:

- Will asks if Sean had any personal experience with abuse, and Sean discloses his father was a mean drunk who beat him.
- Will hadn't told Sean he broke up with Skylar, and doesn't want to talk about it when therapist asks. Yet he mentions in passing that he broke up with her –"Is that why I broke up with Skylar?" Do you think maybe he *does* want to talk about it, but doesn't know how? Or is afraid to? Why? *(shows his vulnerability; he needs help with this; doesn't know what to do)*
- Can anyone guess why Sean kept repeating "it's not your fault?" *(breaking down Will's defense that he is in control and independent, allowing Will to feel his vulnerability.)* Why didn't Will like that? *(Because if it's not his fault, it means he's not in control, and that's scary. If it is his fault, he's in control. He'd rather think it's his fault than feel vulnerable.)*
- When he breaks down and cries, he lets down his defenses and this self-focus is taken away. Vulnerability allows him to let Sean in. To do this he had to trust the therapist.

Describe the next scenes:

14. Last therapy session.
15. Sean reads note; Will's leaving for the girl in California
16. Will driving away.

Discussion Points:

- Will's a free man, but he doesn't seem to want to be free. Wants to keep in touch. Why? Have you ever felt this way – that things are ending and you don't want them to end?
- Uncomfortable with closeness: when they hug, Will asks if it violates the patient-doctor relationship.
- When they hug, before Will says thank you therapist says you're welcome.
- Then when Will says thank you, Sean thanks him. Why? Maybe in working with Will, Sean has gotten the courage to try to love again, as he told Will.

Say before I assign this week's homework, let's role play one scenario securely from the scenario handouts. *(Role play secure scenarios; 5- 10 minutes.)*

Session 11 Avoidance Review: *Good Will Hunting*
Goals:

1. *Psycho educational:* To review attachment avoidance, the defenses involved, and its interpersonal effects.

2. *Insight:* To relate attachment avoidance to the student's own life history. To feel understood, accepted, and not alone.

3. *Behavioral:* To clarify that change is possible and introduce cognitive behavioral ways of being less avoidant.

Content of Module

Write attendance question on the board: Will Hunting demonstrates a) attachment anxiety b) attachment avoidance. Ask students to write their name and the answer on a piece of paper and pass to the front. Ask if everyone handed in their question.

**(Open with slide 1.. Ask if anyone rented Good Will Hunting and saw the whole thing since last week. Say not to worry; only what is covered in class will be on the exam.)*

**(Slide 2. Read summary of Good Will Hunting.)*
**(Slide 3)* What's Will's attachment style? **(Reveal)*(have someone read RQ paragraph)*

**(Slide 4)* Explain underlying dimensions of Will's avoidant attachment. **

**(Slide 5)* explain mechanisms of avoidance * *(ask what are Will's feelings?; *reveal)*

**(Slide 6)* explain perpetuation of the cycle **

**(Slide 7)* Describe how Will thinks

**(Slide 8)* Describe how Will communicates

**(Slide 9)* Describe Will's defense mechanisms

**(Slide 10)* Explain how Will demonstrates discomfort with intimacy and dependence.

**(Slide 11)* Describe how need for independence is manifested

**(Slide 12)* Discuss the avoidant paradox: not really independent

**(Slides 13 and 14)* Explain SELF FOCUS

**(Slide 15)* Cause is feeling unworthy

**(Slide 16) Ask if they think Will and Skylar's relationship will last.*

**(Slide 17)* Discuss how Sean reaches Will 9*

**(Slide 18)* Discuss Sean's attachment; emphasize attachment styles can change.

**(Slide 19) Ask what Skylar's attachment is* *(*Reveal). **(Have someone read secure RQ paragraph)*

**(Slide 20)* Describe underlying dimensions of secure attachment.

**(Slide 21)* Discuss how secure attachment demonstrated

**(Slide 22) Ask and then reveal* how Will changes 8*; emphasize that change involves a decrease in SELF FOCUS. *

Say before I assign this week's homework, let's role play one scenario securely from the scenario handouts. *(Role play secure scenarios; 5- 10 minutes.)*

<u>Session 12 Avoidant Writing Exercise and Discussion</u>
Goals:

1. *Insight:* To relate attachment avoidance to the student's own life history. To see that there is a more secure way to respond. To feel not unlike others in being heard by partner.

2. *Behavioral:* To clarify that change is possible and introduce cognitive behavioral ways of being less avoidant.

Content of Module

Write attendance question on the board: Skylar demonstrates a) attachment anxiety b) attachment security. Ask students to write their name and the answer on a piece of paper and pass to the front. Ask if everyone handed in their question.

Ask if anyone thought, felt, or behaved any differently since last week with regards to attachment? Could you recognize attachment avoidance and anxiety in anyone around you? In yourself? Validate responses demonstrating awareness. Collect homework assignment.

Today we're going to write about an attachment experience that we recognize involved avoidant attachment, and then share it and talk about it with our partners, and then rewrite it from a secure perspective.

Could involve you or someone else. Questions? I'm going to time your writing for 15 minutes.

(Give 15 minutes for writing.) Ask if anyone wants to share.
Share with your partner, and talk with your partner to make it more secure and then rewrite the situation from that person's perspective (if you didn't write about yourself); in other words, write in the first person (I did this or that). It's good when rewriting to use words like "I realize that," or "because of" or "the reason for this…" rather than emotional words, like "I felt abandoned, I felt rejected." *(Write phrases on the board for students to see.)* But it's good to include how you felt at the time as well.

(Give 15 minutes for writing.)
Share with your partner. Does anyone want to share with the class?

(Role play secure scenarios; 5-10 minutes.)

Homework is posted on blackboard:
Write about a situation in which you or someone else behaved less avoidantly than usual. If about yourself: How did you feel? How did others respond? If about another person: how did you feel about them when they behaved less avoidantly? Did you respond differently than usual?

Appendix T: Syllabus (Study 3)

21:830:493 INDIVID STUDY PSYCH
Attachment Awareness
Fall, 2009
Fridays 10:00-11:20

371 Smith Hall

Instructor: Raelene Joran
Office: Smith 303
Phone: 973-353-5440 x3936
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Office hour: Friday 11:30 – 12:50

TEXT: A Secure Base: Parent-Child Attachment and Healthy Human Development, Bowlby, Basic Books, 1988. Available on Blackboard.

Reading: Fraiberg, S., Adelson, E., and Shapiro, B. 1975. *Ghosts in the nursery: A psychoanalytic approach to the problems of impaired infant-mother relationships.* Journal of the American Academy of Child Psychiatry 14: 387-421.

Class		Assignment
1. September 4	Introductory Lecture	No homework
Anxiety module 2. September 11	Reading and Discussion *Are You My Mother* by P. D. Eastman	See Blackboard and read chapter 1: Caring for children.
3. September 18	Partners assigned; in class exercise; talk with partner to plan paper; anxious, avoidant & secure scenarios handed out; practice if time; Quiz I	See Blackboard and read chapter 2: The origins of attachment theory *Bring scenarios to class next week.*
4. September 25	*Antwone Fischer* and *What About Bob?* Discussion	See Blackboard and read chapter 4: Psychoanalysis as a natural science. *Bring scenarios to class next week.*
5. October 2	Attachment and Communication; role play scenarios	See Blackboard and read chapter 5: Violence in the family. *Bring scenarios to class next week.*
6. October 9	In class writing and discussion; Quiz II; role play scenarios	See Blackboard and read chapter 6: On knowing what you are not supposed to know and feeling what you

		are not supposed to feel. *Bring scenarios to class next week.*
7. October 16	Reading and Discussion *Don't Need Friends* by Carolyn Crimi; role play scenarios	See Blackboard and read chapter 7: The role of attachment in personality development. *Bring scenarios to class next week.*
Avoidance module 8. October 23	*Sabrina* Discussion; role play	See Blackboard and read chapter 8: Attachment, communication, and the therapeutic process. *Bring scenarios to class next week.*
9. October 30	*Sabrina* Review; role play scenarios	See Blackboard and read chapter 9: Developmental psychiatry comes of age. *Bring scenarios to class next week.*
10. November 6	*Good Will Hunting* Discussion; role play	See Blackboard and read *Ghosts in the Nursery,* pp 387-402.
11. November 13	*Good Will Hunting* review; role play	*Bring scenarios to class next week* . No homework
12. November 20	In class writing and discussion; role play; Midterm	See Blackboard. *Bring scenarios to class next week.*
November 27	No class – Thanksgiving Recess	
13. December 4	In-class performance: most avoidant, anxious, secure	PAPER DUE; Read *Ghosts in the Nursery,* pp 402-421.
14. December 11	Presentations	No homework
15. December 18	Presentations	

Autobiographical Term Paper –This paper provides the opportunity to organize, integrate, and synthesize Attachment Theory and apply the material to your own life. In other words, you need to review and reflect on your most important relationships from early childhood to the present (e.g., parents, caregivers, siblings, other relatives, friends, romantic partners, own children, etc.) and analyze them in terms of Attachment Theory.

Regardless of how you organize your Paper, you must include the following:
Choose 5 adjectives that describe your relationship with each parent or caregiver during your childhood and support these adjectives with specific memories.
What did you do when you were upset in childhood?
To which parent or caregiver did you feel closer and why?
Did you feel threatened or rejected by a parent/caregiver?
Provide specific examples from childhood when you did not understand the behavior of your parent/caregiver.
Do you understand now?
How have your relationships with your parents/caregivers changed over time?
How, if at all, has this class has impacted your interpersonal interactions (parents/caregivers, friends, siblings, others) positively or negatively in terms of attachment theory?
This question is very important and could easily make up 25 – 50% of your paper: How have your early experiences with your parents/caregivers affected your adult behavior, feelings, attitudes, choice of friends, choice of dating partners, etc.?

You may decide to include other attachment-related issues, e.g., past and present ability to explore new experiences, your behavior in school/work/religious settings, attitudes toward death, how you have mourned in the past, how you might expect to mourn in the future. The essence of your paper is NOT to determine your style. When discussing childhood and adult situations, it is important to include descriptions of your emotional state when appropriate. Also important is to use reflective phrases such as "I realize" or "I understand" or "it seems to me." Required length: no less than 10 (double-spaced) typed pages. Late papers will lose the equivalent of one letter grade per week or part thereof.

Two Quizzes and Midterm: Multiple Choice and Short Essay

Class Participation:
Article Presentation - In groups of three, each student will give a ten-minute presentation on one of the assigned readings. Each group should meet prior to the presentation to divide the reading and coordinate the effort. The presentation should summarize the work and discuss the reading's significance as well as any questions raised.
Class Discussion – It is absolutely important that everyone participate in class discussions. Participation may include answers, questions, comments, etc.

Final Grade – Your final grade is determined as follows:

Term Paper	= 40%
Midterm	= 20%
Quizzes	= 10%
Class Participation	= 30%

Appendix U: Scenarios – Avoidant Attachment

Choose one scenario to act with your partner. Then switch roles. Notice how it feels to behave avoidantly attached and how it feels to interact with someone who is avoidantly attached.

1.

It's Tuesday afternoon before finals week and Ruben has been studying hard. All semester, he was too busy with other things like football practice and trying to get together with his girlfriend Maria when she was available. But now, if he doesn't do well on finals, his grade point average will be severely hurt and he will be asked to quit the football team. He calls Maria to tell her that he'd like to go out this weekend, but that he needed to study this week for finals and couldn't talk until then.

Maria is reading in her apartment when Ruben calls to tell her that he needs to study and they couldn't talk until this weekend, when he'd call her to go out. Maria tells Ruben not to worry, she'll be busy with her own studying; he could just call her when he's ready. Maria is ready to end the conversation when Ruben explains that he's really anxious because his father was on the football team, and his father's father, and he would be letting his dad down if he got kicked off the team. He doesn't want to hurt his father's feelings. His father has had enough of a rough time since losing his job last month.

Maria interrupts Ruben as he expresses his anxiety and without even mentioning football or his family's economic problems, only asks when he will be finished with finals. Ruben is confused... sometimes she is so hard to talk to like when his mother was rushed to the hospital. She seems not to hear what he is really saying. He repeats himself; maybe she didn't hear what he said. Maria wishes him luck on his finals.

He can't believe it! She is so unresponsive. Oh, maybe she's worried about her sister; Maria had gotten a call last week on her cell phone while they were on a date and learned that her twin sister had been in a car accident and was in the hospital. When he asks Maria if she's worried about her sister, Maria suddenly looks at her watch and remarks that it's getting late and she has to finish reading a few more articles for her term paper. She tells Ruben good luck and she's sure he'll do fine, wondering how is it that the guys she dates seem so much dumber than her, or waste so much time. *She* doesn't have a problem getting her work done.

2.

After working for many years together at the local Target store, Ivette and Tonia have become close, especially since Ivette showed Tonia the ropes and really pitched in and helped her keep the job when things were tough at home. Though they now go to different universities and no longer work at the same Target, Tonia is grateful to Ivette,

and calls her frequently to keep in touch. Even though Ivette never calls Tonia, she chats with her friend and enjoys the connection.

One night, Tonia calls Ivette to chat, telling her about her life: her jazz band practice, her new boyfriend. Tonia then asks Ivette how she and the friends she studied with did on the latest psych exam. Ivette tells Tonia she aced the test, but her friends didn't tell her how they did.

Tonia wonders why the friends didn't tell Ivette how they did when they sat together in class. Ivette replies that she didn't sit with them. Tonia is surprised and asks why not, since they usually sit together. Ivette responds that Amanda's bag was in the seat next to her where Ivette usually sits, and Amanda and Tiffany were busy talking with each other. It was no big deal; Ivette went to sit somewhere else.

Tonia feels badly for Ivette; it must be really hard to be treated by friends like that, especially after studying so hard together. Ivette shrugs off her friend's concern: they probably feel bad about themselves because they did badly on the exam. They're not such good students. Tonia wonders how Ivette can say they flunked if they didn't share their grades with her: did she see the postings of their grades outside the class?

Ivette responds that she didn't bother looking at their grades; she just figured they didn't do very well, and they're jealous of her since she did well. That's why they haven't spoken to her since. Who needs such friends, anyway?

Tonia again expresses her concern about Ivette's relationship with her friends and suggests that Ivette talk to them and get together; maybe they're not rejecting her because of the exam, after all. Maybe they were just so involved in their conversation that they didn't see her the day the grades came in, and they didn't do so badly after all. Ivette says that it's time to hang up; she has a lot of work to do.

3.

Roberto and Justin are eating pizza one Sunday, talking about what they're doing this summer. Roberto says he's getting together with a few friends to rent a condo at the beach, and asks Justin what he's doing this summer. Justin replies not much, just hanging around. Roberto suddenly remembers, hey, wasn't Justin going to Florida? Justin replies that he was supposed to visit his mother and stepfather in Florida, but it's not going to work out.

Roberto asks why not. Justin replies that his mom called last night to cancel the trip. Roberto hopes that everything is okay. Justin shrugs and says that it wouldn't work out after all because his mother and stepfather are going to her stepson's med school graduation in Philly instead.

Roberto feels terrible for Justin. It's really awful to have a trip cancelled like that. Didn't they know about the graduation in Philadelphia before they invited him to visit them in

Florida? Justin shrugs and explains that's the way his mother is: she's really disorganized. He wouldn't be surprised if she missed her stepson's graduation; she missed his own high school graduation. Roberto is shocked: how awful for your own mother to miss your graduation! Justin says flatly that it's not such a big deal to him; he didn't need his mother to be there, unlike his stepbrother, who really needs the attention. His stepbrother would really be crushed if people didn't go to his graduation from med school.

Roberto remarks that Justin's mom must have felt really badly to cancel their plans. Nah, Justin said that after his mom cancelled their plans, she had to run to a tennis game so she just hung up. Roberto is shocked. Justin must have felt so badly to be dismissed like that. Justin replies that his mother is just really busy.

Roberto invites Justin to join everyone at the beach house, but Justin says he'll just hang around.

Appendix V

Means, Standard Deviations, and Minimum and Maximum Scores for Attachment Avoidance and Anxiety (Study 3)

	Condition											
Construct	Experimental						Control					
	Pretest	Wk 4	Wk 8	Wk12	Post	Follow	Pretest	Wk 4	Wk 8	Wk 12	Post	Follow
Attachment Anxiety												
M	2.66	2.60	2.81	2.27	2.89	2.39	3.08	2.79	3.16	2.92	3.39	3.45
SD	(1.21)	(1.13)	(1.05)	(1.08)	(0.94)	(0.81)	(1.04)	(0.95)	(1.15)	(0.91)	(0.97)	(0.85)
Min	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.11	1.00	1.22	1.67	1.22
Max	5.11	5.11	4.78	4.33	4.44	4.44	5.33	4.78	5.22	4.33	4.78	4.89
Attachment Avoidance												
M	3.17	2.96	3.01	3.03	3.14	3.42	3.24	3.11	3.08	3.15	3.16	3.17
SD	(1.14)	(1.03)	(1.32)	(1.14)	(1.11)	(1.19)	(1.10)	(1.02)	(0.91)	(0.94)	(1.16)	(1.13)
Min	1.33	1.33	1.00	1.67	1.11	1.00	1.22	1.22	1.22	1.00	1.00	1.00
Max	6.22	5.11	6.22	6.22	6.33	6.11	5.11	5.00	4.78	4.56	5.89	5.00

Post=post-test; Wk=week; Follow=Follow-up

Appendix W

Means, Standard Deviations, and Minimum and Maximum Scores for Dependent Variables other than Explicit Attachment (Study 3)

Construct	Condition					
	Experimental			Control		
	Pretest	Post test	Follow-up	Pretest	Post test	Follow-up
Implicit Security						
M	10.23	6.35	8.87	5.25	9.54	8.00
SD	(3.52)	(5.57)	(4.98)	(5.03)	(4.84)	(4.55)
Min	4	-5	2	-2	0	-2
Max	17	14	19	13	17	16
Attachment Security (RQ)						
M	4.10	5.23	5.40	4.69	5.07	4.91
SD	(1.79)	(1.74)	(1.81)	(1.89)	(1.51)	(1.51)
Min	1.00	1.00	1.00	1.00	2.00	1.00
Max	7.00	7.00	7.00	7.00	7.00	7.00

Appendix W *(continued)*.

Fearful Attachment (RQ)						
M	3.43	3.59	4.00	4.00	3.87	3.91
SD	(1.98)	(1.55)	(1.51)	(1.88)	(1.70)	(1.86)
Min	1.00	1.00	1.00	1.00	1.00	1.00
Max	7.00	7.00	6.00	7.00	7.00	7.00
Preoccupied Attachment (RQ)						
M	2.90	2.97	3.20	3.31	3.20	3.74
SD	(1.73)	(1.40)	(2.08)	(1.71)	(1.47)	(1.66)
Min	1.00	1.00	1.00	1.00	1.00	1.00
Max	6.00	6.00	7.00	7.00	6.00	7.00
Dismissive Attachment (RQ)						
M	4.57	3.90	3.73	3.56	4.63	4.13
SD	(1.70)	(1.79)	(1.75)	(1.66)	(1.50)	(1.55)

Min	1	1	1	1	1	1

Appendix W *(continued)*.

Max	7	7	7	7	7	7
Self Esteem						
M	33.57	32.87	32.07	30.63	30.17	29.74
SD	(6.16)	(5.17)	(4.28)	(5.38)	(5.41)	(5.17)
Min	17	22	25	20	18	21
Max	40	40	40	40	40	39
IRMS						
M	2.51	2.44	2.72	2.51	2.44	2.45
SD	(0.64)	(0.60)	(0.70)	(0.72)	(0.60)	(0.64)
Min	1.30	1.10	1.60	1.20	1.00	1.50
Max	3.80	3.60	4.00	3.90	3.70	3.70
Intrinsic IRMS Subscale						
M	2.53	2.46	2.74	2.63	2.58	2.52
SD	(0.85)	(0.76)	(0.89)	(0.85)	(0.74)	(0.96)

Appendix W *(continued)*.

Min	1.00	1.00	1.00	1.00	1.00	1.00
Max	3.86	4.00	4.00	4.00	3.86	4.00
Extrinsic IRMS Subscale						
M	2.64	2.60	2.33	2.77	2.88	2.70
SD	(0.59)	(0.67)	(0.83)	(0.79)	(0.71)	(0.71)
Min	1.00	1.00	1.00	1.33	1.33	1.00
Max	3.67	3.67	3.67	4.00	4.00	4.00
Authority						
M	13.33	13.10	13.47	12.84	12.03	12.83
SD	(2.09)	(1.88)	(2.00)	(2.05)	(1.77)	(1.95)
Min	9	10	10	9	9	10
Max	16	16	16	16	16	16
Self Sufficiency						
M	9.13	8.86	9.13	9.13	8.97	9.26

SD	(1.50)	(1.33)	(1.06)	(1.39)	(1.30)	(1.69)

Appendix W *(continued).*

Min	7	7	7	6	7	6
Max	12	12	11	11	11	12
Superiority						
M	7.77	7.50	7.47	7.72	7.17	7.83
SD	(1.83)	(1.50)	(1.64)	(1.35)	(1.62)	(1.88)
Min	5	5	5	5	5	5
Max	10	10	10	10	10	10
Exhibitionism						
M	9.72	9.93	9.80	9.09	9.23	9.23
SD	(1.98)	(1.87)	(1.94)	(1.53)	(1.70)	(1.57)
Min	7	7	7	7	7	7
Max	14	14	14	12	12	12
Exploitation						
M	6.93	7.00	7.00	6.69	7.27	7.09
SD	(1.74)	(1.49)	(1.31)	(1.40)	(1.26)	(1.38)

Appendix W *(continued)*.

Min	5	5	6	5	5	5
Max	10	10	10	10	10	10
Vanity						
M	4.47	4.59	4.47	4.06	4.10	4.32
SD	(1.07)	(1.09)	(1.13)	(0.98)	(0.96)	(1.09)
Min	3	3	3	3	3	3
Max	6	6	6	6	6	6
Entitlement						
M	8.77	8.52	9.33	8.65	8.30	8.74
SD	(1.57)	(1.57)	(1.80)	(1.11)	(1.47)	(1.63)
Min	7	6	7	7	6	6
Max	12	12	12	11	11	12
Overall Narcissism						
M	60.17	59.52	60.67	58.29	57.07	59.52

SD	(9.27)	(7.15)	(8.33)	(5.37)	(6.25)	(6.01)

Appendix W *(continued).*

Min	45	47	47	48	45	46
Max	77	75	78	68	69	68
Attention to Emotions						
M	44.55	45.79	43.40	45.66	42.86	44.35
SD	(9.47)	(9.39)	(7.38)	(7.19)	(7.42)	(7.46)
Min	16	26	28	19	22	34
Max	62	65	54	56	55	61
Clarity						
M	37.86	37.83	36.60	34.34	34.80	35.78
SD	(7.53)	(6.83)	(7.30)	(6.70)	(7.11)	(7.80)
Min	22	20	26	25	23	24
Max	53	54	51	52	55	51
Repair						
M	22.10	21.62	21.13	21.69	20.77	20.43

SD	(4.87)	(4.79)	(4.93)	(4.56)	(4.93)	(4.62)

Appendix W *(continued).*

Min	12	14	13	11	8	13
Max	30	30	30	30	30	30
Range						
M	24.86	26.10	25.29	24.39	22.97	23.35
SD	(4.58)	(5.38)	(4.53)	(3.80)	(4.41)	(3.45)
Min	15	12	19	14	16	18
Max	35	35	35	31	33	32
Differentiation						
M	25.64	24.87	25.92	22.97	22.59	23.45
SD	(4.69)	(5.42)	(6.32)	(4.11)	(4.35)	(5.16)
Min	14.00	15	14	15.00	13	13
Max	35.00	35	35	35.00	33	35
Prejudice						
M	15.41	15.82	16.93	17.69	18.40	18.65

SD	(4.44)	(4.48)	(3.28)	(4.37)	(4.52)	(4.00)

Appendix W *(continued)*.

Min	8	8	11	8	9	10
Max	25	24	24	27	32	27
Self Kindness						
M	3.30	3.32	3.16	3.30	3.11	3.15
SD	(0.63)	(0.84)	(0.80)	(0.63)	(0.68)	(0.85)
Min	1.60	1.80	1.80	2.00	1.00	1.00
Max	4.40	5.00	4.80	5.00	4.20	5.00
Self Judgment						
M	2.90	2.70	2.67	2.94	2.95	3.16
SD	(0.76)	(0.74)	(0.57)	(0.75)	(0.64)	(0.84)
Min	1.40	1.00	1.80	1.40	1.00	1.00
Max	4.60	4.00	3.80	4.20	4.60	4.40
Common Humanity						
M	3.44	3.45	3.38	3.52	3.03	3.39

SD	(0.93)	(0.78)	(0.84)	(0.79)	(0.82)	(0.84)

Appendix W *(continued)*.

Min	2.00	2.00	1.75	1.75	1.00	1.00
Max	5.00	5.00	5.00	5.00	5.00	5.00
Isolation						
M	2.92	2.83	2.75	3.03	2.93	3.13
SD	(1.00)	(0.91)	(1.00)	(0.85)	(0.92)	(0.88)
Min	1.00	1.00	1.00	1.00	1.00	1.00
Max	4.50	4.25	4.25	4.75	4.50	5.00
Mindfulness						
M	3.37	3.38	3.40	3.50	3.27	3.10
SD	(0.66)	(0.82)	(0.78)	(0.65)	(0.69)	(0.88)
Min	2.00	1.75	2.25	2.25	1.50	1.00
Max	5.00	5.00	5.00	5.00	4.50	5.00
Over-identification with Emotions						

M	3.06	2.91	2.68	3.00	2.84	3.02
SD	(0.86)	(0.74)	(0.87)	(0.80)	(0.79)	(0.81)

Appendix W *(continued)*.

Min	1.25	1.50	1.25	1.00	1.25	1.00
Max	4.50	4.50	5.00	4.75	4.50	4.50
Self Compassion						
M	19.18	19.72	19.79	19.34	18.68	18.33
SD	(2.95)	(3.21)	(3.30)	(3.08)	(3.18)	(2.21)
Min	12.95	15.60	13.20	13.00	8.90	13.30
Max	24.85	27.95	28.00	25.30	26.45	21.80
Locus of Control						
M	9.53	10.62	11.20	11.59	12.40	11.22
SD	(3.38)	(3.21)	(2.70)	(3.33)	(2.85)	(2.80)
Min	2	4	5	5	7	6
Max	16	18	15	20	18	17
Family Support						
M	5.18	4.86	4.71	5.05	4.77	5.03

SD	(1.33)	(1.28)	(0.95)	(0.75)	(0.92)	(0.91)

Appendix W *(continued)*.

Min	1.00	2.20	2.80	3.00	3.20	3.40
Max	7.00	7.00	6.00	6.80	7.00	6.80
Appearance						
M	4.30	4.44	4.23	4.17	4.11	4.03
SD	(1.50)	(1.00)	(1.15)	(0.96)	(0.92)	(1.07)
Min	1.00	2.20	2.60	1.80	1.40	2.20
Max	7.00	6.80	6.80	6.40	5.60	6.40
Academic						
M	5.54	5.26	5.19	5.50	4.91	5.18
SD	(1.35)	(1.26)	(1.08)	(1.07)	(1.14)	(0.83)
Min	2.00	3.00	3.60	2.80	3.00	4.00
Max	7.00	7.00	7.00	7.00	7.00	6.60
Approval						
M	3.06	3.57	2.72	3.31	3.27	3.15

SD	(1.26)	(0.95)	(1.04)	(1.02)	(1.01)	(1.12)

Appendix W *(continued)*.

Min	1.00	1.20	1.00	1.00	1.00	1.00
Max	5.40	5.40	4.00	5.20	4.80	5.60

Appendix X

Intercorrelations Between Dependent Variables Controlling for Gender, Need for Cognition, and IAT order effects(Study 3)

Construct	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Attachment Anxiety	—	.66**	-.23	-.44[a]	.27	.38	.08	-.68**	.34	-.52*	-.57*	-.04	-.14
2. Attachment Avoidance		—	-.13	-.55*	.33	.14	.23	-.47*	-.17	-.18	-.40	-.40	.00
3. Implicit Security			—	.51*	-.66**	.01	.23	.21	-.24	.11	.25	-.02	.06
4. Attachment Security				—	-.64**	.03	.17	.45[a]	-.02	.21	.42[a]	.38	.01
5. Fearful Attachment					—	.11	-.17	-.35	.30	-.05	-.31	-.05	.04
6. Preoccupied Attach.						—	.07	-.43[a]	.35	-.34	-.17	.11	.24
7. Dismissive Attach.							—	-.07	-.00	-.02	-.17	-.10	.15
8. Self Esteem								—	-.14	.26	.74**	.41[a]	-.07
9. Attention to Emotions									—	-.28	-.20	.75**	.19
10. Emotional Clarity										—	.51*	-.15	.65**
11. Emotional Repair											—	.24	.20
12. Emotional Range												—	.09
13. Emotional Diff.													—

Appendix X *(continued)*.

Construct	14	15	16	17	18	19	20	21	22	23	24	25
1. Attachment Anxiety	.10	-.65**	.55*	-.41	.52*	-.47*	.08	-.68**	-.42[a]	-.50*	-.55*	.05
2. Attachment Avoidance	-.09	-.51*	.36	-.50*	.44[a]	-.40	.08	-.58**	-.34	-.13	-.42[a]	.13
3. Implicit Security	-.46*	-.03	-.04	.22	-.37	.18	-.11	.22	.26	.18	-.09	.31
4. Attachment Security	.14	.10	-.26	.41	-.52*	.34	-.08	.44[a]	.49*	.11	.10	.33
5. Fearful Attachment	-.05	-.03	.26	-.14	.41	-.25	.42[a]	-.38	-.20	.03	-.12	-.28
6. Preoccupied Attach.	.18	-.10	.41	-.16	.22	-.17	.40	-.38	-.40	-.09	-.34	.08
7. Dismissive Attach.	-.14	-.36	-.18	-.09	-.28	-.22	-.03	-.04	-.29	.04	-.31	-.06
8. Self Esteem	.09	.55*	-.70**	.56*	-.33	.70**	-.29	.81**	.62**	.29	.53*	.09
9. Attention to Emotions	.05	.04	.10	.42[a]	.19	.06	.38	-.03	-.10	-.03	-.15	-.24
10. Emotional Clarity	-.51*	.52*	-.25	.14	-.38	.45[a]	-.16	.47*	.50*	.41[a]	.67**	.36
11. Emotional Repair	.01	.53*	-.49*	.39	-.32	.69**	-.19	.67**	.63**	.25	.74**	.31
12. Emotional Range	.28	.25	-.28	.65**	-.11	.47*	.18	.42[a]	.31	.04	.05	-.16
13. Emotional Diff.	-.48*	.49*	-.05	.12	-.20	.41	.12	.28	.06	.41	.29	.29

Appendix X *(continued)*.

Construct	26	27	28	29	30	31	32	33	34	35	36	37
1. Attachment Anxiety	-.30	-.29	-.03	-.43[a]	.15	.17	.01	.67**	-.37	-.32	.38	.17
2. Attachment Avoidance	-.28	-.16	-.18	-.31	-.04	.21	.14	.32	.00	.05	.12	.17
3. Implicit Security	.46*	-.05	-.14	.23	-.13	-.05	-.33	-.46*	.13	.10	-.17	-.14
4. Attachment Security	.40	.30	.35	.46*	-.01	.12	-.12	-.44[a]	.15	.15	-.12	-.26
5. Fearful Attachment	-.32	-.30	-.20	-.30	.35	.19	.32	.39	-.15	-.18	.04	.17
6. Preoccupied Attach.	-.28	-.30	-.08	-.31	.53*	-.03	.09	.03	.01	.00	-.04	.33
7. Dismissive Attach.	-.22	-.26	-.19	-.28	.16	.22	-.23	-.11	-.14	-.10	.19	.21
8. Self Esteem	.43[a]	.43[a]	.25	.58**	-.29	-.04	-.13	-.58**	.32	.35	-.13	-.18
9. Attention to Emotions	-.20	-.22	.27	-.15	.36	-.17	-.14	.31	-.50*	-.52*	.27	-.07
10. Emotional Clarity	.43[a]	.41[a]	.09	.63**	-.31	.38	-.02	-.30	.32	.21	-.50*	-.31
11. Emotional Repair	.59**	.69**	.14	.72**	-.23	.24	.01	-.48*	.48*	.43[a]	-.44[a]	-.02
12. Emotional Range	.22	.09	.38	.21	.09	-.21	-.24	.04	-.34	-.31	.28	-.35
13. Emotional Diff.	.20	.07	.16	.31	-.06	.18	-.10	-.18	-.01	-.11	-.26	-.16

Appendix X *(continued)*.

	14	15	16	17	18	19	20	21	22	23	24	25
14. Locus of Control	—	-.17	-.03	-.07	.03	-.06	.01	-.07	-.17	-.36	-.15	-.26
15. Self Kindness		—	-.39	.51*	-.22	.78**	-.15	.77**	.34	.27	.58**	.02
16. Self Judgment			—	-.23	.38	-.35	.46*	-.73**	-.34	.03	-.44[a]	.19
17. Common Humanity				—	-.02	.63**	.30	.55*	.60**	.24	.18	.02
18. Isolation					—	-.28	.38	-.56*	-.10	-.20	-.18	.02
19. Mindful						—	-.20	.83**	.59**	.19	.43[a]	.21
20. Over-identification							—	-.47*	.02	.43[a]	-.26	-.11
21. Self Compassion								—	.51*	.11	.53*	.03
22. Authority									—	.18	.43[a]	.37
23. Self Sufficiency										—	.36	.22
24. Superiority											—	.20
25. Exhibitionism												—

Appendix X *(continued)*.

	26	27	28	29	30	31	32	33	34	35	36	37
14. Locus of Control	-.27	.19	.10	-.23	.07	-.16	.13	.27	-.00	.10	.25	.19
15. Self Kindness	.18	.27	.04	.37	-.15	-.19	-.11	-.43[a]	.20	.12	-.34	-.11
16. Self Judgment	-.30	-.47*	-.15	-.31	.28	.12	.34	.51*	.09	.05	-.16	.23
17. Common Humanity	.24	.18	.24	.39	.23	-.08	.08	-.13	.06	-.01	-.23	-.33
18. Isolation	-.29	-.05	.14	-.15	.53*	-.07	.65**	.29	.05	.08	.06	-.05
19. Mindful	.53*	.34	.20	.56*	-.27	.06	-.16	-.32	.11	.05	-.21	-.22
20. Over-identification	-.16	-.32	.08	-.07	.66**	-.01	.54*	.26	.13	.03	-.31	-.06
21. Self Compassion	.44[a]	.43[a]	.12	.48*	-.41	-.06	-.43[a]	-.49*	.02	-.01	-.08	-.21
22. Authority	.70**	.50*	.42 [a]	.82**	-.16	.36	.15	-.18	.28	.18	-.42[a]	-.53*
23. Self Sufficiency	.16	-.10	.26	.44[a]	-.06	.02	.20	-.39	.48*	.42[a]	-.46*	-.09
24. Superiority	.30	.63**	.21	.65**	-.32	.08	.03	-.35	.49*	.44[a]	-.45[a]	-.12
25. Exhibitionism	.39	.39	.45[a]	.66**	-.17	.62**	.30	-.22	.50*	.50*	-.32	-.04

Appendix X *(continued)*.

Construct	26	27	28	29	30	31	32	33	34	35	36	37
26. Exploitation	—	.37	.26	.73**	-.29	.30	-.05	-.27	-.01	-.03	-.04	-.53*
27. Vanity		—	.37	.65**	-.28	.22	.19	-.21	.33	.33	-.21	-.19
28. Entitlement			—	.63**	-.12	.15	.28	-.12	.05	.06	-.01	-.37
29. Overall Narcissism				—	-.30	.40	.23	-.37	.45[a]	.39	-.42[a]	-.43[a]
30. Family Support					—	-.02	.56*	.05	-.02	-.02	.02	.06
31. Appearance						—	.27	.18	.26	.21	-.29	.15
32. Academics							—	.07	.43[a]	.44[a]	-.26	-.04
33. Approval								—	-.32	-.37	.11	.03
34. IRMS									—	.96**	-.75**	.22
35. Intrinsic Religiosity										—	-.54*	.20
36. Extrinsic Religiosity											—	-.19
37. Prejudice												—

[a]$p < .08$.
*$p < .05$. ** $p < .01$.

Appendix Y

Conditions Compared for All Participants, Including any Effects of Gender, Covariates on Dependent Variables, and Interactions of Gender x Condition (Study 3)

Change in Dependent Variable	Mean Change by Condition				Effect			
	Experimental		Control					
	Post	Follow	Post	Follow	Pre -Post		Pre-Follow	
Attachment Anxiety	0.23	0.36	0.30	0.32	F(1,56) = 2.28	NS	F(1,33) = 6.49 .016	
Baseline value	(1.01)	(0.20)	(1.10)	(0.16)	F(1,56) = 34.94	.00	F(1,33) = 27.68 .00	
Need for Cognition						NS		NS
Gender						NS	F(1,33) = .087 NS	
Gender x Condition						NS	F(1,33) = 8.88 .005	
Attachment Avoidance		- 0.30		- 0.05	F(1,55) = 0.03	NS	F(1,34) = 0.22 NS	
Baseline value		(0.28)		(0.28)	F(1,55) = 13.30	.001	F(1,34) = 6.38 .016	
Need for Cognition						NS		NS
Gender						NS		NS
Gender x Condition						NS		NS

Appendix Y *(continued).*

Implicit Security	-0.90	0.24	2.21	- 0.83	F(1,15) = 3.97	.065	F(1,17) = 0.16 NS	
Baseline value	(1.07)	(1.85)	(1.01)	(1.65)	F(1,15) = 32.92	.00	F(1,17) = 3.80 .068	
Need for Cognition					F(1,15) = 26.75	.000		NS
Gender					F(1,15) = 20.66	.00		NS
Gender x Condition						NS		NS
Attachment Security (RQ)	1.01	0.78	0.66	0.23	F(1, 57) = 0.89	NS	F(1, 35) = 1.70 NS	
Baseline value	0.26)	0.32)	0.26)	0.26)	F(1, 57) = 30.37	.000		F(1, 35) = 15.13 .000
Need for Cognition						NS		NS
Gender						NS		NS
Gender x Condition						NS		NS
Fearful Attachment (RQ)	- 0.12	0.58	0.05	0.28	F(1, 56) = 0.17	NS	F(1, 35) = 0.35	NS
Baseline value	(0.29)	(0.40)	(0.29)	(0.32)	F(1, 56) = 51.78	.000		F(1, 35) = 15.18 .000
Need for Cognition						NS		NS
Gender						NS		NS
Gender x Condition						NS		NS

Appendix Y *(continued).*

Preoccupied Attachment (RQ)	- 0.11	- 0.33	0.01	0.46	F(1, 56) = 0.12	NS	F(1, 35) = 0.66	NS
Baseline value	(0.25)	(0.47)	(0.24)	(0.38)	F(1, 56) = 40.00	.000	F(1, 35) = 21.42	.000
Need for Cognition						NS		NS
Gender						NS		NS
Gender x Condition						NS		NS
Dismissive Attachment (RQ)	- 0.28	- 0.67	0.74	0.14	F(1, 57) = 5.57	.022	F(1, 35) = 2.42	NS
Baseline value	(0.30)	(0.40)	(0.30)	(0.32)	F(1, 57) = 34.77	.000	F(1, 35) = 12.63	.001
Need for Cognition						NS		NS
Gender						NS		NS
Gender x Condition						NS		NS
Self Esteem	- 0.10	0.10	- 0.97	- 1.28	F(1,57) = 0.68	NS	F(1,35) = 1.00	NS
Baseline value	(0.74)	(1.07)	(0.74)	(0.86)	F(1,57) =19.79	.000	F(1,35) = 22.76	.000
Need for Cognition						NS		NS
Gender						NS		NS
Gender x Condition						NS		NS

Appendix Y *(continued).*

Intrinsic IRMS Subscale	- 0.08	0.06	0.01	- 0.02	F(1,57) = 0.31	NS	F(1,36) = 0.22 NS	
Baseline value	(0.09)	(0.613)	(0.09)	(0.38)	F(1,57) = 20.40	.000		NS
Need for Cognition						NS		NS
Gender						NS		NS
Gender x Condition						NS		NS
Extrinsic IRMS Subscale	0.08	- 0.22	0.16	- 0.02	F(1,56) = 0.82	NS	F(1,35) = 0.73 NS	
Baseline value	(0.12)	(0.18)	(0.12)	(0.15)	F(1,56) = 25.37	.000	F(1,35) = 10.20 .003	
Need for Cognition						NS		NS
Gender						NS		NS
Gender x Condition						NS		NS
Authority	- 0.16	0.56	- 0.88	- 0.19	F(1,56) = 3.14	.08	F(1,35) = 1.17 NS	
Baseline value	(0.29)	(0.42)	(0.29)	(0.34)	F(1,56) =26.85	.000		F(1,35) = 12.81 .001
Need for Cognition						NS		NS
Gender						NS		NS
Gender x Condition						NS		NS

Appendix Y *(continued).*

Self Sufficiency	- 0.40		- 0.14		F(1,54) = 0.60	NS	F(1,35) = 0.00 NS	
Baseline value	(0.25)		(0.23)		F(1, 54) = 47.31	.000	F(1,35) = 9.73 .004	
Need for Cognition						NS		NS
Gender						NS		NS
Gender x Condition					F(1,54) =4.99	.03	F(1,36) = 0.40 NS	
Superiority	- 0.25		- 0.55		F(1,57) = 0.74	NS		NS
Baseline value	(0.25)		(0.25)		F(1,57) = 21.50	.000		NS
Need for Cognition						NS		NS
Gender						NS		NS
Gender x Condition						NS		NS
Exhibitionism	- 0.02	0.71	- 0.02	0.55	F(1,54) =0.82	NS		F(1,33) = 0.11 NS
Baseline value	(0.12)	(0.39)	(0.12)	(0.31)	F(1,54) =22.81	.000		F(1,33) = 6.39 .016
Need for Cognition					F(1,54) = 4.23	.045		NS
Gender						NS		NS
Gender x Condition						NS		NS

Appendix Y *(continued).*

Exploitation	0.09	0.26	0.55	0.44	F(1, 56) = 2.64	NS		F(1, 35) = 0.23 NS
Baseline value	(0.20)	(0.30)	(0.20)	(0.24)	F(1, 56) = 25.70	.000		F(1, 35) =15.86 .000
Need for Cognition						NS		NS
Gender						NS		NS
Gender x Condition						NS		NS
Vanity	0.25	0.52	- 0.04	0.33	F(1, 55) = 1.53	NS	F(1, 34) = 0.88 NS	
Baseline value	(0.16)	(0.22)	(0.16)	(0.18)	F(1, 55) = 16.92	.000	F(1, 34) = 5.68 .023	
Need for Cognition					F(1, 55) = 3.21	.079		NS
Gender						NS		NS
Gender x Condition						NS		NS
Entitlement	- 0.22	0.74	- 0.44	0.04	F(1, 55) = 0.32	NS	F(1, 34) = 1.63 NS	
Baseline value	(0.28)	(0.42)	(0.28)	(0.34)	F(1, 55) = 25.83	.000	F(1, 34) = 3.49 .07	
Need for Cognition						NS		NS
Gender						NS		NS
Gender x Condition						NS		NS

Appendix Y *(continued)*.

Overall Narcissism	- 0.77	1.90	-1.28	1.92	F(1, 56) = 0.16	NS	F(1, 32) = 0.00	NS
Baseline value	(0.93)	(1.30)	(0.89)	(1.06)	F(1, 56) = 22.07	.000	F(1, 32) = 6.22	.018
Need for Cognition						NS		NS
Gender						NS		NS
Gender x Condition						NS		NS
Attention to Emotions	1.91	- 0.08	-1.95	- 0.17	F(1, 54) = 4.21	.045	F(1,34) = 0.001	NS
Baseline value	(1.34)	(2.03)	(1.32)	(1.57)	F(1, 54) = 16.36	.000	F(1,34) = 19.13	.000
Need for Cognition						NS		NS
Gender						NS		NS
Gender x Condition						NS		NS
Clarity	1.34	- 0.26	-0.69	1.30	F(1,55) = 1.28	NS	F(1,35) = 0.55	NS
Baseline value	(1.27)	(1.62)	(1.23)	(1.30)	F(1,55) = 29.64	.000	F(1,35) = 4.42	.043
Need for Cognition						NS		NS
Gender						NS		NS
Gender x Condition						NS		NS

Appendix Y *(continued).*

Repair	- 0.16	-0.60	- 0.96	- 1.17	F(1, 55) = 0.59	NS	F(1,35) = 0.18 NS	
Baseline value	(0.75)	(1.05)	(0.73)	(0.85)	F(1,55) = 11.80	.001	F(1,35) = 10.41 .003	
Need for Cognition						NS		NS
Gender						NS		NS
Gender x Condition						NS		NS
Range	1.68	1.81	-1.39	- 0.72	F(1,53) = 7.93	.007	F(1,33) = 4.24 .047	
Baseline value	(0.78)	(0.98)	(0.75)	(0.74)	F(1,53) = 12.77	.001	F(1,33) = 12.63 .001	
Need for Cognition						NS		NS
Gender						NS		NS
Gender x Condition						NS		NS
Differentiation		1.56		- 1.32	F(1,53) = 0.00	NS	F(1,30) = 2.88 NS	
Baseline value		(1.32)		(1.06)	F(1,53) = 13.57	.001	F(1,30) = 5.66 .024	
Need for Cognition						NS		NS
Gender						NS		NS
Gender x Condition					F(1,53) = 3.58	.064		NS

Appendix Y *(continued)*.

Prejudice		0.80		1.69	F(1,53) = 0.00	NS	F(1,35) = 0.58 NS	
Baseline value		(0.90)		(0.72)	F(1,53) = 14.62	.000	F(1,35) = 24.68 .000	
Need for Cognition						NS		NS
Gender					F(1,53) = 14.33	.000		NS
Gender x Condition								NS
Self Kindness		-0.06		-0.17	F(1,54) = 0.45	NS	F(1,35) = 0.24 NS	
Baseline value		(0.02)		(0.69)	F(1,54) = 5.48	.023		NS
Need for Cognition						NS		NS
Gender						NS		NS
Gender x Condition					F(1,54) = 4.47	.039		NS
Self Judgment	- 0.26	-0.27	- 0.03	0.21	F(1, 56) = 2.00	NS	F(1,33) = 3.33 .077	
Baseline value	(0.12)	(0.21)	(0.11)	(0.16)	F(1, 56) = 27.75	.000	F(1,33) = 22.34 .000	
Need for Cognition						NS		NS
Gender						NS		NS
Gender x Condition						NS		NS

Appendix Y *(continued).*

Common Humanity	-0.002	-0.02	- 0.48	-0.06	F(1, 55) = 6.49	.014	F(1, 35) = 0.02 NS	
Baseline value	(0.13)	(0.21)	(0.13)	(0.17)	F(1, 55) = 39.13	.000	F(1, 35) = 16.03 .000	
Need for Cognition					F(1, 55) = 4.97	.03		NS
Gender						NS		NS
Gender x Condition						NS		NS
Isolation					F(1, 57) = 0.02	NS	F(1, 35) = 1.27 NS	
Baseline value					F(1, 57) = 20.75	.000	F(1, 35) = 17.92 .000	
Need for Cognition								
Gender								
Gender x Condition								
Mindfulness	- 0.02	0.05	- 0.20	- 0.36	F(1, 57) = 1.02	NS	F(1, 36) = 2.62 NS	
Baseline value	(0.13)	(0.56)	(0.13)	(0.87)	F(1, 57) = 13.74	.000		NS
Need for Cognition						NS		NS
Gender						NS		NS
Gender x Condition						NS		NS

Appendix Y *(continued)*.

Over-identification with Emotions	- 0.14	- 0.43	- 0.19	- 0.08	F(1, 57) = 0.09	NS	F(1, 35) = 1.60 NS	
Baseline value	(0.12)	(0.22)	(0.12)	(0.18)	F(1, 57) = 28.07	.000	F(1, 35) = 31.87 .000	
Need for Cognition						NS		NS
Gender						NS		NS
Gender x Condition						NS		NS
Self Compassion	0.51	0.61	-0.52	-0.69	F(1,55) = 2.56	NS	F(F(1,31) = 2.86 NS	
Baseline value	(0.46)	(0.63)	(0.45)	(0.43)	F(1,55) = 9.07	.004	F(1,31) = 11.43 .002	
Need for Cognition						NS		NS
Gender						NS		NS
Gender x Condition						NS	F(1,31) = 3.93 .056	
Locus of Control	0.62	0.25	1.50	0.01	F(1,54) = 1.17	NS	F(1, 35)= 0.07 NS	
Baseline value	(0.58)	(0.70)	(0.54)	(0.56)	F(1,54) = 49.92	.000	F(1, 35)= 23.17 .000	
Need for Cognition						NS		NS
Gender						NS		NS
Gender x Condition					F(1,54) = 3.57	.064		NS

Appendix Y *(continued).*

Family Support	- 0.29	- 0.28	- 0.31	-0.25	F(1, 56) = 0.003	NS	F(1, 36) = 0.01 NS	
Baseline value	(0.20)	(0.31)	(0.19)	(0.24)	F(1, 56) = 21.65	.000	F(1, 36) =7.68 .009	
Need for Cognition						NS		NS
Gender						NS		NS
Gender x Condition						NS		NS
Appearance	0.19	0.15	-0.10	- 0.05	F(1, 56)= 1.74	NS		F(1, 35) = 0.36 NS
Baseline value	(0.16)	(0.26)	(0.16)	(0.21)	F(1, 56) = 52.17	.000	F(1, 35) = 21.92 .000	
Need for Cognition						NS		NS
Gender						NS		NS
Gender x Condition						NS		NS
Academic Success	-0.31	- 0.44	-0.62	- 0.44	F(1, 56) = 1.38	NS	F(1, 35) =0.05 NS	
Baseline value	(0.19)	(0.28)	(0.19)	(0.28)	F(1, 56) = 18.67	.000		F(1, 35) = 29.38 .000
Need for Cognition						NS		NS
Gender						NS		NS
Gender x Condition						NS		NS

Appendix Y *(continued)*.

Approval from others	0.43	- 0.10	0.02	0.08	F(1, 55)= 3.58	.064	F(1, 34) = 0.30 NS	
Baseline value	(0.16)	(0.25)	(0.15)	(0.20)	F(1, 55) = 30.18	.000	F(1, 34) = 13.38 .001	
Need for Cognition						NS		NS
Gender						NS		NS
Gender x Condition						NS		NS

Appendix Z

Confirmatory Intercorrelations Between Attachment and Spirituality[a] *(Study 3)*

Construct	1	2	3	4	5	6	7	8	9
1. IRMS	–	.96**	-.60**	.40**	-.16	-.12	-.31*	-.09	-.14
2. Intrinsic Religiosity subscale		–	-.34**	.37**	-.12	-.12	-.27*	-.06	-.17
3. Extrinsic Religiosity subscale			–	-.27*	.19	.04	.24[b]	.12	-.03
4. Attachment Security				–	-.46**	-.06	-.17	-.16	-.44**
5. Fearful Attachment					–	.10	.001	.22	.38**
6. Preoccupied Attachment						–	-.01	.43**	.06
7. Dismissive Attachment.							–	-.07	.11
8. Attachment Anxiety								–	.31*
9. Attachment Avoidance									–

[a]n = 56

[b]p = .067

*p < .05. ** p < .01.

Appendix AA: Recruitment Talk

Research in Psychology

Raelene Joran, PhD Candidate
Psychology Department
Rutgers, Newark

Outline of Talk

- t Rutgers: what it means for you
- research
- ychologist asked and what
  -
  -
  -
- utgers-
-
-

Psychological Research and YOU

- versity is a research institution
- uct, write, and publish
- any sources
  000
- mous or
  t relevant
-

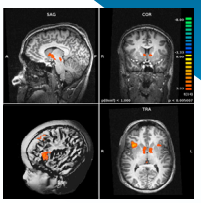
Research at Rutgers University

- ffective Neuroscience
  - siological and behavioral measures on ing and thinking in the human brain decision making
  - haped by rewards and
-
  - others
  - pret the intent
  -
-
  -
  -
  -

Research at Rutgers University

- ffective Neuroscience
  - siological and behavioral measures on ing and thinking in the human brain decision making
  - haped by rewards and
- Cognitive Psychology
  - how autistic individuals perceive others
  - how our visual system helps us to interpret the intent conveyed in subtle body movements
  - How infants learn
- Social Psychology
  - Coping and Social Support
  - Attachment
  - Conflict and Mediation

Social and Affective Neuroscience



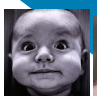
- Lie still in a MRI scanner while performing some task or thinking about specific things
- Which parts of the ain are active?
- d research in
  gy,

Research at Rutgers University

- Social and Affective Neuroscience
  - fMRI studies physiological and behavioral measures on interaction of feeling and thinking in the human brain during learning and decision making
  - how behavior can be shaped by rewards and punishments
-
  - others
  - pret the intent
  -
- Social Psychology
  - Coping and Social Support
  - Attachment
  - Conflict and Mediation

Cognitive Psychology

- bies learn?
- develop language?



stand
they
g.

Cognitive Psychology

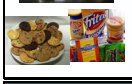
- Understand how the visual system interprets moving objects.
- How visual xperience, motor erience, and rocesses all to the of t.

Research at Rutgers University

- Social and Affective Neuroscience
  - fMRI studies physiological and behavioral measures on interaction of feeling and thinking in the human brain during learning and decision making
  - how behavior can be shaped by rewards and punishments
- Cognitive Psychology
  - how autistic individuals perceive others
  - how our visual system helps us to interpret the intent conveyed in subtle body movements
  - How infants learn
-
  -
  -
  -

Social Psychology

why do k, feel, do?

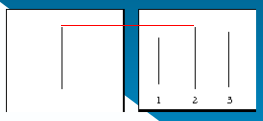


Why do people follow the herd?

Solomon Eliot Asch (1907 – 1996)

- Mentored by Gestalt psychologist Max Wertheimer at Columbia University
- Experimentally established mainstream view in social psychology: ehavior is not a response world as it is, but rld as *perceived*."
- LOGY (1952)
- n dent

The Question:



e lines on the right line on the left?

Asch Conformity Experiment

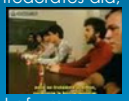
Results (Asch, 1955)

- ple denied what they saw and the confederates who gave the
- d independent
  - 're confident in what they
- wers all the time
  - they're right" or
  - first t still

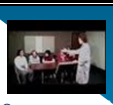
Asch modern replication

But…

- ld we know that participants gave vers *because* the confederates did, me other reason?
-
-
- federates wers ount of wrong
- te in the rtant in



Does the *number* of people make a difference?



- confederates giving wrong
- t answered correctly
- 13.6%
-

What if… another participant agrees with you?

give the right answer or go with y? Why?

nswers 75% less of the time

..reasonably intelligent ung people are willing atter of concern. It ways of es that guide

was rm

So why do research?

Because it's fun!

Not for money…

Curiosity
Desire for truth
plain phenomena
the human
ledge

So why do research?

Not for money…

Curiosity
Desire for truth
plain phenomena
the human
ledge

To explain phenomena

- d Latane questioned how is it an not respond to a crime, sent person?

Darley_bystander effect

To better the human condition…

- mon Asche Center, nsylvania
  - education, practice, up conflict and
  - 

To further knowledge…

- earchers build upon research already asking more questions, like laying bricks, building a strong ucture upon a foundation.
- ntribution sparks more ch
- of Asch, and on
  - 

Milgram's Shocking Experiment

- ipants randomly assigned to be learner or n experiment to study how people
- thority figure) s how to cks ments
  - 
- cks learner

Milgram's Shocking Experiment

ipant gets a k before d helps n the

cher could not see who was next could hear and with rner t.

If you were teacher, would you have shocked the learner?

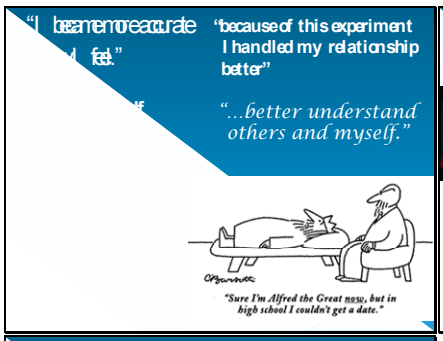
es until r's

But it wasn't real!

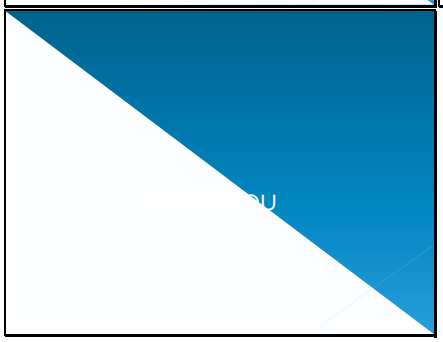
- didn't really deliver shocks
- lways a confederate; ged
- t performed today
- pproval for the

Learning and Relationships

- e: to determine how different types of ight affect relationships
- nester; one session next semester
- completing questionnaires st, you will be randomly conditions, after me more
  - ovie clips, role- cussions,
  -
  - d


"I been more accurate
feel."
"because of this experiment
I handled my relationship
better"
"...better understand
others and myself."
"Sure I'm Alfred the Great now, but in
high school I couldn't get a date."


Without participants, none of this is possible.
Behind every researcher are participants
who deserve credit for what is discovered.
32
USA
I WANT YOU



Appendix BB: Changed Measures (Study 4)

(ECR-R) pretest

The 18 items below concern how you generally feel in emotionally close relationships. Respond to each statement by indicating how much you disagree or agree with it by placing a number from 1 to 7 in front of the item.

1----------2----------3----------4----------5----------6----------7
NOT TRUE SOMEWHAT TRUE VERY TRUE

_____1. I find it difficult to allow myself to depend on romantic partners.

_____2. I talk things over with my partner.

_____3. I do not often worry about being abandoned.

_____4. I worry a lot about my relationships.

_____5. My partner really understands me and my needs.

_____6. I am nervous when partners get too close to me.

_____7. It's not difficult for me to get close to my partner.

_____8. It helps to turn to my romantic partner in times of need.

_____9. When my partner is out of sight, I worry that he or she might become interested in someone else.

_____10. I'm afraid that I will lose my partner's love.

_____11. My partner only seems to notice me when I'm angry.

_____12. I don't feel comfortable opening up to romantic partners.

_____13. I prefer not to be too close to romantic partners.

_____14. I get uncomfortable when a romantic partner wants to be very close.

_____15. When I show my feelings for romantic partners, I'm afraid they will not feel the same about me.

_____16. I rarely worry about my partner leaving me.

_____17. I find that my partner(s) don't want to get as close as I would like.

_____18. I worry that I won't measure up to other people.

(ECR-R) posttest

The 18 items below concern how you generally feel in emotionally close relationships. Respond to each statement by indicating how much you disagree or agree with it by placing a number from 1 to 7 in front of the item.

1----------2----------3----------4----------5----------6----------7
NOT TRUE SOMEWHAT TRUE VERY TRUE

_____1. Sometimes romantic partners change their feelings about me for no apparent reason.

_____2. I often wish that my partner's feelings for me were as strong as my feelings for him or her.

_____3. I feel comfortable sharing my private thoughts and feelings with my partner.

_____4. I am very comfortable being close to romantic partners.

_____5. My romantic partner makes me doubt myself.

_____6. I find it easy to depend on romantic partners.

_____7. I usually discuss my problems and concerns with my partner.

_____8. It's easy for me to be affectionate with my partner.

_____9. My desire to be very close sometimes scares people away.

_____10. I worry that romantic partners won’t care about me as much as I care about them.

_____11. It makes me mad that I don't get the affection and support I need from my partner.

_____12. I often worry that my partner will not want to stay with me.

_____13. I tell my partner just about everything.

_____14. I often worry that my partner doesn't really love me.

_____15. I find it relatively easy to get close to my partner.

_____16. I'm afraid that once a romantic partner gets to know me, he or she won't like who I really am.

_____17. I feel comfortable depending on romantic partners.

_____18. I prefer not to show a partner how I feel deep down.

IRI (Davis, 1980)

The following statements inquire about your thoughts and feelings in a variety of situations. For each item, indicate how well it describes you by choosing the appropriate letter on the scale at the top of the page: A, B, C, D, or E. When you have decided on your answer, fill in the letter on the answer sheet next to the item number. READ EACH ITEM CAREFULLY BEFORE RESPONDING. Answer as honestly as you can. Thank you.

ANSWER SCALE:

A	B	C	D	E
DOES NOT DESCRIBE ME WELL				DESCRIBES ME VERY WELL

_____ 1. I am often quite touched by things that I see happen.

_____ 2. I try to look at everybody's side of a disagreement before I make a decision.

_____ 3. I often have tender, concerned feelings for people less fortunate than me.

_____ 4. When I see someone being taken advantage of, I feel kind of protective towards them.

_____ 5. I believe that there are two sides to every question and try to look at them both.

_____ 6. Other people's misfortunes do not usually disturb me a great deal.

_____ 7. When I'm upset at someone, I usually try to "put myself in his shoes" for a while.

_____ 8. I sometimes feel helpless when I am in the middle of a very emotional situation.

_____ 9. When I see someone being treated unfairly, I sometimes don't feel very much pity for them.

_____ 10.I sometimes try to understand my friends better by imagining how things look from their perspective.

_____ 11. Being in a tense emotional situation scares me.

_____ 12. Before criticizing somebody, I try to imagine how I would feel if I were in their place.

_____ 13. I am usually pretty effective in dealing with emergencies.

_____ 14. I tend to lose control during emergencies.

_____ 15. I sometimes find it difficult to see things from the "other guy's" point of view.

_____ 16. When I see someone who badly needs help in an emergency, I go to pieces.

_____ 17. If I'm sure I'm right about something, I don't waste much time listening to other people's arguments.

_____ 18. Sometimes I don't feel very sorry for other people when they are having problems.

_____ 19. In emergency situations, I feel apprehensive and ill-at-ease.

_____ 20. I would describe myself as a pretty soft-hearted person.

_____ 21. When I see someone get hurt, I tend to remain calm.

NPI: exploitation, self sufficiency, and authority subscales (Raskin & Terry, 1988)

Instructions: In each of the following pairs of attitudes, choose the one that you **MOST AGREE** with. Mark your answer by writing **EITHER A** or **B** in the space provided. Only mark **ONE ANSWER** for each attitude pair, and please **DO NOT** skip any items.

_____ 1. A Sometimes I tell good stories.
B Everybody likes to hear my stories

_____ 2. A I like having authority over other people.
B I don't mind following orders.

_____ 3. A I would prefer to be a leader.
B It makes little difference to me whether I am a leader or not.

_____ 4. A I will be a success.
B I am not too concerned about success.

_____ 5. A I always know what I am doing.
B Sometimes I am not sure what I am doing.

_____ 6. A I sometimes depend on people to get things done.
B I rarely depend on anyone else to get things done.

_____ 7. A I can usually talk my way out of anything.
B I try to accept the consequences of my behavior.

_____ 8. A I am assertive.
B I wish I were more assertive.

_____ 9. A Being an authority doesn't mean that much to me.
B People always seem to recognize my authority.

_____ 10. A I find it easy to manipulate people.
B I don't like it when I find myself manipulating people.

_____ 11. A I have a natural talent for influencing people.
B I am not good at influencing people.

_____ 12. A I can read people like a book.
B People are sometimes hard to understand.

_____ 13. A I am more capable than other people.
B There is a lot that I can learn from other people.

_____ 14. A I am not sure if I would make a good leader.

B I see myself as a good leader.

_____ 15. A I am going to be a great person.
B I hope I am going to be successful.

_____ 16. A I am a born leader.
B Leadership is quality that takes time to develop.

_____ 17. A If I feel competent I am willing to take responsibility for making decisions.
B I like to take responsibility for making decisions.

_____ 18. A People sometimes believe what I tell them.
B I can make anybody believe anything I want them to.

_____ 19. A I can live my life in any way I want to.
B People can’t always live their lives in terms of what they want.

SCS (Neff, 2003b) self-kind and common humanity subscales
HOW I TYPICALLY ACT TOWARDS MYSELF IN DIFFICULT TIMES

Please read each statement carefully before answering. To the left of each item, indicate how often you behave in the stated manner, using the following scale:

Almost never				Almost always
1	2	3	4	5

_____ 1. I'm tolerant of my own flaws and inadequacies.

_____ 2. When I'm down, I remind myself that there are lots of other people in the world feeling like I am.

_____ 3. When I feel inadequate in some way, I try to remind myself that feelings of inadequacy are shared by most people.

_____ 4. I'm kind to myself when I'm experiencing suffering.

_____ 5. I try to be understanding and patient towards those aspects of my personality I don't like.

_____ 6. When things are going badly for me, I see the difficulties as part of life that everyone goes through.

_____ 7. I try to be loving towards myself when I'm feeling emotional pain.

_____ 8. When I'm going through a very hard time, I give myself the caring and tenderness I need.

_____ 9. I try to see my failings as part of the human condition

TMMS (Salovey et al, 1995) attention subscale

Instructions: Please read each statement and decide whether or not you agree with it. Place a number in the blank line next to each statement using the following scale:

1	**2**	**3**	**4**	**5**
Strongly Disagree	Somewhat Disagree	Neither Agree or Disagree	Somewhat Agree	Strongly Agree

____ 1. Feelings are a weakness people have.

____ 2. People would be better off if they felt less and thought more.

____ 3. It is usually a waste of time to think about your emotions.

____ 4. One should never be guided by emotions.

____ 5. Feelings give direction to life.

____ 6. I don't usually care much about what I'm feeling.

____ 7. The best way for me to handle my feelings is to experience them to the fullest.

____ 8. I pay a lot of attention to how I feel.

____ 9. I never give in to my emotions.

____ 10. I don't think it's worth paying attention to your emotions or moods.

____ 11. I believe in acting from the heart.

____ 12. I don't pay much attention to my feelings.

____ 13. I often think about my feelings.

Attachment Awareness Questions

1. It is possible to spoil a baby by responding sensitively and consistently to their needs when they cry or by holding them when they cry.

1	2	3	4	5	6	7
definitely			maybe			not at all

2. Can a parent, by the way they respond to their child when the child expresses a need or feeling, affect that child's mental health and ability to relate to others as adults?

1	2	3	4	5	6	7
definitely			maybe			not at all

3. We appear to be programmed to be in relationships with others beginning with our caregivers.

1	2	3	4	5	6	7
definitely			maybe			not at all

4. Before becoming independent, a young child must first be dependent on others who capably meet their needs for security and attention.

1	2	3	4	5	6	7
definitely			maybe			not at all

5. Caretakers (mother, father, grandparents, uncle/aunt, foster parents, adoptive parents) sometimes hurt a child's body and/or feelings or don't give a child the love or attention the child needs because the caretakers can't for their own reasons, not because it's the child's fault.

1	2	3	4	5	6	7
Definitely			maybe			Not at all

6. You can help a person to be less upset and also find solutions to their problems when you listen to them with empathy and reflect their feelings back to them.

1	2	3	4	5	6	7
Definitely			maybe			Not at all

7. If your friend (or boyfriend/girlfriend) does not want to go out when you want to go out with them, it's always because they don't want to be with you or are upset at you.

1	2	3	4	5	6	7
Definitely			maybe			Not at all

8. The way you behave, which is your choice, affects your self-image and the way others treat you.

1	2	3	4	5	6	7

Definitely maybe Not at all

WQ-r

1. What is your current relationship status? (Please circle all that apply.)
   a) unchanged
   b) current relationship ended
   c) began seeing someone else

2. If your current relationship status is unchanged from last week, please rate your satisfaction with the relationship (Please circle one number):

1	2	3	4	5	6	7
not satisfied			about the same			very satisfied

3. How satisfied are you with your current relationship status this week as compared to last week? (Please circle one number.)

1	2	3	4	5	6	7
less satisfied			about the same			more satisfied

(PSTQ)

1. ***During the course of this experiment***, did anyone to whom you felt close die? y/n

2. If yes, please specify:

3. ***During the course of this experiment***, did your parents divorce? y/n

4. ***During the course of this experiment***, did you, your parents or siblings have any children? y/n

5. If yes, please specify:

6. Please note any accomplishments or failures that are of significance to you that you experienced ***during the course of this experiment***. (some examples might be:

acing or failing an important test; getting a promotion at work/getting hired or getting fired; getting complimented or insulted by someone very significant in your life.)

7. What did you learn from this experiment?

8. Was what you learned personally relevant to you?

9. Did it affect your interpersonal relationships this semester? If so, how?

10. Do you give permission for your academic records to be accessed to assess any effects of the intervention?
(please circle one:) Yes No

11. Would you be willing to participate in follow-up assessments in the future that could help others?
(please circle one:) Yes No

Course Evaluations

Your responses are totally anonymous and may help shape this class in the future. Thank you.

What were the most helpful aspects of this class for you? Please explain.

Is there anything about this class you did not like? Please explain.

How do you feel about yourself after participating in this class? Why do you think you feel this way?

How do you now feel about caretakers such as parents, aunts, uncles, etc? Friends? Boyfriends or girlfriends?

_____
_____
_____
_____
_____

Some people have found that as a result of taking this class their perceptions of themselves and/or specific other people have **changed**. The following questions address this.

My feelings about myself **changed** as a result of this class:

1	2	3	4	5	6	7
not at all			**maybe**			**definitely**

If you answered 4-7: *How* have your feelings about yourself changed as a result of taking this class? *Why* do you think your feelings about yourself have changed as a result of taking this class?

_____
_____
_____
_____
_____
_____
_____
_____
_____

If you answered 1-3: *Why* do you think your feelings about yourself have not changed as a result of taking this class?

_____
_____
_____
_____
_____
_____
_____
_____

My feelings about specific people have **changed** as a result of this class:

1	2	3	4	5	6	7
not at all			**maybe**			**definitely**

If you answered 4- 7: *Who* have you noticed a change in your feelings towards (*please indicate your relationship with each person about whom your feelings have changed*)? *How* have your feelings changed? *Why* do you think your feelings have changed this way as a result of taking this class?

_____

_____

_____

_____

_____

_____

_____

_____

If you answered 1-3: *Why* do you think your feelings towards other people have *not changed* as a result of taking this class?

_____

_____

_____

_____

_____

_____

_____

_____

How satisfied are you with your experience at Rutgers this semester?
1----------2----------3----------4----------5----------6----------7
NOT SATISFIED VERY SATISFIED

Currently, how satisfied are you overall with your relationships with your friends?
1----------2----------3----------4----------5----------6----------7
NOT SATISFIED VERY SATISFIED

Currently, how satisfied are you overall with your relationships with your parents/ caretakers?
1----------2----------3----------4----------5----------6----------7
NOT SATISFIED VERY SATISFIED

In this class, how free did you feel to express your feelings?
1----------2----------3----------4----------5----------6----------7
NOT SATISFIED VERY SATISFIED

In this class, to what degree did you actually express your feelings?
1----------2----------3----------4----------5----------6----------7

NOT AT ALL VERY MUCH

How often did you get sick this semester?
1----------2----------3----------4----------5----------6----------7
NEVER VERY OFTEN

How stressed did you feel about school this semester?
1----------2----------3----------4----------5----------6----------7
NOT STRESSED VERY STRESSED

How much did this class allow you to talk about personal experiences?
1----------2----------3----------4----------5----------6----------7
NOT A LOT VERY MUCH

How much did this class allow you to feel understood?
1----------2----------3----------4----------5----------6----------7
NOT AT ALL VERY MUCH

How much did this class allow you to feel sense of belonging?
1----------2----------3----------4----------5----------6----------7
NOT AT ALL VERY MUCH

How much did this class allow you to feel valued?
1----------2----------3----------4----------5----------6----------7
NOT AT ALL VERY MUCH

How much did you like other people in this class?
1----------2----------3----------4----------5----------6----------7
NOT AT ALL VERY MUCH

Did you increase your liking of other people in this class?
1----------2----------3----------4----------5----------6----------7
NOT AT ALL VERY MUCH

Did you decrease your liking of other people in this class?
1----------2----------3----------4----------5----------6----------7
NOT AT ALL VERY MUCH

To what degree did you increase your understanding of other people as a result of this class?
1----------2----------3----------4----------5----------6----------7
NOT AT ALL VERY MUCH

Did you feel excluded in this class?
1----------2----------3----------4----------5----------6----------7
NOT AT ALL VERY MUCH

Appendix CC: Control Condition Syllabus and Readings (Study 4)

Strategies for Academic Success

Department of Psychology

Academic Foundations Center

830:493:18

Fall 2010 Syllabus

Instructors: T. LeGette, E. Santana
Office: Bradley Hall Room 105
Office Hours: 8:30 A.M. - 4:30 P.M. Monday-Friday
By appointment Monday-Thursday Walk-ins Friday 10 A.M.-12 noon
Phone: (973) 353-3561/3551
E-Mail: santanam@rutgers.edu or tlegette@rutgers.edu

Course Description

This course has two components:

1. **Learning & Interpersonal relationships**
2. The perception of diversity at Rutgers University

As part of this experimental course, students will be asked to answer a battery of brief surveys on a weekly basis. Students' responses to these surveys will be anonymously utilized to further advance the psychological study of interpersonal relationships. In addition, students will be asked to journal their perceptions of diversity at Rutgers-Newark through the lens of various "isms". The framework for the journals will be based on various readings distributed to the students bi-weekly along with open-ended questions relating to the "ism" presented in the readings.

Diversity topics to be discussed:

- Discriminations
- Racism
- Ableism (ex. learning disability)
- Classism
- Visions and Strategies for Change

Grading:

Students will be receiving ***1 degree credit*** for this course. Grading will be determined by a combination of your attendance and journals.

Attendance & Participation	30 points
Reflection Journals	70 points

	Topics	Assignments
Week 1 Sept. 14/15	Distribution of Reading: Discrimination	
Week 3 Sept. 28/29	Distribution of Reading: Racism	***Reflection Journal 1 Due***
Week 5 Oct. 12/13	Distribution of Reading: Racism	***Reflection Journal 2 Due***
Week 7 Oct. 26/27	Distribution of Reading: Ableism	***Reflection Journal 3 Due***
Week 9 Nov. 9/10	Distribution of Reading: Classism	***Reflection Journal 4 Due***
Week 11 Nov. 23/24	Distribution of Reading: Visions and Strategies for Change	***Reflection Journal 5 Due***
Week 13 Dec. 7/8	Final Reflections	***Reflection Journal 6 Due***

Attendance/Class Participation
Attendance is mandatory. The course meets for the last 20 minutes of your Strategies for Academic Success course. We expect your responses to the surveys and journals to be both honest and thorough. Your participation in this course will help further advance the field of psychology and notions of diversity at Rutgers-Newark.

Assignments and Readings
All readings and reflection journals will be posted to the Sakai website (sakai.rutgers.edu). Readings will be posted under the Resources tab by week and your reflections will be posted under assignments.

Perceptions of Diversity at Rutgers-Newark

Since the Independent Studies course is housed within the psychology the department the theme for the course will focus on “perceptions”; more specifically perceptions of diversity at Rutgers-Newark.

Students will be asked to journal their perceptions of diversity at Rutgers-Newark through the lens of various “isms”. The framework for the journals will be based on various readings distributed to the students bi-weekly along with open-ended questions relating to the “ism” presented in the readings.

We anticipate that the students' responses will provide first-hand accounts as to what it means to attend the most "Diverse Campus" and what such classification really means to our students.

Seven readings have been selected which focus on the following conceptual frameworks and isms:

• Conceptual Frameworks: Discriminations (1)
• Racism (2)
• Ableism (ex. learning disability) (1)
• Classism (1)
• Visions and Strategies for Change (2)
The following questions have been developed according to each reading and will be distributed to students along with the readings:

Session 1: Conceptual Frameworks: Discriminations

1. What are student's expectations for being on the "most diverse" college campus in the nation?
2. Do you believe any of the three forms of discrimination mentioned are present and/or take place at Rutgers-Newark? How does this affect the campus climate?
Session 2: Racism

1. What role can Rutgers-Newark play in effecting change on immigration policies and laws?
Session 3: Racism

1. Can acceptance of different cultures only exist as long as its individuals conform to mainstream perceptions?

Session 4: Ableism

1. Does diversity go beyond ethnicity/race?
2.Is diversity visible on campus in terms of student abilities (i.e. hearing or visually impaired/learning disabilities)? If so, how does this contribute to the campus culture?
Session 5: Classism

1. Based on economic class do all students at Rutgers-Newark have both equal access to resources and opportunity to succeed?
Session 6: Vision and Strategies for Social Change

1. How should diversity be embraced both within and between groups and cultures? What steps can be taken to have this occur on campus?
Session 7: Vision and Strategies for Social Change

1. How would you define diversity at Rutgers-Newark? What or Who should be included or excluded when evaluating Rutgers-Newark's diversity?

Readings from *Readings for diversity and social justice: An Anthology on Racism, Antisemitism, Sexism, Heterosexism, Ableism, and Classism,*2nd ed. New York: Routledge.

Chung, O. (2010). Finding my eye-dentity. In M. Adams, W. Blumenfeld, R. Castañeda, H. Hackman, M. Peters & X. Zúñiga (Eds.), (pp. 106-107). New York: Routledge.

Gansworth, E. (2010). Identification pleas. In M. Adams, W. Blumenfeld, R. Castañeda, H. Hackman, M. Peters & X. Zúñiga (Eds.), *Readings for diversity and social justice:An Anthology on Racism, Antisemitism, Sexism, Heterosexism, Ableism, and Classism,*2nd ed. (pp. 108-111). New York: Routledge.

Human Rights Immigrant Community Action Network. (2010) Chapter 15: Over-raided, under siege: US immigration laws and enforcement destroy the rights of immigrants. In M. Adams, W. Blumenfeld, R. Castañeda, H. Hackman, M. Peters & X. Zúñiga (Eds.), *Readings for diversity and social justice: An Anthology on Racism, Antisemitism, Sexism, Heterosexism, Ableism, and Classism,*2nd ed. (pp. 100-106). New York: Routledge.

Mantsios, G. (2010). Class in America –2006. In M. Adams, W. Blumenfeld, R. Castañeda, H. Hackman, M. Peters & X. Zúñiga (Eds.), *Readings for diversity and social justice:An Anthology on Racism, Antisemitism, Sexism, Heterosexism, Ableism, and Classism,*2nd ed. (pp. 148-155). New York: Routledge.

McClelland, N. & Rizga, K. (2010). Top 10 Youth Activism Victories in 2007. In M. Adams, W. Blumenfeld, R. Castañeda, H. Hackman, M. Peters & X. Zúñiga (Eds.), *Readings for diversity and social justice:An Anthology on Racism, Antisemitism, Sexism, Heterosexism, Ableism, and Classism,*2nd ed. (pp. 635-639). New York: Routledge.

Pelkey, L. In the LD bubble. (2010) In M. Adams, W. Blumenfeld, R. Castañeda, H. Hackman, M. Peters & X. Zúñiga (Eds.), *Readings for diversity and social justice: An Anthology on Racism, Antisemitism, Sexism, Heterosexism, Ableism, and Classism,*2nd ed. (pp. 507-510). New York: Routledge.

Pincus, Fred L. (2010). Discrimination comes in many forms: Individual, institutional and structural. In M. Adams, W. Blumenfeld, R. Castañeda, H. Hackman, M. Peters & X. Zúñiga (Eds.), *Readings for diversity and social justice: An Anthology on Racism, Antisemitism, Sexism, Heterosexism, Ableism, and Classism,*2nd ed. (pp. 31-35). New York: Routledge.

Appendix DD: Course Assignments

Grade each of your assignments before you submit them. Based on the two dimensional grid, what grade do you deserve, D being the highest grade, A being the lowest?

1. <u>After session 1 introduction:</u>
   Respond in 1-1½ pages: Read scenarios; describe and label an example of attachment behavior ("Actor") and the response of another person ("Responder"), either observed in someone else or experienced yourself, applying what you learned in class. In writing your response, you might want to consider the following, although your answer need not address all these questions: What might the Actor have been thinking and feeling? What might have been motivating this particular Actor? Why did the Responder respond as they did? What did the Actor feel in response? How could the Actor have behaved less anxiously or avoidantly attached – that is, how could the Actor have thought or felt differently that might then allow more securely attached behavior?

2. <u>After session 2: self disclosure exercise</u>

   Respond in 1-1½ pages: What are your responses to today's in-class exercise? You might want to consider the following, although your answer need not address all these questions: How did it feel to share with your partner? Was it fun, boring, interesting- and why? What did you think about the questions? Which did you like most? Which least? Why? Do you feel that you got to know your partner? Did the exercise bring you closer to an understanding of your partner or more aware of yourself? In what way? Could you see asking any of these questions in conversation to get to know someone better?

   What is one question you have on the reading assignment this week?

3. <u>After session 3: Attachment and communication lecture. Choose which question to answer.</u>

   Respond in 1-1½ pages: Consciously practice empathic listening. In one paragraph up to one page, write about an instance when you practiced it and how it felt. If you felt differently about yourself when consciously listening empathically, how did you feel differently? Did the other person comment or respond differently than usual, and if so, how?

   Respond in 1-1½ pages: Write about an instance when you really felt like the listener heard you and another when you wanted to be heard but were not. How did you feel in these situations? Did you respond differently in each situation, and if so, how? What did the other person do or say, or what did you do or say, or possibly think or feel, that made you feel heard? What, if anything, can you do to be better heard in the future?

What is one question you have on the reading assignment this week?

4. <u>After session 4: Are you my mother?</u>
   Respond in 1-1½ pages: Describe someone (a real person or a character in a book, film, or TV show) who is anxiously attached. Regardless of who it is, give evidence of attachment anxiety: how is it expressed in behavior? In writing your response, you might want to consider the following, although your answer need not address all these questions:What is this person feeling or thinking that is causing them to behave this way? How might this person have been treated by significant caretakers when they were young that has contributed towards their attachment today? How does their attachment anxiety affect others? How does it make others feel? How does the attachment anxiety affect this person's relationships?

   Think about a negative event that you experienced in high school or college that made you feel badly about yourself – something that involved failure, humiliation, or rejection. For example, the event might involve a time that you played poorly in an athletic competition, forgot your lines in a play, did badly on an important test, or did something else that led you to feel badly about yourself.
   1. Describe the event in writing, detailing what led up to the event, who was present, exactly what happened, and how you felt and behaved at the time of the event.
   2. List ways in which others also experience similar events.
   3. Write a paragraph expressing empathy to yourself as if you were writing to a good friend who had experienced the event.
   4. Describe your feelings objectively and unemotionally.

   What is one question you have on the reading assignment this week?

5. <u>After session 5 in class anxiety writing and discussion.</u>
   Respond in 1-1½ pages: List 1-5 things you like about yourself and 1-5 things you don't like about yourself but you want to change. How might these things have developed from your attachment relationships, if at all? How do these things affect your interpersonal relationships (either positively or negatively), if at all?

   What is one question you have on the reading assignment this week?

   Reminder: Outlines for term papers due next week.

6. <u>After session 6 Anxiety movies</u>
   Respond in 1-1½ pages: Using your assignment last week on things you didn't like but want to change: what could you do to change those things you don't like? Describe a plan for doing so.

   Respond in ½-1 page: There are many different levels of self control, and being human, everyone can improve. Bob Wiley had 95 % out of control, whereas a Zen Buddhist monk or Ghandi or Mother Theresa might be 95% in control, because of the

choices they make that allow them to have more self control. Perform an act that requires greater self control for you. Describe it and how you felt afterwards about yourself.

What is one question you have on the reading assignment this week?

7. <u>After session 7: Don't need friends</u>
   Respond in 1-1½ pages: In class, we discussed how the choices a person makes, make the person. Rat chose to bring Dog a sandwich, and gained a friend, becoming less lonely. How have your choices in your relationships affected you? There are several ways to approach this question. In answering this, you might want to consider how your choices have affected your self-image as well as your relationships with others. You also might want to consider a specific choice you have made that had a big impact on you, someone else, and/or your relationships, such as breaking up with someone, or choosing to invite someone to join you and your other friends. Explore whether your choice was constructive or destructive to you and others in your life. Would you make the same choice today? Why or why not?

   What is one question you have on the reading assignment this week?

   Extra Credit:
   Do something nice for somebody, if possible, even anonymously. Do something nice for someone *anonymously* and *secretly*. Describe what you did and how the other person(s) responded. What was the effect on you? How did their reaction to your act make you feel?

8. <u>After session 8: Sabrina</u>
   Respond in 1-1½ pages: Considering one of your attachment figures, answer the following three questions: (1) "What did this person give to me?" focusing on the good this person did for you, including, but not limited to, financial support. (2)"What did I return to this person?" and (3) "What trouble did I cause this person?"

   What is one question you have on the reading assignment this week?

9. <u>After session 9: Sabrina review</u>

   Answer the following in 1-2 pages (250-500 words): Using what we discussed from the last lecture, explain three of the ways Linus is avoidant, giving examples from the movie. This should be five paragraphs: the first paragraph is an introduction telling me what you're going to say; the next three paragraphs together make up the "body" of the paper, with each paragraph featuring one of the ways Linus expresses avoidance; the final paragraph is the conclusion. (See example of essay posted in course documents).

   Respond in 1-1½ pages: Describe someone (a real person or a character in a book, film, or TV show) who is avoidantly attached. Regardless of who it is, give evidence

of attachment avoidance: how is it expressed in behavior? In writing your response, you might want to consider the following, although your answer need not address all these questions:What is this person feeling or thinking that is causing them to behave this way? How might this person have been treated by significant caretakers when they were young that has contributed towards their attachment today? How does their attachment avoidance affect others? How does it make others feel? How does the attachment avoidance affect this person's relationships?

Extra Credit: What is one question you have on the reading assignment this week?

10. After session 10: Good will Hunting

"What winds *your* clock?" Will asks Sean.
Every person has a "spark," something not just that a person enjoys, but that motivates them, energizes them, gives their life meaning. The "spark" of Will's therapist, Sean, is counseling people, helping them to resolve their challenges. What is *your* spark? One way to identify your spark is to think of three times when you felt really happy and fulfilled doing something, and then see what those three times have in common. What were you doing? Then, when you have found your spark, write 1-2 pages (250-500 words) on what your spark is, how you are nurturing your spark now, and how you plan to nurture it and live it in the future, after your graduation from Rutgers.

Extra Credit: What is one question you have on the reading assignment this week?

11. After session 11: Good will hunting review

In 1-2 pages (250-500 words), explain three of the ways Will Hunting expresses avoidant attachment, giving examples from the movie. This should be five paragraphs: the first paragraph is an introduction telling me what you're going to say; the next three paragraphs together make up the "body" of the paper, with each paragraph featuring one of the ways Will expresses avoidance; the final paragraph is the conclusion. (See example of essay posted in course documents).

12. After 12th session: in class avoidant writing exercise
No homework. Reminder: Term Papers due before the next class, after Thanksgiving break.

13. After session 13: in class performance
Respond in 1-1½ pages: How does what you have learned in this course relate to your life in the present and the future? How has your learning impacted or changed your thinking? In writing your response, you might want to consider the following, although your answer need not address all these questions: Howhas your learning impacted the way in which you see yourself and other people, including the people who cared for you when you were small, such as your parents and significant others? Do you have a better understanding of yourself and them? How, if at all, can you apply what you have learned to your future relationship choices?For example, will

your choice of dating partner or spouse be affected? Will what you have learned impact the way you treat your own children, and how?

Extra Credit: What is one question you have on the reading assignment this week?

14. <u>After session 14: presentations</u>
    No homework

Appendix EE: Syllabus (Study 4)

21:830:493:14 INDIVID STUDY PSYCH LEARNING & INTERPERSONAL RELATIONSHIPS	Instructor: Raelene Joran Office: Smith 303
Fall, 2010 Fridays 10:00-11:20	Phone: 973-353-5440 x3936 rjoran@psychology.rutgers.edu
371 Smith Hall	Office hour: Friday 11:30 – 12:50 or by appointment

- TEXT: A Secure Base: Parent-Child Attachment and Healthy Human Development, Bowlby, Basic Books, 1988. Available on Blackboard.
- Reading: Fraiberg, S., Adelson, E., and Shapiro, B. 1975. *Ghosts in the nursery: A psychoanalytic approach to the problems of impaired infant-mother relationships.*Journal of the American Academy of Child Psychiatry 14: 387-421. Available on Blackboard.

Assignments: submitted through Blackboard; due prior to the next class; at least 1 page, but no more than 1.5 pages long, except where noted. Attendance will be taken by attendance questions on a homework assignment or class content, and points given for correct responses. Syllabus subject to change.

Class		Assignment
1. September 3	Introductory Lecture	See Blackboard
2. September 10	Partners assigned; in class exercise; talk with partner to plan term paper	See Blackboard and read chapter 1: Caring for children.
3. September 17	Attachment and Communication, role play; Quiz I	See Blackboard and read chapter 2: The origins of attachment theory

Anxiety Module

4. September 24	Reading and Discussion *Are You My Mother* by P. D. Eastman; role play	See Blackboard and read chapter 4: Psychoanalysis as a natural science.
5. October 1	In class writing/discussion; role play	See Blackboard and read chapter 5: Violence in the family.
6. October 8	*Antwone Fischer* and *What About Bob?* Discussion; Quiz II	See Blackboard and read chapter 6: On knowing what you are not supposed to know and feeling what you are not supposed to feel; paper outline due
Avoidance module		
7. October 15	Reading and Discussion *Don't Need Friends* by Carolyn Crimi; role play	See Blackboard and read chapter 7: The role of attachment in personality development.
8. October 22	*Sabrina* Discussion; role play	See Blackboard and read chapter 8: Attachment, communication, and the therapeutic process.
9. October 29	*Sabrina* Review; role play	See Blackboard and read chapter 9: Developmental psychiatry comes of age
10. November 5	*Good Will Hunting* Discussion; role play	See Blackboard and read *Ghosts in the Nursery,* pp 387-402.

11. November 12	*Good Will Hunting* review; role play; ***take home Midterm due by Nov 20****	See Blackboard
12. November 19	In class writing/discussion; ***Midterm****	No homework
November 20		Midterm due by midnight
November 26	No class – Thanksgiving Recess	
13. December 3	Partners perform one secure scenario (5 minutes-you choose which one); class votes on most secure – and why.	PAPER DUE; Read *Ghosts in the Nursery,* pp 402-421.
14. December 10	Partners perform scenarios; group presentations	No homework-have a great break!

Autobiographical Term Paper –This paper provides the opportunity to organize, integrate, and synthesize Attachment Theory and apply the material to your own life. In other words, you need to review and reflect on your most important relationships from early childhood to the present (e.g., parents, caregivers, siblings, other relatives, friends, romantic partners, own children, etc.) and analyze them in terms of Attachment Theory.

Regardless of how you organize your Paper, you must include the following:

Choose 5 adjectives that describe your relationship with each parent or caregiver during yourchildhood and support these adjectives with specific memories.

What did you do when you were upset in childhood?

To which parent or caregiver did you feel closer and why?

Did you feel threatened or rejected by a parent/caregiver?

Provide specific examples from childhood when you did not understand the behavior of your parent/caregiver.

Do you understand now?

How have your relationships with your parents/caregivers changed over time?

How, if at all, has this class has impacted your interpersonal interactions (parents/caregivers, friends, siblings, others) positively or negatively in terms of attachment theory?
This question is very important and could easily make up 25 – 50% of your paper: How have your early experiences with your parents/caregivers affected your adult behavior, feelings, attitudes, choice of friends, choice of dating partners, etc.?

You may decide to include other attachment-related issues, e.g., past and present ability to explore new experiences, your behavior in school/work/religious settings, attitudes toward death, how you have mourned in the past, how you might expect to mourn in the future. The essence of your paper is NOT to determine your style. When discussing childhood and adult situations, it is important to include descriptions of your emotional state when appropriate. Also important is to use reflective phrases such as "I realize" or "I understand" or "it seems to me." Required length: 8-10 (double-spaced) typed pages with 1 inch margins and 11-12 point font. ***Papers are to be emailed to me as an attachment.*** Late papers will lose the equivalent of one letter grade per week or part thereof. Computers are available in several computer labs on campus, including Hill Hall as well as Dana Library.

Two Quizzes and Midterm*: In class would be objective (multiple choice, true/false, fill in the blank); take-home would be both objective and subjective (short essay, questions from class discussion and lectures, which will be posted on blackboard after each class). *You decide if midterm is take-home (you may use lectures and notes) or in–class (closed book).

Class Participation:
Article Presentation - In groups of four, students will give an 8-10 minute presentation on one of the assigned readings. Each group should meet prior to the presentation to divide the reading and coordinate the effort. The presentation should summarize the work and discuss the reading's significance as well as any questions raised.
Class Discussion – It is absolutely important that everyone participate in class discussions. Participation may include answers, questions, comments, etc.

Homework – All assignments are to be submitted through blackboard before the next class. It is strongly recommended to save your work as a word document and then copy and paste into Blackboard.

Final Grade – Your final grade is determined as follows:

Term Paper	= 40%
Homework	= 20%
Midterm	= 15%
Quizzes	= 10%
Class Participation	= 15%

I'm interested in what YOU have to say and what YOUR ideas are. Plagiarism (copying another source word for word without either putting in quotes or citing it) will not be tolerated.

Any incident of plagiarism will be reported, and you will receive an F for that assignment.

There are no "bad" or "stupid" questions. You may email me with questions or see me during my office hour or make an appointment in addition to asking questions in class. On the other hand, during class time, the following is prohibited: eating, using cell phones (including texting), and talking during a lecture or presentation or while another student is speaking.

Appendix FF

Means, Standard Deviations, and Minimum and Maximum Scores for Attachment Avoidance and Anxiety (Study 4)

Construct	Condition											
	Experimental						Control					
	Pretest	Week 4	Week 8	Week 12	Post-test	Follow-up	Pretest	Week 4	Week 8	Week 12	Post-test	Follow-up
Attachment Anxiety												
M	3.26	2.31	2.66	2.41	2.42	3.02	3.70	3.18	3.21	2.43	2.63	2.65
SD	(1.17)	(1.27)	(0.83)	(1.42)	(0.94)	(1.08)	(1.20)	(1.42)	(1.33)	(1.14)	(1.36)	(1.39)
Min	1.00	1.00	1.67	1.00	1.00	1.67	2.22	1.00	1.56	1.00	1.00	1.00
Max	6.00	5.56	4.44	5.00	3.67	5.22	6.78	6.11	6.22	4.11	6.00	4.56
Attachment Avoidance												
M	2.79	3.15	2.59	2.79	2.74	3.39	3.38	3.67	3.37	3.38	3.22	3.42
SD	(0.86)	(1.07)	(0.94)	(0.92)	(1.04)	(1.76)	(1.17)	(1.01)	(1.44)	(1.23)	(1.14)	(1.31)
Min	1.67	1.56	1.00	1.22	1.00	1.00	1.56	1.11	1.11	1.00	1.33	1.00
Max	4.67	5.00	4.44	4.22	4.67	6.56	5.78	5.00	6.56	5.11	5.11	4.78

Appendix GG

Means, Standard Deviations, and Minimum and Maximum Scores for Dependent Variables other than Explicit Attachment (Study 4)

Construct	Condition					
	Experimental			Control		
	Pretest	Post test	Follow-up	Pretest	Post test	Follow-up
Implicit Security						
M	6.63	11.75	13.90	7.50	11.15	8.50
SD	(5.71)	(1.92)	(3.51)	(5.37)	(3.87)	(4.96)
Min	-3.00	8.00	10.00	-4.00	2.00	0.00
Max	15.00	15.00	22.00	15.00	17.00	15.00
Authority						
M	14.13	13.38	13.50	12.88	12.88	12.40
SD	(1.86)	(1.86)	(1.78)	(1.86)	(1.86)	(2.01)
Min	10	11	10	9	9	10
Max	16	16	16	16	16	15

Appendix GG *(continued).*

Exploitation						
M	7.59	7.19	8.00	7.12	6.81	6.50
SD	(1.37)	(1.38)	(1.50)	(1.05)	(1.17)	(1.18)
Min	6	5	6	6	5	5
Max	10	10	10	9	9	9
Self Sufficiency						
M	9.94	9.19	9.40	8.82	9.44	8.30
SD	(1.30)	(1.28)	(1.71)	(1.55)	(1.50)	(1.64)
Min	7	7	7	6	7	6
Max	12	12	12	12	12	11
Attention to Emotions						
M	49.59	51.69	45.40	43.00	42.94	43.80
SD	(12.18)	(6.28)	(7.41)	(9.83)	(8.12)	(6.91)
Min	19	42	36	21	21	36
Max	64	59	58	59	58	58

Appendix GG *(continued)*.

Self Kindness						
M	3.65	3.61	3.36	3.26	3.43	3.36
SD	(0.90)	(0.81)	(0.75)	(0.99)	(0.72)	(0.81)
Min	1.40	1.40	1.80	1.00	2.40	2.40
Max	5.00	5.00	4.60	5.00	4.80	4.80
Common Humanity						
M	3.43	3.78	3.83	3.16	3.50	3.13
SD	(0.92)	(0.72)	(0.78)	(1.09)	(0.64)	(0.85)
Min	2.25	2.00	2.50	1.00	2.50	2.25
Max	5.00	5.00	5.00	5.00	5.00	4.75
Locus of Control						
M	11.53	11.71	10.56	12.53	11.06	11.40
SD	(2.74)	(4.07)	(2.56)	(3.28)	(2.84)	(3.44)
Min	6	7	7	7	6	4
Max	17	21	14	17	17	15

Appendix GG *(continued).*

Empathic Concern						
M	21.88	21.50	21.33	21.50	19.19	17.70
SD	(4.70)	(5.25)	(3.71)	(4.59)	(5.38)	(4.62)
Min	12	11	17	11	11	12
Max	28	28	28	28	28	27
Personal Distress						
M	13.18	11.69	13.10	14.38	13.81	12.20
SD	(4.84)	(3.91)	(4.51)	(4.30)	(4.00)	(2.86)
Min	4	5	6.00	10	8	6.00
Max	22	18	19.00	26	24	16.00
Perspective Taking						
M	18.65	18.63	18.10	17.50	16.94	18.20
SD	(5.40)	(4.80)	(3.87)	(7.32)	(3.77)	(5.55)
Min	9	12	13	0	11	13

Max	28	28	24	28	23	28

Appendix GG *(continued).*

Attachment Awareness						
M	21.71	11.56	15.00	23.88	23.56	25.40
SD	(5.08)	(3.35)	(6.72)	(6.41)	(6.52)	(7.69)
Min	15	8	8	8	11	13
Max	33	18	30	34	35	35

Appendix HH

Intercorrelations Between Dependent Variables Controlling for Gender, Need for Cognition, and IAT order effects[a] *(Study 4)*

Construct	1	2	3	4	5	6	7
Attachment Anxiety	—	.28	.31	-.30	-.05	-.18	.17
Attachment Avoidance		—	.18	-.25	-.04	-.10	-.10
Implicit Security			—	-.20	.10	.14	-.38[c]
Authority				—	.40*	.15	.01
Exploitation					—	.61**	-.04
Self Sufficiency						—	-.10
Attention to Emotions							—

Appendix HH *(Continued).*

Construct	8	9	10	11	12	13	14
1. Attachment Anxiety	-.23	-.07	.30	.20	.49**	-.08	-.20
2. Attachment Avoidance	.27	.19	-.01	-.36[d]	.12	-.03	-.04
3. Implicit Security	.02	-.22	.32	-.09	.34	-.30	.21
4. Authority	.16	.08	-.11	.28	.09	-.27	-.15
5. Exploitation	.29	.21	-.14	.03	.08	-.01	.05
6. Self Sufficiency	.34	.06	-.04	-.15	.20	-.20	.07
7. Attention to Emotions	.33	.44*	.19	.32	-.25	.41*	-.38[e]
8. Self Kindness	—	.65**	-.08	.11	-.13	.16	-.48*
9. Common Humanity		—	-.16	.17	-.27	.43*	-.54**
10. Locus of Control			—	-.12	-.10	-.06	.14
11. Empathic Concern				—	.08	.20	-.44*
12. Personal Distress					—	-.54**	-.01
13. Perspective Taking						—	-.43*
14. Attachment Awareness[b]							—

[a]n = 23. [b] higher scores indicate less attachment awareness; lower scores indicate greater attachment awareness. [c]p =.058.

[d]p =.076. [e]p = .064.*p < .05. **p < .01.

APPENDIX II

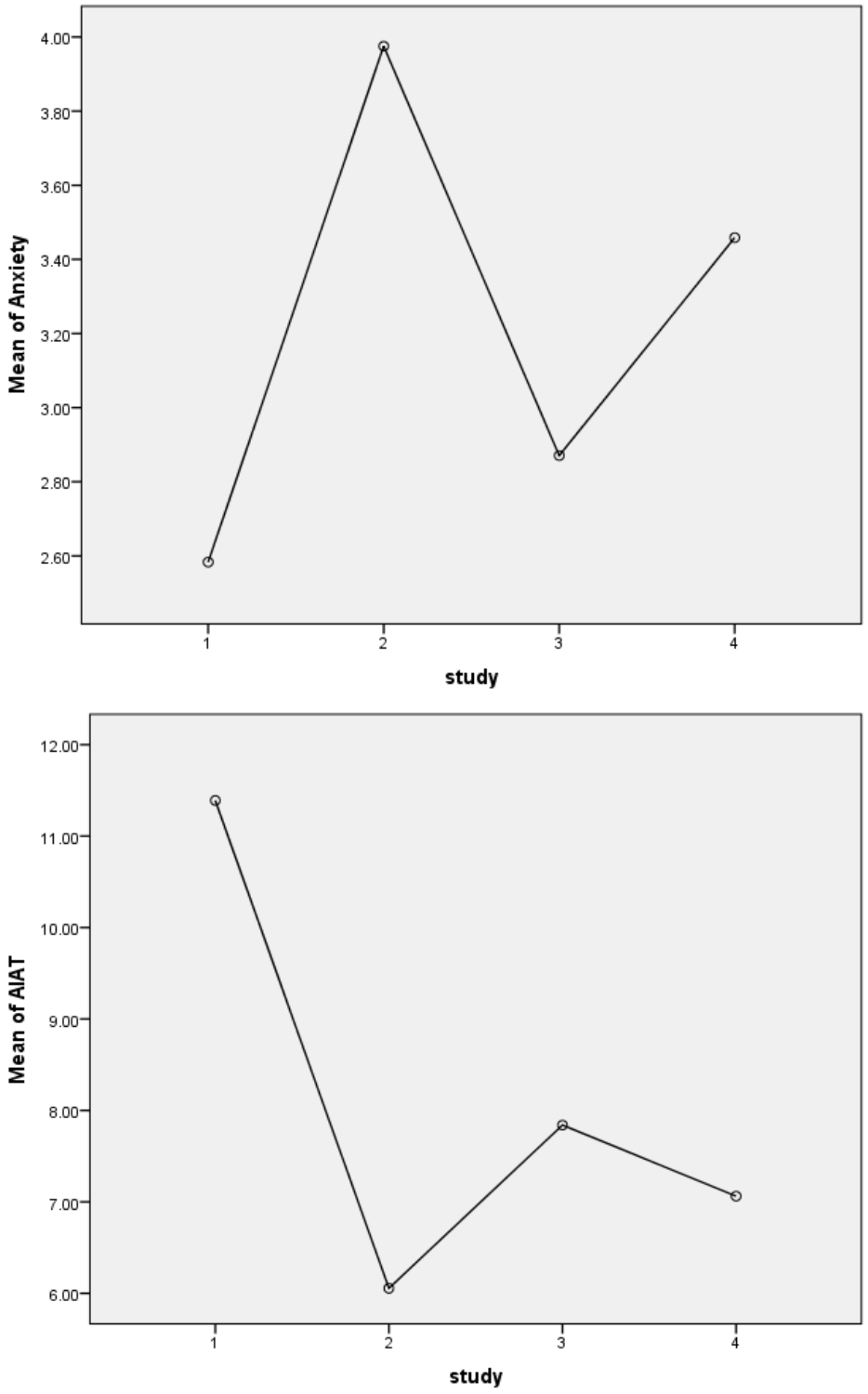


Figure 1: Mean attachment anxiety and implicit security across all four studies

Appendix JJ

Effects of Condition, Gender, Covariates on latent variables, and Interactions of Gender x Condition (Study 4)

Among All Participants

Latent Variable and covariates	Mean Change by Condition				Effect			
	Experimental		Control					
	Post	Follow	Post	Follow	Post-test	Univariate analyses: effect on Δ in DV	Follow-up	Univariate analyses: effect on Δ in DV
Attachment					F(3, 18) = 0.24NS		F(3,8) = 1.76 NS	
Baseline Attachment Anxiety	-9.20 (0.31)	- 0.43 (0.32)	-0.99 (0.36)	-1.32 (0.42)	F(3,18) = 2.74.074	Attach anxiety F(1, 20) = 9.02 .007	F(3,8) = 6.64 .015	Attach anxiety F(1, 10) = 14.67 .003
Baseline Attachment Avoidance					F(3,14) = 0.72NS		F(3,4) = 0.36 NS	
Baseline Implicit security	5.11 (0.88)	6.70 (1.34)	3.95 (1.05)	2.75 (1.84)	F(3,18) = 0.24.00	implicit security F(1, 20) = 40.76 .00	F(3,4) = 8.52 .007	implicit security F(1, 10) = 27.69 .00
Need for Cog.					F(3,14) = 0.06NS		F(3,4) = 0.31 NS	
Gender					F(3,14) = 0.50 NS		F(3,4) = 0.53 NS	

Appendix JJ *(continued).*

Gender x Condition								
View of Self					F(3, 19) = 1.27 NS		F(3,12) = 2.36 .12	
Baseline Locus of Control	-0.70 (0.88)		-1.65 (0.95)		F(3,19) = 3.51 .035	locus of control F(1, 21) =10.12.004	NS	
Baseline Self Kindness	0.22 (0.22)	- 0.33 (0.26)	- 0.05 (0.23)	- 0.05 (0.26)	F(3,19) = 7.07 .002	self-kindness F(1, 21) = 21.23.00	F(3,12) = 8.24.003	self-kindness F(1, 14) = 10.93 .005
Baseline Common Humanity	0.62 (0.15)	0.25 (0.25)	0.21 (0.16)	- 0.28 (0.25)	F(3,19) = 5.64 .006	comm humanity F(1, 21) =15.56.001	F(3,12) = 8.16 .003	comm humanity F(1, 14) = 12.34.003
Need for Cognition					NS		NS	
Gender					F(3,19) = 2.73 .073	locus of control F(1, 21) = 7.13 .014	NS	
Gender x Condition					NS		NS	
Narcissism					F(3 24) = 0.92 NS		F(3,12) = 0.63 NS	

Appendix JJ *(continued).*

Baseline Exploitation	- 0.34 (0.29)		- 0.25 (0.28)		F(3, 24) = 6.17.003	exploitation F(1, 26) =14.86 .001	NS	
Baseline self sufficiency	- 0.51 (0.38)	0.15 (0.69)	0.29 (0.36)	- 0.92 (0.61)	F(3, 24) = 7.00.002	self-sufficiency F(1, 26) = 10.50.003	F(3,12) = 3.11 .067	self-sufficiency F(1, 14) = 9.42 .008
						exploitation F(1, 26) = 3.27 .082		
Baseline authority	- 0.32 (0.45)	- 0.65 (0.62)	- 0.38 (0.43)	- 0.68 (0.54)	F(3, 24) = 5.46.005	authority F(1, 26) = 7.69 .01	F(3,12) = 1.57 NS	Authority F(1, 14) = 3.75 .073
Need for Cognition					F(3, 21) = 0.89 NS		NS	
Gender					F(3, 21) = 1.72 NS		NS	
Gender x Condition					NS		NS	
Empathy					F (3, 25) = 0.80 NS		F (3,12) = 1.46 .27	

Appendix JJ *(continued).*

Baseline Empathic Concern	F (3, 21) = 2.09 NS		F (3,12) = 4.17031	personal distress F (1,14) = 2.09 NS perspective taking F (1,14) = 1.13NS empathic concern F (1,14) = 1.99 NS
Baseline Perspective Taking	F (3, 25) = 8.21.001	perspective taking F (1,27) = 24.44 .00 empathic concern F (1,27) = 2.97 .096 personal distress F (1,27) = 3.91 NS	F (3,12) = 9.49.002	perspective taking F (1,14) = 14.39 .002 personal distress F (1,14) = 3.08NS empathic concern F (1,14) = 0.01 NS

Appendix JJ *(continued).*

Baseline Personal Distress	F (3, 25) = 5.19.006	personal distress F (1, 27) = 12.95.001 perspective taking F (1,27) = 1.65 NS empathic concern F (1,27) = 21.38 NS	F (3,8) = 2.56 NS
Need for Cognition	F (3, 21) = 1.94NS		F (3,8) = 0.57 NS
Gender	F (3, 21) = 1.18 NS		F (3,8) = 0.96 NS
Gender x Condition	NS		NS

Appendix JJ *(continued).*

Among Participants High in Attachment Anxiety

Latent Variable and covariates	Mean Change by Condition				Effect			
	Experimental		Control					
	Post	Follow	Post	Follow	Post-test	Univariate analyses: effect on Δ in DV	Follow-up	Univariate analyses: effect on Δ in DV
Attachment					$F(3, 8) = 0.35$ NS		$F(3,4) = 0.52$ NS	
Baseline attachment anxiety						NS		NS
Baseline attachment avoidance						NS		NS
Baseline implicit security						NS		NS
Need for Cognition						NS		NS
Gender						NS		NS
Gender x						NS		NS

Condition

Appendix JJ *(continued).*

Attachment			F(3, 6) = 3.75.08		F(3,4) = 0.46 .73
Baseline attachment anxiety	-1.62 (0.51)	-1.31 (0.60)	F(3, 2) = 5.96 NS		anxiety F(2, 1) = 0.79 NS
Baseline implicit security	2.91 (0.80)	1.72 (0.95)	F(3,6) = 20.79 .001	implicit security F(1, 8) = 0.22 NS	implicit security F(2, 1) = 1.67 NS
Baseline attachment attention	5.53 (2.13)	-2.34 (2.52)	F(3,6) = 39.74 .00	attention F(1, 8) = 68.86 .00 implicit security F(1, 8) = 5.56 .046	attention F(2, 1) = 0.61 NS
Need for Cognition			F(3, 2) = 0.70 .63		need for cognition F(2, 1) = 0.66 NS
Gender			F(3, 2) = 1.02 NS		N/A[a]
Gender x Condition					N/A [a]
View of Self			F(3, 4) = 4.50 .09		F(3,6) = 1.42 NS

Appendix JJ *(continued).*

Baseline locus of control	-0.64 (0.65)	-1.07 (0.54)	F(3,4) = 1.81 NS	locus of control F(1, 6) = 6.01 .05 self-kindness F(1, 6) = 4.81 .071	F(3,1) = 0.32 NS	
Baseline self kindness	0.72 (0.15)	0.38 (0.12)	F(3,4) = 3.00 NS	locus of control F(1, 6) = 6.29 .046 self-kindness F(1, 6) = 10.29 .018	F(3,1) = 0.19 NS	
Baseline common humanity	1.04 (0.12)	0.33 (0.10)	F(3,4) = 5.82 .061	Comm humanity F(1, 6) = 25.29 .002	F(3,6) = 3.63 .084	comm humanity F(1, 8) = 10.07 .013
Need for Cognition			F(3,4) = 8.31 .034	locus of control F(1, 6) = 8.87 .025 self-kindness F(1, 6) = 14.55 .009	F(3,1) = 0.09 NS	

Appendix JJ *(continued).*

Gender			F(3,4) = 1.66 NS		locus of control F(1, 6) = 4.12 .089	gender F(3,1) = 0.04 NS	
Gender x Condition			F(3,4) = 3.71 NS		locus of control F(1, 6) = 6.59 .042 self-kindness F(1, 6) = 4.46 .079	NS	
Narcissism			F(3, 7) = 0.21	NS		F(3,3) = 1.37	.40	exploitation F(1, 5) = 5.41 .067
Baseline exploitation	1.56 (0.64)	- 0.34 (0.51)	F(3,7) = 3.49	.079	exploitation F(1, 9) = 6.16 .035 authority F(1, 9) = 5.54 .04	exploitation F(2, 1) = 23.74	NS	
Baseline self sufficiency				NS		self-sufficiency F(2, 1) = 1.17	NS	

Appendix JJ *(continued).*

Baseline authority			NS		authority		
					F(2, 1) = 1.13	NS	
Need for Cognition			NS		F(3,3) = 7.07	.071	exploitation
							F(1, 5) = 10.77 .02
Gender			F(3,7) = 1.22 NS		F(3,3) = 5.60	.095	self-sufficiency
							F(1, 5) = 4.11 .098
Gender x Condition			NS		F(3,3) = 9.02 .052		exploitation
							F(1, 5) = 6.23 .055
Empathy			F(3, 6) = 12.22.006	Personal distress	F(3,7) = 0.21 NS		
				F(1, 8) = 17.89 .003			
Baseline Empathic Concern	1.67 (3.11)	-2.28 (2.42)	NS			NS	
Baseline Perspective Taking	3.30 (2.16)	0.07 (1.69)	F(3,6) = 15.85.003	personal distress		NS	
				F(1, 8) = 24.74 .001			
				perspective			
				F(1, 8) = 6.07			

.039

Appendix JJ *(continued).*

Baseline Personal Distress	-3.09 (0.65)	0.39 (0.50)	F(3,6) = 21.03 .001	personal distress F(1, 8) = 15.86 .004	NS
Need for Cognition			F(3,6) = 14.11 .004	personal distress F(1, 8) = 11.62 .009	NS
Gender			F(3,6) = 15.79 .003	personal distress F(1, 8) = 14.97 .005	NS
Gender x Condition			F(3,6) = 3.90 .07		NS

[a]There were not enough participants to permit using gender as a between-subjects variable

Appendix KK: On How to Write an Essay

A simple essay should be five paragraphs. The first paragraph is an introduction telling me what you're going to say; the next three paragraphs together make up the "body" of the paper, with each paragraph providing another piece of supporting evidence; the final paragraph is the conclusion.

If I were writing about how Bob Wiley illustrates anxious attachment, the three paragraphs in the middle would detail three of the ways he shows anxious attachment: he's 1) controlling; 2) intrusive, and 3) lacks self control. Then I would give examples from the lecture or movie.

For the first point that he's controlling, I could give several examples: he dominates the driver's time, not caring that she has a schedule to keep; he dominates Leo's time even while he's on vacation, going so far as to hire a prostitute to impersonate Leo's sister and get Dr. Marvin to the telephone, and also faking his own death and posing as a detective to get Dr. Marvin's address while on vacation; and even his pet is totally under his control: a fish is captive in a fishbowl and can make no demands of him.

I would write one or two sentences for each of these examples from the movie. I would use *transitional words* (underlined for you to see) to introduce each idea and give supporting examples. For example, I could say:

"<u>Another way</u> that Bob Wiley illustrates anxious attachment is with his intrusive behavior. <u>For example, not only</u> does he call Dr. Marvin, despite the fact that Dr. Marvin had told him that the covering doctor would be there for Bob if he needs someone to talk with, <u>but also</u> he visits Dr. Marvin while he is on vacation. <u>Another time</u> Bob is intrusive when he goes to Dr. Marvin's vacation home, rather than wait at the diner as they had agreed. <u>Also,</u> earlier, when getting on the bus to find Dr. Marvin, he asks a passenger to please knock him out.

"<u>Finally,</u> Bob shows anxious attachment with his lack of self control. <u>One way</u> he does this is…"

And so on. Then, for the last paragraph, I would sum up what I have said. For example:

"<u>To conclude</u>, as can be seen from the movie "What About Bob," Bob Wiley expresses anxious attachment in several ways, such as being controlling, intrusive, and lacking self control."

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