

Attachment Orientation and Leadership Style:
From Child's Play to Partnerships with the Person Upstairs

By

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A Thesis Submitted in Partial Fulfillment of the
Requirements for the Degree of Bachelor of Arts

With Honors in Psychology from the

University of Michigan

2011

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Abstract

The present study examined the relationship between attachment orientation—one's working model for close relationships— and leadership style. Attachment measures consisted of a continuous trait measure, an experimental manipulation intended to prime attachment mindset, and a state attachment measure that served as a manipulation check. In addition, two leadership measures were employed. The results showed that secure and avoidant attachment mindsets yield directly opposing patterns of leadership strategies. The data on anxious attachment was less conclusive, but the attachment prime did have a main effect on transformational leadership strategies, yielding higher means for the anxious attachment condition. However, surprisingly, the attachment prime had no significant effect on the manipulation check state attachment orientation. The findings provide novel evidence that attachment style is associated with leadership style in theoretically meaningful ways. Furthermore, the results suggest that the effects of attachment style may extend to behaviors in the workplace in addition to intimate relationship dynamics.

Keywords: Attachment style, close relationships, leadership

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By widening the scope on traditional attachment theory, current research on the relationship between attachment and leadership has been able to emerge. Attachment theory originated with the infant-caregiver relationship (Bowlby, 1968). This line of research extended to adult romantic relationship and, more recently, the leader-followed dyad (Hazan & Shaver, 1987; Doverspike, Hollis, Justice and Polomsky, 1997). It is through this expanded research scope that academics have come to understand attachment as a pervasive paradigm infiltrating different types of relationships. In particular, the literature on attachment orientation and leader-follower relationships has begun to inform organizations about the personal and relational dynamics that affect productivity, success, and morale.

Previous Research

Initial research on attachment analyzed the crux of the relationship between infant and caregiver (Bowlby, 1969). Bowlby (1969) developed attachment theory to describe the evolutionary infant-caregiver bond necessary for survival. The proposed "attachment behavioral system" governs the emotional and behavioral dynamics of close relationships. Furthermore, "internal working models" are developed within the infant based on the quality of care and caregiver availability. Bowlby argues that these models generalize from this initial relationship and serve as prototypes for future close relationships (Bowlby, 1973). Utilizing Bowlby's attachment theory, Ainsworth (1978) contributed to the theory by identifying three forms of attachment: secure, anxious/ambivalent, and avoidant. The secure style is characterized by trust, high self-esteem, an ability to seek out social support, and a comfort with intimacy and

independence. The anxious/ambivalent style is characterized by fear of rejection and abandonment, worry regarding the partner's emotions, and a preoccupation with intimacy and close relationships. The avoidant attachment style is characterized by a distrust of others' intentions, a preference for emotional distance over investment, and discomfort with close relationships and intimacy. Ainsworth clarified and categorized Bowlby's early work on attachment, creating a paradigm that is more easily defined and measured. These classifications were derived from infant reactions during the presence and absence of their caregiver in a "strange situation", or novel environment where the infant was introduced to a new person.

After Ainsworth categorized attachment theory, the paradigm was expanded to incorporate relationships between adults. Hazan and Shaver (1987) were the first widely known psychologists to extrapolate attachment theory from the infant-caregiver relationship to adult romantic relationships. Adult individuals develop internal working models, rooted in past relationship experiences. These models are stable in that they are formed during early infant-caregiver experiences and served as a prototype for later adult relationships. However, Bowlby claimed that these models can be molded by new relationship experiences that counter previous working models (Bowlby, 1973). Relationship experiences are not limited to those of survival, such as that of the infant to the caregiver. Thus, attachment theory could also extend to relationships less imperative to continuance of existence, such as adult romantic relationships. As Hazan and Shaver (1987)'s research unfolded through its application to other relationships, the data pointed to the possibility of a two-dimensional approach to attachment. It was not until Bartholomew (1990) that these dimensions were recognized and named as they are now acknowledged: anxiety and avoidance. The new model expanded upon Ainsworth (1978)'s categorization of attachment styles placing them accordingly along anxiety and avoidance

continuums. It was through the application of attachment theory to research on adult relationships that the paradigm became more robust.

Brennan, Clark and Shaver (1998) began to delve into the intricacies of adult attachment relationships, further examining and classifying the adult application in the way that Ainsworth (1978) did for the original infant-caregiver theory. Unlike the infant care-giver relationship, adult relationships are reciprocal, often involving sexual intimacy, internal values and belief systems, rather than simply external interactions (Hazan & Shaver, 1994). Brennan et al. (1998) identified four adult relationship patterns: preoccupied, secure, fearful, and dismissive orientations. In couples, preoccupied orientation (synonymous with anxious attachment style) is characterized by high anxiety and low avoidance. Low anxious and low avoidance scores categorize secure attachment orientation. This line of research distinguished between two forms of avoidant attachment orientation: dismissive avoidance and fearful avoidance. Dismissive avoidance is characterized by low anxiety and high avoidance, while fearful avoidance is associated with the opposite pattern.

Around the time that attachment theory was applied to adult romantic relationships, Doverspike, Hollis, Justice and Polomsky (1997) began to draw the line between attachment style and leadership constructs. Using Fiedler's Least Preferred Coworker scale, Doverspike et al. (1997) found that secure attachment was associated with relational leadership style while avoidant attachment was associated with task-oriented leadership. Although Doverspike et al. (1997) conducted initial research on attachment and leadership early on; it was not until recently that this area of research became popularized.

Popper, Mayseless, and Castelnovo (2000) conducted initial in-depth work on the relationship between leadership and attachment. The study utilized the transactional-

transformational leadership structure as a foundation for discovery about the relationship.

Transactional leaders pursue a cost-benefit relationship with followers, while transformational leaders encourage followers through satisfaction of higher needs (for example, personal growth) (Bass & Avolio, 1990). Popper et al. (2000) found secure leaders possessed qualities of transformational leadership, including charisma, individual consideration, and intellectual stimulation, according to ratings by their followers. On the other hand, anxious and avoidant leaders did not possess these indices.

Mikulincer and Shaver (2007) applied the theorized attachment research to an applied sample. Mikulincer and Shaver (2007) found that attachment style affects both individual perception and action toward the other. In particular, the researchers examined the role of attachment style in the leader-follower relationship of the military. Avoidant leaders were found to have a detriment effect on the instrumental and emotional functioning of the soldiers. However, the relationship between leader's attachment anxiety and soldier functioning was more complex. While high anxiety leaders interfered with soldiers instrumental functioning, the attachment style actually aided emotional functioning of soldiers. In particular, the group becomes more interpersonally close, having higher group cohesion, consensus, and morale. However, improvement in these emotional domains could act as a defense of soldiers to the anxious leader, occurring at the expense of instrumental functioning. In addition, avoidant soldiers held a bias in officer ratings, appraising them as more personalized and less socialized. Socialized leadership is characterized by the use of power to serve others, open communication, and morality, while personalized leadership consists of power use for personal gain, one-way communication, and standards of morality that serve self-interest (House & Howell, 1992). Also, these officers were rated more negatively on leading in task- and emotion-focused situations.

Mikulincer and Shaver (2007) illustrated the influence of attachment style both personally, coloring the way in which the individual sees the world and others, and socially, impacting the individual's own actions and interactions with others.

Of additional importance, Mikulincer and Shaver (2007) found that, rather than being permanent, attachment styles can be temporal and leader attachment affects the follower. That is, there is an influence of leadership attachment style on followers' attachment orientation over time. Soldiers' mental health (or anxiety levels) was measured at baseline, 2-month and 4-month periods. At baseline, soldiers' anxiety levels were reflective of their own attachment style. However, at 2- and 4-month periods, the higher the leader's avoidance, the higher the negative impact on the soldiers' health. Although the secure attachment style acted as an initial buffer for the follower to the leader's avoidant attachment style, the secure model deteriorated over time. These findings illustrate Hazan and Shaver (1987)'s theorized flexibility of attachment style. This malleability of attachment orientation was a key finding in the work of applied attachment research in organizational settings. Overall, Mikulincer and Shaver (2007) identified the effects of attachment style both on the individual's thoughts and actions, as well as the influence that the style has on the other's attachment orientation. Mikulincer and Shaver (2003) expand on this notion, claiming that both individual attachment orientation as well as environmental context (including others' attachment style) influence attachment related outcomes. For instance, a feedback loop can develop when an avoidant leader's negative mental representation of the follower inclines the leader to be less trusting and less responsive. Therefore, the follower may respond likewise, creating a self-fulfilling prophecy that perpetuates the insecure attachment cycle.

More recently, Popper and Amit (2009) began to research attachment style influences on qualities of the individual, rather than among relationships with others. In particular, Popper and Amit (2009) teased apart the relationship of attachment psychological substructure formed in early childhood to leader development later in life. Structural equation modeling provided support for a model in which secure attachment substructure affects the level of trait anxiety and openness to experience. Both of these components, in turn, relate to leadership experiences which promote leader development. Understanding of others' emotions and appropriate display of one's own emotions is essential in effective leader-follower relationships, which explains the negative relationship between trait anxiety and leadership experiences. In addition, openness to experience means higher accessibility of engagement opportunities including that of the leader-follower relationship; this explains the association between leadership experience and openness to experience. Furthermore, leadership experience provides opportunities to practice and solidify leadership ability spurring leader development.

Current Research

To date, there has been no examination of the effect of attachment style on specific leadership strategies utilizing an experimental measure in addition to continuous trait and state measures. The current study will employ attachment and leadership measures to identify the relationship between the attachment orientations and leadership styles, such that secure attachment and avoidant attachment will be associated with different leadership strategies. Secure attachment should yield integrative leadership strategies that employ both relational/people-focused leadership styles and independent/task-focused leadership styles. Avoidant attachment should yield compartmentalized strategies that employ primarily an

independent/task-focused leadership style. Conversely, anxious attachment should yield primarily relational/people-focused leadership strategies.

We hypothesize that secure attachment facilitates the ability to recognize and incorporate contextual and relational cues and therefore the ability to vary one's strategies in accordance with the situation at hand. Conversely, we hypothesize that avoidant attachment orientation inhibits the ability to recognize and interpret situational cues. Furthermore, we expect anxious attachment to be associated with an overemphasis on relational/people-focused strategies, given that this orientation indicates a preoccupation with relationships, while we expect avoidant attachment to be associated with an overemphasis on independent/task-focused strategies, given that this orientation indicates discomfort with closeness/interdependence and a tendency to be inattentive to relationship-relevant information.

In addition to examining the relationship between both continuous trait and state attachment orientations and leadership style, we employed the use of an experimental attachment measure. The experimental measure primed state attachment mindset, while the state attachment measure acted as a manipulation check. We were interested in whether the attachment prime could be used to manipulate the attachment mindset. In addition, we were intrigued by the possible affect of this primed attachment mindset on leadership style. Our hypotheses pertaining to primed attachment orientation were that the attachment prime would have a main effect on the state attachment measure, transactional leadership strategies and transformational leadership strategies.

Hypotheses.

State and trait hypotheses.

Secure hypothesis. Hypothesis 1: We expect secure attachment to be positively correlated with relational leadership strategies and positively correlated with transactional leadership strategies.

Insecure hypotheses. Hypothesis 2: We hypothesize avoidant attachment orientations to be negatively correlated with relational strategies and positively correlated with transactional leadership strategies.

Hypothesis 3: We expect anxious attachment to be positively correlated with relational/people-focused strategies.

Experimental hypotheses. Hypothesis 4: We hypothesize that the assigned attachment prime condition will have a main effect on its respective state attachment orientation, such that participants in the secure condition will score higher on the secure state measure than participants in the anxious, avoidant, and neutral conditions, participants in the anxious condition will score higher on the anxious state measure than participants in the avoidant, secure, and neutral conditions, and participants in the anxious condition will score higher on the anxious state measure than participants in avoidant, secure, and neutral conditions.

Hypothesis 5: We expect a main effect of the attachment prime on relational leadership strategies, such that participants in the secure and anxious conditions will be more likely to advocate relational strategies than those in the avoidant and neutral conditions.

Hypothesis 6: We expect a main effect of the attachment prime on transactional leadership strategies, such that participants in the avoidant and secure conditions will be more likely to advocate transactional strategies than those in the anxious and neutral conditions.

Method

Participants

The sample for this study consisted of 144 undergraduate Introductory Psychology students at the University of Michigan (74 males; 70 females). The average age for the sample was 18.64 years and the race breakdown was as follows: 79% identified as “White”; 9.8% as “Asian”; 3.5% as “Black or African American”; 2.1% as “Hispanic or Latino”; 3.5% as “Multiracial”; 1.4% as “Other”; and .7% as “Don’t Know/Not Sure”. The study consisted of an online survey administered via Qualtrics survey software. The Department of Psychology subject pool was utilized for this study. Subjects were given course credit for their participation.

Measures

Reliability for all scales and sub-scales was assessed using Chronbach’s alpha. All scales and sub-scales yielded sufficient reliability (alphas approximated to .70 or greater) with the exception of the contingent reward sub-scale of the MLQ ($\alpha = .56$).

Attachment measures.

Experiences in close relationships- short. The shortened version of the Experiences in Close Relationships Scale (Brennan, Clark, & Shaver, 1998) assesses adult attachment orientation on a continuous anxiety-avoidance scale. Therefore, it is assumed by this scale that securely attached individuals fall low on both anxiety (e.g. “I make group members feel at ease when talking with them”) ($\alpha = .70$) and avoidance (e.g. “I get uncomfortable when a romantic partner wants to be very close”) ($\alpha = .80$). This 12-item short scale has been assessed as equally valid as its former 36-item full-length scale. Exactly half of the items assess anxiety, while the other half assesses avoidance. The measure consists of a 7-point rating scale with 1 being “disagree strongly”, while 7 is “agree strongly”.

Experimental attachment prime. The attachment prime (Gillath & Schachner, 2006) is based on the theory that exposing a participant to their own mental representation of a figure that

symbolizes an attachment style activates related attachment goals. The attachment prime attempts to override chronic attachment style in favor of a chosen prime; this prime assumes that attachment style is malleable in the present. The attachment prime consists of four randomly-assigned conditions: anxious, avoidant, secure, and neutral. The neutral prime acts as a control in the present study. In contrast to the attachment orientation primes, which ask about close relationships, the neutral prime questions about an acquaintance that the subject has no strong feelings towards. Specifically, the primes ask the participant to read the description of the attachment style and write about a time that this was experienced in a close relationship. Please see the Appendix for a complete list of the experimental attachment primes.

State adult attachment measure. The State Adult Attachment Measure (Gillath, et al., 2009) assesses the participants' feelings at the present moment. This continuous attachment measure assessed participants current attachment mindset with respect to anxiety (e.g. "I wish someone would tell me they really love me") ($\alpha = .86$), avoidance (e.g. "If someone tried to get close to me, I would try to keep my distance") ($\alpha = .84$) and security (e.g. "I feel like others care about me") ($\alpha = .90$) categories. The measure consists of 21 items on a 7-point rating scale (1 = "strongly disagree" to 7 = "agree strongly"). This state measure was used as a manipulation check of our experimental measure to determine whether the attachment prime affected state attachment mindset as intended.

Leadership measures.

Multifactor leadership questionnaire (MLQ). The Multifactor Leadership Questionnaire (Bass & Avolio, 1995) assesses transformational and transactional leadership categories. Transactional leadership is characterized by the leaders use of goal-oriented contingent reinforcement upon the subordinates (e.g. "I make clear what one can expect to receive when

performance goals are achieved”) ($\alpha = .75$); whereas, transformational leaders look beyond self-interest for the good of the group (e.g. “I emphasize the importance of having a collective sense of mission”) ($\alpha = .87$). These leadership styles consist of several subcomponents.

Transformational subcomponents consist of: idealized influence ($\alpha = .69$), inspirational motivation ($\alpha = .68$), intellectual stimulation ($\alpha = .71$), and individualized consideration ($\alpha = .65$). These sub-scales emphasize behavior that is relationally focused. Specifically, idealized influence is characterized by charisma; these leaders are trusting, committed and steadfast role models. Inspirational motivation is defined by optimism, encouragement and productive challenging of subordinates. Providing perspective and encouraging the questioning of assumptions constitutes intellectual stimulation. Individualized consideration characterizes a leader’s attention to the subordinates’ unique needs, abilities and aspiration. In opposition to transformational strategies, transactional subcomponents consist of contingent reward ($\alpha = .56$), active management ($\alpha = .66$), passive management ($\alpha = .76$) and laissez-faire ($\alpha = .73$). These sub-scales emphasize behaviors that are task-focused. In particular, contingent reward characterizes a purely transactional relationship: reward for performance. Active management consists of the leader taking action when subordinates deviate from what is requested, while passive management characterizes leaders that only take action when problems become serious. Laissez-faire characterizes non-leadership; leaders are absent when needed and fail to take responsibility. In addition to transactional and transformational leadership components, the MLQ also assesses leadership outcomes including subordinate effectiveness, extra effort and satisfaction. Taken together, the MLQ contains 45 items assessing the 12 leadership categories. The measure consists of a 5-point rating scale (0 = “not at all” to 4 = “frequently, if not always”).

Leader behavior description questionnaire (LBDQ). The Leader Behavior Description Questionnaire (Halpin & Winer, 1957) assesses participants across initiating structure and consideration categories. While initiating structure reflects the leaders tendency to employ relations with subordinates which are based on goal attainment (e.g. “I assign group members to particular tasks”) ($\alpha = .85$), consideration reflects the leaders focus on the strengthening of the leader-subordinate relationship (e.g. “I make group members feel at ease when talking with them”) ($\alpha = .77$). In addition, consideration constitutes a leadership style that is more relational or people-focused; initiating structure describes a leadership style that is more task-focused or non-relational. The revised version of the Leader Behavior Description Questionnaire consists of 10 items of the original 30-item scale. Exactly half of the items assess initiating structure and the other half, consideration. The measure consists of a 5-point rating scale (0 = “not at all” to 4 = “frequently, if not always”).

Procedure

The study was administered online via Qualtrics survey software. Students accessed the survey through the University’s subject pool website. The survey was designed to be fewer than 30 minutes in duration, with an average length of 25 minutes among participants. First, the participants electronically approved a consent form for the study. Participants were informed that the study consists of two parts. The first part contained questions related to close relationships, while the second contained scales related to leadership style. For the first scale, participants filled out the Experiences in Close Relationships Scale-Short questions, to assess continuous attachment style with respect to the anxiety and avoidance dimensions. The scale was followed by demographics and a distracter task, to ensure that the prompting of self-assessed attachment did not influence the effect of the subsequent attachment prime. The distracter task consisted of a

simple letter counting exercise, in which participants were asked to count the “t’s” in a highly technical scientific passage on periaqueductal gray matter (Weber & Pert, 1989). Participants were then notified that they were entering part two of the study. The two parts of the study were created to disassociate, in the minds of the participants, the subject of chronic attachment in part one of the study from primed attachment measure and leadership measures in part two of the study; This structure was intended to avoid any disruptions to the experimental attachment prime.

The attachment prime was placed at the beginning of part two. Participants were instructed to read a paragraph that followed and respond for 5-7 minutes. A randomized attachment style prompt consisting of four attachment conditions (avoidant, secure, anxious and neutral) followed the instructions page. A neutral prime was included in the set to create a control condition. A timing function in the survey gave participants approximately 4.5 minutes before they were able to move to the next page. The prime was followed by leadership scales and a state attachment measure. The Leader Behavior Description Questionnaire and the Multifactor Leadership Questionnaire (MLQ) measured people-focused vs. task-focused and transformational vs. transactional leadership, respectively. The state attachment control was presented to assess the participants’ current attachment condition; this acted as a measure of the influence of the prime. Finally, participants were debriefed and asked to provide required information to award credit for the study.

Results

One-way ANOVAs were used to analyze the effects of the attachment prime on the manipulation check (i.e., the state attachment measure) and the effects of the attachment prime on relational and transactional leadership measures. Correlations were used to assess the relationships among the main continuous variables of interest. Refer to Table 1 for descriptive

statistics for the main variables of interest. Refer to Table 2 for correlations among trait and state attachment orientation measures and transformational leadership sub-scales of the MLQ and LBDQ. Refer to Table 3 for correlations among trait and state attachment orientation measures and transactional leadership sub-scales of the MLQ and LBDQ.

Experimental Attachment Prime Effects on Adult State Attachment Measure

Utilizing a one-way ANOVA to assess the relationship between the attachment prime measure and State Adult Attachment Measure, we uncovered no effect of the attachment prime on the State Adult Attachment Measure. The attachment prime did not have a significant effect on the State Adult Attachment Measure as intended. That is, priming attachment mindset did not impact the participants' attachment in the present. Therefore, Hypothesis 4 was not supported.

Utilizing one-way ANOVAs to assess the relationship between the attachment prime measure and leadership measure sub-scales, we uncovered two results that depicted main effects of the attachment prime on leadership sub-scales idealized influence and consideration. First, we uncovered a main effect of the attachment prime on idealized influence, $F(3, 135) = 3.37, p < .05$. Participants presented with the anxious prime were more likely to advocate an idealized influence leadership style ($M = 3.84, SD = .08$) than those who had the avoidant prime ($M = 3.48, SD = .09$), a secure attachment prime ($M = 3.58, SD = .09$), or the neutral prime ($M = 3.73, SD = .09$). Second, there was a main effect of the attachment prime on consideration, $F(3, 129) = 2.79, p < .05$. Participants in the anxious condition were more likely to advocate consideration leadership style ($M = 4.01, SD = .07$) than participants in the avoidant condition ($M = 3.76, SD = .07$), secure condition ($M = 3.93, SD = .07$), or the neutral condition ($M = 3.98, SD = .07$). Hypothesis 5 was partially supported. The analysis showed no significant main effect

of the attachment prime on the remainder of the leadership sub-scales. Hypothesis 6 was not supported.

Trait and State Attachment Effects on Leadership Scales

Leader behavior description questionnaire.

Consideration. A correlation was used to assess the relationship between the consideration sub-scale of the LBDQ and the Experiences in Close Relationships attachment measure. This relational leadership strategy was negatively correlated with avoidance, $r(144) = -.28, p < .01, p = .001$, and negatively correlated with anxiety, $r(140) = -.17, p < .05$. That is, avoidant individuals and anxious individuals are less likely to employ the consideration relational leadership strategy. Stated differently, individuals who are low in anxiety and low in avoidance (indicative of secure attachment) were more likely to utilize this relational-oriented leadership strategy.

A correlation was used to assess the relationship between the consideration sub-scale and the State Adult Attachment Measure. Utilizing this attachment measure, consideration was negatively correlated with avoidant attachment, $r(140) = -.41, p < .001$, but positively correlated with secure attachment, $r(140) = .32, p < .001$. There was no significant correlation with anxious attachment. Avoidant individuals were less likely to employ the consideration leadership strategy, while secure individuals were more likely to employ this relational strategy. Therefore, Hypotheses 1 and 2 were partially supported and the data countered Hypothesis 3.

Initiating structure. A correlation was used to assess the relationship between the initiating structure sub-scale of the LBDQ and the Experiences in Close Relationships attachment measure. This more independent, task-focused leadership style was negatively

correlated with avoidance, $r(144) = -.19, p < .05$. There was no significant correlation with anxiety. Avoidant individuals were less likely to use the initiating structure leadership strategy.

A correlation was used to assess the relationship between the initiating structure sub-scale and the State Adult Attachment Measure. Utilizing this attachment measure, initiating structure was negatively correlated with avoidant attachment, $r(130) = -.22, p < .05, p = .01$, but positively correlated with anxious attachment, $r(130) = .22, p < .05, p = .01$. There was no significant correlation with secure attachment. Avoidant individuals were less likely to utilize the initiating structure transactional leadership strategy, while anxious individual were more likely to employ this strategy. In sum, this data did not support Hypothesis 1 and partially countered Hypothesis 2.

Multifactor leadership questionnaire.

Transformational leadership.

Idealized influence. A correlation was used to examine the relationship between the idealized influence sub-scale on the MLQ and the Experiences in Close Relationships attachment measure. Assessing this transformational leadership strategy on the ECR, we found that the sub-scale was negatively correlated with avoidance, $r(136) = -.23, p < .01$, but there was no significant correlation with anxiety. Avoidant individuals were less likely to employ the idealized influence transformational leadership strategy.

A correlation was used to assess the relationship between idealized influence and the State Adult Attachment Measure. Utilizing this attachment measure, idealized influence was positively correlated with secure attachment style, $r(136) = .23, p < .01$ and anxious attachment, $r(136) = .17, p = .05$, but negatively correlated with avoidant attachment style, $r(136) = -.32, p < .001$. Individuals who are higher on the anxious and secure attachment styles were more likely to employ the idealized influence leadership strategy. Conversely, avoidant individuals were less

likely to utilize this transformational leadership strategy. Hypothesis 1 and 2 was partially supported. Hypothesis 3 was supported.

Inspirational motivation. A correlation was used to assess the relationship between the inspirational motivation sub-scale and the Experiences in Close Relationships attachment measure. Assessing this transformational leadership strategy on the ECR, the sub-scale was negatively correlated with avoidance, $r(139) = -.28, p < .01, p = .001$, but there was no significant correlation with anxiety. Avoidant individuals were less likely to employ the inspirational motivation leadership strategy.

A correlation was used to assess the relationship between the inspirational motivation sub-scale and the State Adult Attachment Measure. Utilizing this attachment measure, inspirational motivation was negatively correlated with avoidant attachment style, $r(139) = -.39, p < .001$, and correlated with the secure attachment style, $r(139) = .22, p < .01$. There was no significant correlation with anxious attachment style. That is, avoidant individuals were less likely to utilize the inspirational motivation leadership strategy, while securely attached individuals were more likely to use this strategy. Taking into consideration all of the results, Hypotheses 1 and 2 were partially supported. The results did not support Hypothesis 3.

Intellectual stimulation. A correlation was used to assess the relationship between the intellectual stimulation sub-scale and the Experiences in Close Relationships attachment measure. Assessing this transformational leadership strategy, there were no significant correlations found with continuous attachment styles.

A correlation was used to assess the relationship between the intellectual stimulation sub-scale and the State Adult Attachment Measure. Utilizing this attachment measure, intellectual stimulation was negatively correlated with avoidant attachment, $r(142) = -.25, p < .01$, and

positively correlated with the secure attachment style, $r(142) = .29, p < .01, p = .001$. There was no significant correlation with anxious attachment style. Avoidant individuals were less likely to utilize the intellectual stimulation leadership strategy, while securely attached individuals were more likely to use this strategy. Hypotheses 1 and 2 were partially supported by these results, while Hypothesis 3 was not supported.

Individualized consideration. A correlation was used to assess the relationship between the individualized consideration sub-scale and the Experiences in Close Relationships attachment measure. The sub-scale was negatively correlated with the avoidant attachment style, $r(143) = -.29, p < .001$, and negatively correlated with the anxious attachment style, $r(143) = -.18, p < .05$. That is, avoidant individuals and anxious individuals are less likely to use the individualized consideration leadership strategy.

A correlation was used to assess the relationship between the individualized consideration sub-scale and the State Adult Attachment Measure. Utilizing this attachment measure, individualized consideration was negatively correlated with avoidant attachment, $r(143) = -.36, p < .001$, but positively correlated with secure attachment, $r(143) = .45, p < .001$. There was no significant correlation with anxious attachment style. In essence, avoidant individuals were less likely to utilize the individualized consideration leadership strategy, while securely attached individuals were more likely to use this strategy. Taking the sum of these results, Hypotheses 1 and 2 were partially supported by these findings, while the data countered Hypothesis 3.

Transactional leadership.

Contingent reward. A correlation was used to assess the relationship between the contingent reward sub-scale of the MLQ and the Experiences in Close Relationships attachment

measure. The transactional leadership sub-scale was negatively correlated with avoidance, $r(144) = -.36, p < .001$, but was not significantly correlated with anxiety. That is, avoidant individuals were less likely to employ a contingent reward transactional leadership strategy.

A correlation was used to understand the relationship between the contingent reward sub-scale and the State Adult Attachment Measure. Utilizing this attachment measure, contingent reward was negatively correlated with avoidant attachment, $r(144) = -.39, p < .001$, and positively correlated with secure attachment, $r(144) = .35, p < .001$. There was no significant correlation between anxious attachment style and contingent reward. This suggests that avoidant individuals were less likely to utilize the contingent reward leadership style, while secure individuals were more likely to use the strategy. Thus, these results partially supported Hypotheses 1 and partially countered Hypothesis 2.

Active management. A correlation was used to assess the relationship between the active management sub-scale and the Experiences in Close Relationships attachment measure. This transactional leadership strategy was positively correlated with anxiety, $r(142) = .18, p < .05$, but not significantly correlated with avoidance. Anxious individuals were more likely to use the active management leadership strategy.

A correlation was used to assess the relationship between the active management sub-scale and the State Adult Attachment Measure. Utilizing this attachment measure, active management was negatively correlated with secure attachment, $r(142) = -.18, p < .05$. There were no significant correlations with either anxious or avoidant attachment. Secure individuals were less likely to employ the strategy of active management. Taking the sum of the data, Hypothesis 1 was partially countered by this data. The results did not support Hypothesis 2.

Passive management. A correlation was used to assess the relationship between the passive management sub-scale and the Experiences in Close Relationships attachment measure. This transactional leadership strategy was positively correlated with avoidance, $r(142) = .25, p < .01$, but not significantly correlated with anxiety. Avoidant individuals were more likely to employ the strategy of passive management.

A correlation was used to assess the relationship between the passive management sub-scale and the State Adult Attachment Measure. Utilizing this attachment measure, passive management was positively correlated with avoidant attachment, $r(142) = .38, p < .001$, but negatively correlated with secure attachment, $r(142) = -.37, p < .001$. There was no significant correlation with anxious attachment. In sum, avoidant individuals were more likely to utilize the passive management leadership strategy, while secure individuals were less likely to employ this strategy. Hence, Hypotheses 1 was partially countered by the data and Hypothesis 2 was partially supported by the data.

Laissez-faire. A correlation was used to assess the relationship between the laissez-faire sub-scale and the Experiences in Close Relationships attachment measure. This transactional leadership strategy was positively correlated with avoidance, $r(140) = .24, p < .01$, and positively correlated with anxiety, $r(140) = .18, p < .05$. Avoidant individuals and anxious individuals were more likely to utilize the laissez-faire leadership strategy.

A correlation was used to assess the relationship between the laissez-faire sub-scale and the State Adult Attachment Measure. Utilizing this attachment measure, the laissez-faire style was positively correlated with avoidant attachment, $r(140) = .43, p < .001$, but negatively correlated with secure attachment, $r(140) = -.29, p = .001$. There was no significant correlation with anxious attachment. That is, avoidant individuals were more likely to employ the laissez-

faire leadership strategy, while secure individuals were less likely to utilize this strategy. Overall, Hypotheses 1 was partially countered by this data and Hypothesis 2 was partially supported by the data.

Discussion

Secure attachment was positively correlated with relational leadership strategies and negatively correlated with transactional leadership strategies, only partially supporting Hypothesis 1. Hypothesis 2, that avoidant attachment orientation would be negatively correlated with relational strategies and positively correlated with transactional strategies, was supported by the findings. Anxious attachment results were largely inconclusive, but showed a slight trend toward transactional leadership strategies. Therefore, the data was inconclusive on Hypothesis 4.

Also notable is that across both leadership measures, all attachment measures were associated more often with relational leadership sub-scales over transactional leadership sub-scales. This makes sense considering relational leadership is more likely to involve attachment. Furthermore, the results suggest, by striking amount of significant data, that the effects of attachment style may extend to behaviors in the workplace in addition to intimate relationship dynamics.

Leadership Measures

Leader behavior description questionnaire. Correlations were used to assess the relationship between the two attachment style measures (Experiences in Close Relationships and State Adult Attachment Measure) and the first leadership measure (Leader Behavior Description Questionnaire), which assesses consideration and initiating structure leadership styles.

Overall, our results on these relationships partially supported our hypotheses. Individuals who were high in secure attachment were more likely to utilize consideration leadership

strategies. There was no significant correlation between secure attachment and initiating structure. Therefore, Hypothesis 1 was only partially supported. Individuals who were low in avoidant attachment were less likely to employ both consideration and initiating structure leadership strategies. Therefore, the transformational leadership prediction of Hypothesis 2 was supported, while the transactional leadership prediction actually exhibited the opposite pattern. Hypothesis 2 was partially supported. The intricacies of anxious attachment, discussed in Hypothesis 3, were teased apart more than in the MLQ. Anxious attachment correlated positively with consideration and negatively with initiating structure, suggesting that anxious individuals were more likely to employ relational leadership strategies and less likely to utilize transactional strategies. Hypothesis 3 was supported by these results.

Multifactor leadership questionnaire. Correlations were used to assess the relationship of the two attachment style measures (Experiences in Close Relationships, and State Adult Attachment Measure) on the second leadership measure (Multifactor Leadership Questionnaire), which assesses leadership across transformational and transactional strategies.

Overall, our results on these relationships had partial support for our hypotheses. Secure attachment was positively correlated with relational leadership strategies, but negatively correlated with transactional leadership strategies (with the exception of contingent reward). The data supported the transformational prediction of Hypothesis 1, but countered the transactional prediction; Hypothesis 1 was partially supported. Individuals high in secure attachment are high in transformational leadership style and lower in transactional leadership style. Low avoidance was the most significant predictor of transformational leadership strategy. Avoidant attachment orientation was negatively correlated with transformational leadership strategies and positively correlated with transactional leadership strategies (with the exception of contingent reward). The

data supported Hypothesis 2. Individuals that are higher in avoidant attachment orientation are more likely to employ transactional leadership strategies and less likely to employ transformational leadership strategies. Anxiety findings were discrepant. The intricacies of anxious attachment, discussed in Hypothesis 3, were largely inconclusive in the MLQs transformational leadership findings; even so, anxious attachment style positively correlated with a couple transactional sub-scales, suggesting that anxiously attached individuals may be more likely to employ transactional leadership strategies. Individuals lower in secure attachment and higher in both avoidant and anxious attachment are high in transactional leadership style. However, for the contingent reward sub-scale, the opposite pattern is observed (low avoidance and high secure attachment). There were no other significant results for the remaining leadership sub-scales.

Hypotheses

State and trait hypotheses.

Secure hypothesis. Hypothesis 1. Partially supporting our hypothesis, secure attachment was positively correlated with relational leadership strategies and negatively correlated with transactional leadership strategies. The transaction leadership results countered our hypothesis that secure attachment orientation would be positively correlated with transactional leadership strategy. There were two notable exceptions to this data trend. First, contingent reward, a transactional leadership sub-scale, countered this pattern. Second, the transactional leadership initiating structure strategy showed no significant results for secure attachment and was therefore inconclusive on Hypothesis 1. Still, the remainder of the data exhibited this trend, partially supporting the hypothesis. Securely attached individuals were more likely to yield compartmentalized strategies that employ primarily a relational leadership style. An additional

point, findings suggest that state attachment mindset, of the attachment measures, yielded the highest correlations with leadership measures.

The results were in accordance with Popper (2002), Mikulincer and Shaver (2007), Davidovitz, Mikulincer and Shaver (2007) and Popper and Amit (2009)s' assessment of the effect of attachment on leadership style; securely attached individuals possess qualities, such as individual consideration, which contribute to their use of relational leadership strategies. Furthermore, empathy and emotional involvement characterize securely attached individuals (Popper et al., 2002). Secure attachment may facilitate the ability to recognize and incorporate contextual and relational cues and therefore the ability to recognize the higher needs of the follower. Conversely, secure attachment may debilitate the individual's ability to ignore relational cues and emotions to focus solely on the task at hand; these individuals are unable to view tasks as transactions alone.

Insecure hypotheses. *Hypothesis 2.* Hypothesis 2, that avoidant attachment orientation is negatively correlated with relational strategies and positively correlated with transactional leadership strategies, was supported by the findings. It was often the case that avoidant attachment was negatively correlated with relational strategies. Still, there were two counter findings to this finding: the initiating structure and contingent reward transactional leadership strategies. Furthermore, active management, a transactional leadership strategy, was inconclusive on this trend. The MLQ supported these findings, while the LBDQ supported the transformational leadership prediction, but countered the transactional leadership prediction. The findings suggest that avoidant individuals yield compartmentalized strategies that employ primarily an independent/task-focused leadership style. Another note, avoidant attachment style correlated with leadership measures significantly more than any other attachment style. Secure

attachment was a far second. Anxiety correlated with all scales about equally, as well as across relational-transaction leadership dyad. It is the case that avoidant individuals are less likely to employ relational leadership strategies.

Avoidant attachment may facilitate the individual's ability to ignore relational cues and emotions to focus solely on the task at hand; they are able to view tasks simply as transactions. Popper (2002) concludes that Personalized Leadership (the rough equivalent of transactional leadership) is associated with narcissism and that avoidance is correlated with higher levels of Personalized Leadership. Transactional leaders are more self-oriented as opposed to transformational leaders whom are more other oriented. This is in agreement with the current study, considering avoidant attachment may be related to self-orientation, in which others can fall into the background.

In addition, avoidant attachment may debilitate the ability to recognize and incorporate contextual, emotional, and relational cues and therefore the ability to recognize the higher needs of the individuals. Again, Popper (2002) points to the explanation that avoidant leaders do not possess the same relational qualities that secure leaders do. Secure leaders possess empathy and show emotional involvement in others (Popper, 2002). Mikulincer and Shaver (2007) explains that avoidant individuals are lower in compassion and altruistic helping. Interestingly, Popper and Amit (2009) point to low trait anxiety as a mediating factor between secure attachment and leadership growth. Overall, a myriad of qualities could act as mediating factors between secure attachment and relational strategies, which avoidant leaders do not possess.

Hypothesis 3 Overall, the data seems to suggest that anxious attachment may be positively correlated with transactional leadership strategies. The results on the relationship between anxious attachment and transformational leadership are discrepant. The findings suggest

that anxiously attached individuals may be more likely to employ transactional leadership strategies. Still, the data is not absolutely conclusive. It seems because of the anxious attachments characteristically ambivalent nature, that the attachment style may not be significantly related to the presented leadership scales.

Anxiously attached individuals may overemphasize relational/people-focused strategies, given that this orientation indicates a preoccupation with relationships, which may actually inhibit relational strategies. Still, the overall results suggest a more ambivalence of the anxiously attached, having little effect on leadership strategies. The results in the literature seem conflicted, as well. Mikulincer et al. (2007) claimed that anxiety was associated with a self-enhancing and self-reliant approach to leadership, typical of transactional leadership. The results also express that insecure attachment (anxious and avoidant) was associated with lower transformational leadership. Still, Doverspike et al. (1997) found no correlations between anxious attachment and leadership style.

Experimental hypotheses.

Hypotheses 4- 6. We uncovered no effect of the attachment prime on the State Adult Attachment Measure. The attachment prime did not have a significant effect on the State Adult Attachment Measure as intended. That is, priming attachment mindset did not impact the participant's attachment in the present. Therefore, Hypothesis 4 as not supported.

We uncovered two results that depicted main effects of the attachment prime on leadership sub-scales idealized influence and consideration. First, we uncovered a main effect of the attachment prime on idealized influence; participants presented with the anxious prime were more likely to advocate an idealized influence leadership style than those in all other conditions. Second, there was a main effect of the attachment prime on consideration; participants in the

anxious condition were more likely to advocate consideration leadership style than all other conditions. The prime did have a main effect on relational leadership strategies of both the MLQ and the LBDQ. The data partially supported Hypothesis 5. There were no other main effects of the prime on other leadership strategies; Hypothesis 6 was not supported.

Limitations

There are several noteworthy limitations of the study. One of the primary limitations concerns the attachment prime results. Although we predicted that priming attachment would affect the individual's reported state attachment, there was no significant effect of primed attachment style on subsequent attachment mindset. The writing exercise the prime consisted of may not have been immersive enough to significantly affect the individual's attachment mindset. The non-significant effects could have been due to the placement of the State Adult Attachment Measure. In order to avoid the potential reactance effects of completing the state attachment items immediately after the explicit relationship-relevant attachment prime, the state measure was not placed directly after the prime. In follow-up studies, it would be helpful to include the state measure directly after the attachment prime to determine whether it has an immediate effect and also to test other versions of attachment mindset primes.

Furthermore, the attachment prime had few significant effects on the leadership measures. When the prime had an effect, it was primarily for the anxious prime and only with respect to relational leadership strategies. The prime had significant effects on the idealized influence sub-scale, $F(3, 135) = 3.37, p < .05$, of the MLQ, and the consideration sub-scale of the LBDQ, $F(3, 129) = 2.79, p < .05$. However, results observed for the prime were in the hypothesized direction, and the state attachment mindset was significantly correlated with many of the dependent measures of interest.

A second possible limitation is the survey distribution. Survey results were collected through an online system. Being outside the laboratory setting, students taking the survey online may have not absorbed the significance and importance of their participation. Furthermore, by having students take the survey on the computer, they may have been more prone to distraction than in a laboratory setting. The sense of removal from the laboratory setting may have deemphasized the importance of high quality and honest answers from the participants.

A third limitation is related to the sample characteristics. The sample was drawn from an undergraduate student population at the University of Michigan. All students were also enrolled in an Introductory Psychology course. As with any study that utilizes a student sample, there can be an argument against the external validity the study holds; the results may not be generalizable to the population at large. Furthermore, the University of Michigan has a liberal and socially conscious reputation that may affect student responses to surveys claiming to tap into relationships and leadership strategies. Of a minor note, the University's motto includes the quote "the leaders and the best". Since the survey was distributed with the University of Michigan's logo visible, students may have conformed to leadership roles that fit this particular University's image.

A fourth limitation is related to the types of analyses performed in the study. Specifically, correlations were performed to determine the relationships between trait and state attachment measures and leadership strategies. Causation cannot be inferred for these results. Instead of attachment style influencing leadership strategy, the relationship could be such that the leadership strategies participants' use affects their attachment style. For example, transformational leaders, through their positive interactions with subordinates, could develop a secure attachment style. In addition, there could be a third variable mediating the relationship

between attachment style and leadership strategy. In this case, there would not be a direct relationship between the two main variables of the study: attachment orientation and leadership style. Correlational data does not provide a conclusive answer as to the direction of the relationship between these variables.

Future Directions

Because of the ambivalent nature of anxious attachment and the corresponding inconsistent findings in the current and previous literature, anxious attachment is an interesting topic for future exploration. As previously mentioned, anxious attachment yielded few significant results with respect to the leadership measures included in the present study. Perhaps this is due to the dualistic nature of anxious attachment, characterized by a preoccupation with close relations in some cases and ambivalence toward them in others (Batholomew & Horwitz, 1991; Brennan et al., 1998). Both of these sub-orientations are characterized by a negative view of the self and a positive view of the other (the opposite holds true for avoidant individuals), but these sub-orientations differ in willingness to engage in relationships. This dualistic component of anxious attachment may be a contributing factor to the often conflicting and inconclusive findings on the relationship between anxious attachment and leadership strategies. Further research is necessary to tease apart the intricacies of the anxious-ambivalent orientation and its relationship to leadership strategies and behaviors in the workplace.

Secondly, the transactional leadership paradigm provides another area ripe for future research. In particular, there seems to be a close relationship between the contingent reward strategy of the MLQ and initiating structure of the LBDQ. Both of these sub-scales yielded results that countered hypotheses and proved discrepant from the findings associated with the other transactional leadership strategies. While all other transactional leadership strategies

yielded a positive correlation with avoidance as predicted, both of these measures showed a negative correlation with avoidance. Additionally, the contingent reward strategy showed an unanticipated positive correlation with secure attachment. Further research on the sub-scales of transactional leadership may provide a better understanding of the distinctions among these strategies and how they differ from relational strategies.

Furthermore, the objective of clarifying the relationships among attachment orientation, primed attachment mindset, and leadership strategies warrants further attention. The current data set does not address questions of process. Popper and Amit (2009) began to pave the way for research on these topics with their finding the low levels of trait anxiety and high openness to experience act as mediators between secure attachment and leader development. Further research is needed to address process variables and to identify possible mediating factors of the relationship between attachment and leadership. Perspective-taking and inclusivity may be viable venues for exploration. Perspective-taking is characterized by the individual's tendency to spontaneously adopt other peoples' point of view (Davis, 1980). Inclusivity is characterized by the perceived interdependence between the individual and other entities (Leary, Tipsord, & Tate, 2008). Additionally, testing the effects of various attachment primes on leadership strategies will provide further insight into whether current attachment mindset affects concurrent leadership practices. Priming insecure individuals with secure attachment may facilitate the use of more relational strategies that address people-focused objectives. In the present study, attachment prime had no effect on state attachment. However, considering the results for the state attachment measure, there is great potential for future studies that attempt to temporally alter attachment mindset.

State attachment yielded the strongest relationships with leader behavior, even surpassing the results for the trait attachment measure. In other words, compared to an individual's stable attachment orientation rooted in past relationships, the attachment mindset that the individual experienced in the moment affected their reported leadership strategies to a greater extent. This supports the theorized malleability of attachment orientations, in favor of a working model that is more temporal rather than strictly stable. Hence, a secure attachment mindset may have the potential to yield more relational outcomes in the moment. Interventions that prime a secure attachment mindset in leaders and authority figures may have the potential to yield more relational strategies in the workplace, such as those afforded by transformational leadership.

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Many thanks to my graduate mentor, Melanie Henderson, for collaborating with me on this manuscript. She far surpassed all mentor duties and this thesis would not be possible without her. I also want to thank Dr. Fiona Lee for overseeing and offering big-picture insight on the thesis.

Table 1

Descriptive Statistics of Attachment Style Measures

Attachment Measures	Mean	Standard Deviation
<i>Experiences in Close Relationships- Short</i>		
Avoidant	2.85	1.13
Anxious	3.74	1.06
<i>State Adult Attachment Measure</i>		
Avoidant	2.91	1.19
Anxious	4.69	1.23
Secure	5.75	1.05

Table 2

Correlations Between Attachment Measures and Transformational Leadership

Attachment Measures	<i>Multifactor Leadership Questionnaire</i>				<i>Leader Behavior Description Questionnaire</i>
	Idealize Influence	Inspirational Motivation	Intellectual Stimulation	Individualized Consideration	Consideration
<i>Experiences in Close Relationships-Short</i>					
Avoidant	-0.234**	-0.277***	-0.156+	-0.292***	-0.276***
Anxious	-0.073	-0.149+	-0.115	-0.176*	-0.174*
<i>State Adult Attachment Measure</i>					
Avoidant	-0.318***	-0.386***	-0.245***	-0.356***	-0.414***
Anxious	0.168*	0.148+	0.071	0.055	-0.023
Secure	0.231**	0.223**	0.285**	0.447***	0.317***

Note. + $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 3

Correlations Between Attachment Measures and Transactional Leadership

Attachment Measures	<i>Multifactor Leadership Questionnaire</i>				<i>Leader Behavior Description Questionnaire</i>
	Contingent Reward	Active Management	Passive Management	Laissez-Faire	Initiating Structure
<i>Experiences in Close Relationships-Short</i>					
Avoidant	-0.358***	0.033	0.253**	0.237**	-0.194*
Anxious	0.002	0.180*	0.162+	0.175*	0.032
<i>State Adult Attachment Measure</i>					
Avoidant	-0.386***	0.117	0.376***	0.425***	-0.220*
Anxious	0.138+	0.213*	0.009	-0.084	0.216*
Secure	0.353***	-0.181*	-0.372***	-0.290***	0.049

Note. + $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Appendix

Experimental Attachment Prime Items

Instructions: Below you will be presented with a description of a particular type of individual in your life. We ask that you take the next 5-7 minutes to write about an experience you have had with this person. Describe an experience in which this person exhibited the characteristics in the description. After about 5 minutes has passed, a "next" arrow will appear. At that point, finish the sentence you are writing and proceed to the next page.

Avoidant Attachment:

Try to remember a close relationship in which you did not feel comfortable getting close to your partner, you had difficulty trusting your partner completely and had difficulty being dependent on your partner. This would be a relationship in which you felt tense when your partner got too close, and you often felt as though your partner wanted a relationship more intimate than you were ready for.

Secure Attachment:

Try to remember a close relationship in which you felt it was relatively easy to get close to your partner. You were comfortable depending on your partner and having him/her depend on you. You didn't worry about being abandoned, and you were not concerned about your partner getting too close to you.

Anxious Attachment:

Try to remember a close relationship in which your partner was reluctant to get as close to you as you would like. You may have often worried that he/she didn't like you or didn't want to stay with you. You may have wanted to get close to your partner and this sometimes scared him/her.

Neutral:

Try to remember an acquaintance you recently met. This could be a person you met in passing or only briefly. You have no particularly strong feelings about this person and do not know him/her very well.