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Pepperdine University
Graduate School of Education and Psychology

MODIFICATION OF THE “GOLD STANDARD”?
LEADERSHIP SELECTION FROM AN ATTACHMENT LENS: A CRITICAL ANALYSIS

A dissertation submitted in partial satisfaction
of the requirements for the degree of
Doctor of Psychology

by

Rebecca Pearlstein

October, 2016

Louis Cozolino, Ph.D. –Dissertation Chairperson

This clinical dissertation, written by

Rebecca Pearlstein

under the guidance of a Faculty Committee and approved by its members, has been submitted to and accepted by the Graduate Faculty in partial fulfillment of the requirements for the degree of

DOCTOR OF PSYCHOLOGY

Doctoral Committee:

Louis Cozolino, Ph.D. – Chairperson

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Thank you to my family. Dad, you are and have always been my constant and inspiration. You have taught me strength in the toughest times, to always move forward. From you I have learned resilience. Tere, thank you for your friendship and trust. And Ben, thank you for your encouragement and love. Without your constant support, through my 14-hour days tucked away in the office, clinic, or library, I would not have endured the challenges of graduate school. Your patience is remarkable; you are a true partner and safe haven.

Finally, I extend a big thank you to my extraordinary supervisors: Dr. Aviera, Dr. Shafranske, Dr. Gomberg, Dr. McCreary, and Dr. Zeller. You have taught me to think critically and act patiently, with compassion and respect. I move forward in our field equipped with a strong model of exemplary leadership.

VITA

EDUCATION

Pepperdine University Anticipated: May 2017
 Graduate School of Education and Psychology; Los Angeles, CA
Doctoral Student in Clinical Psychology, APA-accredited Psy.D. Program

Pepperdine University April 2013
 Graduate School of Education and Psychology; Los Angeles, CA
Master of Arts in Psychology

University of California, Berkeley; Berkeley, CA December 2010
Bachelor of Arts, Rhetoric, Honors with High Distinction
 Phi Beta Kappa

CLINICAL EXPERIENCE

Pacific Clinics; Pasadena, CA September 2016
Adult Outpatient Track—APA-Accredited Pre-Doctoral Internship Program
 Full Service Partnership Program: Primary Rotation
Supervisor: Susan Sabo, Ph.D.

West Los Angeles VA Healthcare Center; Los Angeles, CA September 2015-May 2016
Psychology Pre-Intern
Mental Health Clinic
Supervisor: Sara Jarvis, Ph.D.

- Participate in an integrative treatment team of psychologists, psychiatrists, nurses, and social workers and participate in clinical supervision and treatment team meetings.
- Provide evidence-based interventions to a diverse patient population presenting with varied psychiatric disorders and co-morbid substance-use disorders.
- Conduct longer-term and brief psychotherapy in the treatment of individuals, families, couples, and groups.
- Provide comprehensive personality assessments and cognitive evaluations for diagnostic and treatment planning purposes. Assessment instruments include: WAIS-IV, WMS, WRAT, MCMI, MMPI, and Rorschach.
- Participate in weekly Grand Rounds.

Health Psychology

Supervisor: Charles McCreary, Ph.D.

- Provide group behavioral health interventions in the MOVE weight lose program, participate in didactic courses on nutrition and health, and provide individual behavioral therapy.
- Provide psycho-education and behavioral interventions in the Quit Smoking program, setting individualized goals, identifying barriers, and monitoring weekly progress.
- Participate in *Biofeedback*, component of Health Promotion and Disease Prevention Programs to help veterans regulate their physiological stress response.
- Co-lead *Coping with Chronic Illness Group*, providing weekly support and coping skills for veterans living with chronic, debilitating illnesses.

Rehabilitation Psychology

Supervisor: Michelle Zeller, Psy.D., ABPP/CN

- Provide bedside brief assessments for psychodiagnostic purposes and assess capacity/readiness for discharge for individuals in the acute rehabilitation unit. Assessment instruments include RBANS, MOCA, Folstein, GAD-7, PHQ-9 and brief neuropsychological assessments.

- Participate in short-term therapy through the Primary Care Mental Health Integration (PCMHI) and provide the medical team with an evaluation of a patient's adjustment, potential difficulties with medical interventions, compliance with treatment, and suggestions for how medical interventions should be tailored to the individual patient.
- Participate in the Stroke Survivor weekly support group providing psycho-education and support for those coping with disabilities following a stroke.
- All responsibilities incorporate ongoing suicide risk assessments and prevention plans.

Long Beach Mental Health Center—Adult Rehabilitative Services September 2014-August 2015
Long Beach, CA

Supervisor: Lee Gomberg, Ph.D.

Psychology Extern

- Provide evidence-based practice group and individual therapy using cognitive-behavioral therapy (CBT), dialectical behavior therapy (DBT), and seeking safety to adults with a wide range of disorders, including chronic mental illness, mood and anxiety disorders, posttraumatic stress disorder (PTSD), substance use disorders, borderline personality disorder (BPD), and co-occurring medical conditions.
- Assess, plan, implement, and adapt treatment for clients with learning, linguistic, or other barriers, as well as sexual, gender, cultural, socioeconomic and racial diversity issues.
- Co-facilitate groups delivering evidence-based practices, including Seeking Safety and DBT skills group.
- Comply with strict DBT treatment protocol, including weekly monitoring of treatment progress using diary cards, as well as participation in structured weekly sessions (utilizing chain analysis), phone coaching, and weekly team consultation meetings.
- Conduct intakes, assessments and screenings, as well as provide initial diagnoses in triage and make appropriate referrals, including initiating hospitalizations.
- Administer, score, and interpret outcome measures, as means of diagnostic clarification and tracking progress in treatment (including DERS, SCID-II, GAD-7, BAI, BDI, PSSI).
- Collaborative treatment in providing integrative care with psychiatrists, social workers, and nurses in addressing case management, medication, housing, or other healthcare matters.
- Strict adherence to, and training in, Department of Mental Health documentation and policy standards.
- Attend weekly group and individual supervision, as well as a year-long seminar at Harbor-UCLA in Advances in CBT.

Pepperdine University Community Counseling Center
West Los Angeles, CA

Supervisor: Edward Shafranske, Ph.D.

September 2014- June 2016

Supervisor: Aaron Aviera, Ph.D.

September 2013-August 2014

Therapist

- Provide weekly, long-term individual psychotherapy for adults in a community counseling setting.
- Conduct thorough intake assessments and provide treatment utilizing cognitive-behavioral therapy, as well as psychodynamic therapy to populations presenting with mood-related and anxiety disorders, personality disorders, and substance use disorders.
- Conduct psychodiagnostic assessment and administer outcome measurements to track treatment progress, evaluate progression towards treatment goals, and modify the treatment plan, as necessary.

- Attend weekly individual and group supervision to discuss case conceptualizations and treatment progress.
- Participate in weekly case conference and case presentation to discuss treatment planning and differential diagnoses.

Kaiser Permanente Los Angeles Medical Center, Pediatric Department September 2013-July 2014

Supervisor: Juliet Warner, Ph.D.

Neurocognitive Late Effects Clinic (NCLE):

- Provide evidence-based screening assessment services to pediatric cancer patients. Conduct pre and post-treatment assessment for newly diagnosed oncology patients, evaluation of long-term neuropsychological outcomes in remitted patients, and markers of cognitive decline.
- Contribute to the development of a research infrastructure through serial assessment and creation of a testing database.
- Administration, scoring, and report writing of WISC-IV, D-KEFS Verbal and Design Fluency, Color-Word Interference Test, WAIS-III Digit Span, BRIEF, BASC-II.

ADHD/School Clinic:

- Provide assessment services for school-age children to rule-in/out attention deficit and learning disorders as variables contributing to academic delays.
- Provide individualized clinical feedback and recommendations regarding academic and treatment planning, including evidence-based psychoeducation regarding the patients' cognitive strengths and weaknesses.
- Administration, scoring, and report writing of KTEA-II, Beery-Buktenica VMI-5, WASI, WISC-IV, Spadafore Diagnostic Reading Test, and DAP-IQ.

Didi Hirsch: Suicide Prevention Center; Culver City, CA

August 2012-November 2013

Volunteer Crisis Line Counselor:

- Participated in comprehensive 65-hour training course beginning with Applied Suicide Intervention Skills Training (ASIST) workshop.
- Provide suicide prevention and crisis intervention for individuals in crisis or at risk of suicide.
- Coordinate state-by-state referrals and community resources.
- Make short-term and extended follow-up calls.
- Aid in training new crisis counselor trainees by role playing suicidal crisis calls.
- Trained chat counselor providing suicide prevention and crisis intervention techniques for online communication.

San Fernando Valley Community Mental Health Center; Van Nuys, CA

October 2011-June 2013

Transitional Youth Volunteer

- Mentor and provide social support for teens experiencing symptoms of major mental illness in weekly visits to the Transitional Youth House.
- Co-facilitate psycho-education group sessions focusing on coping skills.
- Set individualized goals to foster skill building.
- Facilitate conflict resolution among residents and de-escalate arguments.
- Conduct in-depth behavioral observations and monitor progress with Day Treatment Intensive Program counselors.

PEER SUPERVISION

Pepperdine University, Graduate School of Education and Psychology
Los Angeles, CA

September 2015-Present

Faculty Supervisor: Aaron Aviera, Ph.D.

- Appointed by the Director of Clinical Training to conduct peer supervision of first-year doctoral students, and one second-year doctoral student.
- Meet weekly with supervisees to provide guidance and assistance with differential diagnosis skills, case conceptualization, treatment planning, as well as implementing interventions.
- Review, edit, and provide feedback regarding intake assessments, videotaped sessions, and progress notes.
- Weekly meetings with the supervisees' primary licensed supervisor to assist with crisis management needs, as well as with year-long competency evaluation of students.

RESEARCH EXPERIENCE

Pepperdine University, Graduate School of Education and Psychology January 2014-July 2016
Los Angeles, CA

Applied Scholarship Community

Chair: Louis Cozolino, Ph.D.

- Dissertation: *Modification of the "Gold Standard"? Assessing Leadership Through an Attachment Lens: A critical analysis*

Pepperdine University, Graduate School of Education and Psychology May 2013-September 2013
Los Angeles, CA

Principle Investigator: Louis Cozolino, Ph.D.

Research Assistant

- Create research article databases related to attachment theory, business psychology in corporate settings, and attachment measurements.
- Compile research data using PubMed, PsychInfo, PsychNet, and Google Scholar and organize through Excel.
- Organize and maintain electronic and hard copy article files for use in future publications.

Kaiser Permanente Los Angeles Medical Center, Pediatric Department April 2012-September 2013

Principle Investigator: Juliet Warner, Ph.D.

Research Assistant, Neurocognitive Late Effects Clinic

- Assist with research assessing the Neurocognitive Late Effects (NCLE) of pediatric oncology patients to track development over time; and patients presenting with academic difficulties in the ADHD/School Clinic.
- Score neuropsychological and psychodiagnostic assessments.
- Receive ongoing assessment training in: WISC-IV, D-KEFS Verbal and Design Fluency, Color-Word Interference Test, WAIS-III Digit Span, BRIEF, BASC-II.
- Data entry in NCLE database.

PROFESSIONAL EXPERIENCE

Office of the City Manager, City of Berkeley, CA September 2009-February 2010

Intern for the Ambassadors Program

- Facilitated outreach to homeless population to provide resources and assistance and manage crises.
- Worked closely with recovering addicts serving as liaisons between Berkeley residents and the police in the Ambassadors Program.
- Drafted summary reports for contract renewal of the program.

POSTER PRESENTATION

Pearlstein, R., Staffaroni, Adam, A., & Zeller, M. (2016). *Stroke Support Group featuring Zorro: Meeting CARF standards one week at a time*. CARF Accreditation of Stroke Support Program. Greater Los Angeles VA, CA.

Warner, J., Gindlesperger, M. F., Wells, V. A., Pearlstein, R. J. Yang, A., Fried, R., Kakavand, H. (2013). *Neurocognitive Late-Effects of Pediatric Oncology: Annual Screening as Standard of Care with the KP-NCLE Brief Assessment Battery*. International Neuropsychological Society (INS) Conference. Waikoloa, HI.

ADDITIONAL TRAININGS

Acceptance and Commitment Therapy: Building Skills in Implementation and Process	May 2016
<u>Instructor:</u> Robyn Walser, Ph.D.	
Enhancing Clinical Supervision: Application of a Competency-Based Approach	April 2016
<u>Instructor:</u> Edward Shafranske, Ph.D./ABPP	
Harbor-UCLA <i>Advances in CBT</i>	September 2014-June 2015
<u>Instructor:</u> Lynn McFarr, Ph.D.	
Seeking Safety Training	October 2014
County of Los Angeles—Department of Mental Health	
Dialectical Behavioral Therapy (DBT) Two-Day Training	September 2014
<u>Instructor:</u> Lynn McFarr, Ph.D.	

ADDITIONAL SKILLS

University of California, Berkeley Symphony Orchestra Viola	September 2006-February 2010
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AFFILIATIONS

California Psychological Association of Graduate Students	2014-Present
Psi Chi International Honor Society	2011-Present
American Psychological Association Student Affiliate	2011-Present
Golden Key International Honor Society	2006-2010
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Dean's List	2007

ABSTRACT

The demands of corporate America are placing increased pressures on supervisors and executives to create and manage optimal organizational cultures. Relational capabilities and emotional intelligence have come to the fore as an essential component of effective and successful business leadership. When leaders are unable to create positive relationships with their working teams and navigate the day-to-day stressors of the workplace, the costs can be significant. In addition to losses in productivity, absenteeism, stress, burnout, and demoralization all take a heavy toll.

From the perspective of attachment theory, the ability to connect with others, cope with stress, and engage in productive behavior all stem from positive early relationships with caregivers. It is thought that early experiences create attachment schema, which continue to organize the way we relate at home and in the workplace. Preliminary research suggests that leaders with secure attachment styles are able to drive optimal employee behaviors and performance outcomes. Similarly, leaders with neglectful, dismissive, and critical interpersonal styles grounded in insecure attachment schema lead to more undesirable and less productive employee behaviors.

There is an abundance of research utilizing self-report measures to assess attachment and leadership behaviors in the workplace and the potential to use attachment behavior as an additional criterion for leadership selection. The current study will explore the following questions: 1. What does the research say about the integration of adult attachment, assessment, and leadership? 2. Can the well-established Adult Attachment Interview be modified for the purpose of leadership selection? As such, the goal is to apply attachment research to selecting more effective leaders capable of creating healthier and more productive working cultures.

Chapter 1: Introduction and Background

Attachment theory is regarded as a well-developed theoretical and organizational system that deepens our understanding of human connections. As the theory has expanded in the recent years, its applications are vast, bringing to the fore the socio-emotional consequences of adult attachment relationships. Understanding the potential applications of attachment theory across various settings and as a treatment intervention requires a thorough examination of its origins, its connection to neural systems, and trauma. As such, this review will explore the roots of the theory and serve as a departure point for the development of resources that capitalize on the theory's possibilities to cultivate healthy relationships.

Key Tenets of Attachment Theory in the Workplace

Hazan and Shaver (1994) were among the earliest researchers to apply attachment theory to adult relationships. In adulthood, the attachment bond forms between two people when there is close physical proximity between the two, specifically when one might be regarded as more physically adept and can offer protection when faced with perceived or actual threat (Hazan & Shaver, 1994). Researchers further clarified the ways in which a relationship partner fulfilled the criteria of an attachment figure, specifically "the balance between attachment and exploration associated with healthy functioning early in life is, in important aspects, similar to the love/work balance that marks healthy functioning in adulthood" (Hazan & Shaver, 1990, p. 270).

Insecure attachment behaviors similarly stem from the early working models formed in caregiving relationships. For example, the adult classified as an anxious attachment style likely lacks the confidence that their partner will respond to their needs in a reliable and consistent way. Because of this, ample time and energy is devoted to securing the partner's responsiveness, keeping them close by. Needy, clinging behaviors can illustrate this style, as well as heightened

expressions of anger and suffering. Avoidant attachment styles in adult relationships results when one partner is consistently unresponsive. This elicits avoidant behaviors in the adult, specifically avoiding social contact, dismissing their need for closeness and safety in stressful situations (Hazan & Shaver, 1994).

Drawing on the interconnections of emotional relatedness, exploration, and independence, Hazan and Shaver (1990) were the first to apply attachment theory to workplace relationships. Often the high demands and stress of the workplace activates the attachment system, and colleagues, managers, and supervisors can all meet those attachment needs. Given the negative and damaging effects of suboptimal leadership, it is critical to take a closer look at the individual in the authoritative role serving as the attachment figure. Hazan and Shaver (1990) specifically connected the support and exploration pieces inherent to attachment bonds across love and work. Further, authors consider the link between satisfaction at work and satisfaction with relationships, as well as overall well-being. Theoretically, when the individual achieves safety and security when the caregiver provides a safe haven, they are able to engage in subsequent exploration. This is only possible after the attachment needs are met, thus the exploration comes secondary to attachment security. In other words, “adults’ tendencies to seek and maintain proximity to an attachment figure and move away from that figure in order to interact with and master the environment are expressed...in romantic love relationships and in productive work” (Hazan & Shaver, 1990, p. 271).

This seminal work revealed that securely attachment adults derive the most satisfaction from workplace relationships and approach their work with the most confidence, “unburdened by fears of failure” (Hazan & Shaver, 1994, p. 278). Additionally, results showed that those individual’s investment in work does not interfere with the quality of their relationships.

However, those with anxious/ambivalent attachment styles were associated with concerns with other's perceptions of their work performance (e.g. wanting to impress others with their work, concerns with rejection). These preoccupations ultimately were found to interfere with their work performance and productivity (Hazan & Shaver, 1990). Further, avoidant individuals endorsed feeling unsatisfied when not working, in other words it appears that relationships interfered with work; this is consistent with the theory and avoidant attachment style's negative model of the other.

Researchers have built upon this work over the years, and specifically have integrated the key role of leadership with attachment. Quick, Nelson, and Quick (1987) were among the earliest to identify one's attachment, in combination with self-reliance, as a key ingredient to selecting successful leaders. Further, in recent years authors have noted the predictive component of attachment behaviors and the utility in approaching leadership from this perspective (Hudson, 2013). When taken together, it becomes clear that there is value in expanding this theory to the leader-follower dyad. Based on Bowlby's original hypotheses, in the parent-child dyad we might be able to predict the behavioral outcomes of the securely attached infant who has a responsive caregiver. These children are more self-confident and have positive expectations that their needs will be met during times of threat or danger. Similarly, "attachment theory helps to predict the actions of the leader and of the follower in their relationship" (Hudson, 2013, p. 148). Again, the internal working models help us understand the formation and consistency of leader-follower relationships.

Consistent with the theoretical foundations of attachment, it is important to examine how the different styles of attachment present in the leadership role. The secure leader offers consistency in their responsiveness to employee's needs and promotes a positive relationship

(Keller, 2003). Similar to intrusive parenting, the preoccupied, anxiously attached leader is likely to be vigilant and dependent on the follower (Keller, 2003). These individuals may have insecurities about their own leadership performance and abilities, and subsequently seek approval and reassurance from employees. Finally, the dismissive/avoidant leader's inattention and lack of emotions may turn-off the follower and leave them to rely on themselves.

Manning (2003) broadens the scope of the leader-follower dyad relationship and examines the affect on organizational outcomes, while also addressing the cross-cultural component. Specifically, this author discusses the importance of the common factors necessary for the development of effective cross-cultural leaders: technical and organizational experience and competence, as well as interpersonal competence as characterized by attachment style (Manning, 2003).

When considering the application of attachment theory to business organizations, it is necessary to address the diversity piece in order to promote generalizability of the theory. Diversity of the workforce requires culturally competent and sensitive leaders, as organizations are comprised of diverse groups ethnically and racially. In fact, a 2050 projection for the United States stipulates that the workforce will "bring today's White majority to just half of the U.S. population while the Hispanic/Latino population will grow to more than 24% and the overall Asian American population will double from 4% to 8%" (Groves & Feyerherm, 2011, p. 536). Researchers identify the importance of emotional and cultural intelligence among leaders to effectively navigate across cultural lines. Both of these kinds of intelligence involve a wide variety of behaviors that are appropriate across diverse populations. More specifically, cultural intelligence is defined as "an individual's capability to exhibit appropriate verbal and nonverbal

actions when interacting with people from different cultural backgrounds” (Groves & Feyerherm, 2011, p. 538).

This emotional intelligence is a key component for leaders if they are to function as the secure and responsive attachment figure. This intelligence is what ultimately drives their behaviors, providing support and protection in high stress situations. Manning (2003) highlights the consequences of culturally incompetent leaders that lack this emotional acumen. Manning (2003) noted that a survey conducted on 750 organizations found that up to 20% of leaders returned home early from working abroad due to challenges in a foreign environment. These challenges relate to job satisfaction, morale, work performance, and having an attitude of openness to new experience and flexibility. This emotional, relationship competency involves knowing and anticipating the unique needs of the employees in order to provide optimal responsiveness, which may vary culturally. Manning (2003) applies working models of behavior to those relationships at work. These models are developed in early interpersonal interactions with caregivers and shape the attachment system. These behaviors include empathy, conflict resolution, and trust, are all highly critical to relationships within the workplace. It is understandable then that securely attached leaders are theorized to take a more collaborative, perspective-taking stance when faced with conflict than someone with an insecure attachment style.

More recently, Harms (2011) took an in depth look at the developmental foundations of leadership, making the link between attachment theory, leadership, job satisfaction and performance in the workplace. Harms (2011) acknowledges the scarcity in the literature linking attachment as a precipitant of workplace outcomes, and maintains that this may partly be due to the fact that attachment research has focused more on the developmental piece and romantic

relationships. Additionally, because personality theory and the Five Factor Model have typically dominated the workplace literature, attachment theory has historically been underrepresented (Harms, 2011). Even so, attachment theory is regarded as having superior predictive power in understanding and anticipating behaviors. Harms (2011) is a strong proponent of utilizing attachment theory to guide leadership selection, as well as developing training and interventions for those leaders with insecure attachment. Although attachment theory has historically been regarded as stable over time, literature also shows that attachment styles are malleable to change with different corrective experiences and relationships (Gillath, Selcuk, & Shaver, 2008). Finally, similar to the proposals made by Harms (2011), further implications are made to promote programs and organizational interventions integrating attachment, leadership, relationship competency, and attitudes towards diversity (Manning, 2003).

Cultural Considerations of Attachment Theory

Building on the diversity and cultural sensitivity piece in the workplace, it is important to consider the cultural considerations of attachment theory, in general. Though Ainsworth (1978) early on applied the Strange Situation across cultures, specifically in the Uganda sample, this application brought to light several cultural considerations pertaining to the theory's universality (Van Ijzendoorn & Sagi, 1999). In other words, is attachment theory, a theory primarily based off of the research of Western-centric studies, applicable across cultures? This discussion has largely centered around three main issues: the sensitivity hypothesis, the competency hypothesis, and the secure base hypothesis (Rothbaum, Weisz, Pott, Miyake, & Morelli, 2000; Yalcinkaya, Rapoza, & Malley-Morrison, 2010). Rothbaum et al. (2000) conclude that these hypotheses, involving a mother's sensitivity to the infant's needs, the development of social and emotional competency, and secure attachment leading to exploration, are largely rooted in Western values

of individualism. More recently researchers have participated in this universality debate, looking further into the cultural congruence of attachment types, structure (secure and insecure dimensions), predictability, and outcomes (Yalcinkaya et al., 2010).

Regarding the universality of types, this involves whether measures are able to delineate different types of attachment across cultures. In a large meta-analysis studying the outcomes of more than 10,000 administrations of the AAI, researchers concluded that attachment styles as measured by the AAI were “valid in various languages with only minor adaptations in the coding system” (Bakermans-Kranenburg & Van IJzendoorn, 2009, p. 248). Additionally, researchers confirmed the significance of the preoccupied attachment style as measured by the Relationships Questionnaire, an instrument developed in the West (Bartholomew & Horowitz, 1991) with a population in East Asia (Schmitt et al., 2004).

Regarding the presence of secure attachment behaviors across cultures with multiple caregivers, these behaviors observed in the children are consistent with those of Western culture. Specifically, researchers studied the caregiving practices within a tribe in Nigeria, the Hausa (Marvin, VanDevender, Iwanaga, LeVine, & Levine, 1977). Researchers studied those children who use three to four caregivers as a secure base, and multiple caregivers were responsive to their proximity-seeking behaviors (i.e. crying). Though these attachment behaviors were similar to those observed in research in Western societies, exploratory behaviors were limited to visual exploration in the presence of caregivers due to environmental or safety concerns (Marvin et al., 1977). Additionally, the universality of the secure base was confirmed in a study of Chinese mothers and their infants (Posada et al., 1995). In a Q-Sort measuring the applicability of the secure base hypothesis, Chinese mothers’ descriptions of ideal infant secure attachment

behaviors were correlated with descriptions from not only the United States and Europe, but from Japan, as well (Posada et al., 1995).

Much of the cross-cultural research studies of attachment have largely supported the universality hypothesis and the context-dependent displays of attachment behaviors across different cultures (Van Ijzendoorn & Sagi, 1999). Though many of the studies involve small sample sizes, the studies often utilize a mixed methods approach, combining observational methods with longitudinal data, giving the results a robust look at the variations within a culture. Though further cross-cultural studies are needed to expand the applicability of the theory (particularly looking at the moderating role of gender across societies), the behavioral and contextual differences observed across cultures rests on the evolutionary and biological underpinnings of attachment.

Neurobiology of Attachment

When considering the adaptation of an assessment tool that capitalizes on cognitive processes and affective strategies, it is necessary to review the neurobiological research surrounding attachment theory. As such, a deeper examination of the biological mechanisms at play in the parent–child bond lends to a comprehensive understanding of the underlying neural substrates of attachment.

Examining the neurobiology of attachment is an endeavor that aligns with Bowlby’s theory that attachment is indeed a biologically driven process (Strathearn, 2011). Specifically, this model views molecular biology as playing a fundamental role in understanding how parent–infant interaction shapes genetic expression. Strathearn (2011) purports that different attachment strategies (e.g. secure, anxious-ambivalent), may actually represent differences in the way the brain processes sensory information. This research supports the notion surrounding

neurobiology, which holds that the brain is hard-wired to connect to other brains. Further, research supports the claim that attachment is not necessarily unique to humans, but that the neural pathways implicated in the process can be explored ethologically. This mechanism in mammals is one of survival, specifically involving proximity seeking and response to separation in times of threat (Insel, 1997).

The biological underpinning of attachment has been explored in the caregiving behaviors of mammals, with a significant amount of research studying the behavior of rats. Specifically, literature reveals three ways in which maternal behavior shapes this structuring of the brain; through learning, plasticity, and the ability to cope with stress (Cozolino, 2012). Crucial in the regulation of stress is the hypothalamic-pituitary-adrenal (HPA) system. The development of this system is found to hinge upon maternal responses to environmental events, e.g. handling pups by way of licking and grooming (Cozolino, 2012).

Liu et al. (1997) further elucidate the impact of behavioral responses to stress on neural development. Specifically, they posit that these aforementioned maternal behaviors dampen HPA responsiveness to stress, in effect regulating the central nervous system of the pup. Further, various neuropeptides, specifically oxytocin and vasopressin, have been implicated in the study of pair bonds in prairie voles (Insel, 1997). Rather than locating a single circuit to attachment, researchers examine several regions of the brain dense in oxytocin and vasopressin receptors (Insel, 1997). Specifically, regions central in integrating social information and reward pathways, most notably the amygdala to the hypothalamus, to the ventral tegmental regions, are rich in neuropeptides. Although an abundance of research on rats supports this claim, Strathearn (2011) also identifies these maternal caregiving behaviors as associated with oxytocinergic and dopaminergic systems in humans.

Integral to the biological systems identified in maternal caregiving behaviors is oxytocin. This neuromodulator, produced in the hypothalamus, has been linked to long-term anxiolytic and bonding effects (Strathearn, 2011). Part of the oxytocinergic system, responsible for social memories and emotional regulation in humans and animals, oxytocin is presumed to facilitate physical proximity between mother and infant. When oxytocin is passed to infants through breast milk, cues from the environment are linked to the mother, ultimately facilitating a social bond.

Research has linked oxytocin to long-term feelings of comfort and security and overall cardiovascular health (Diamond, 2001). Additionally, the role of the dopaminergic system has been correlated to infant neural development, specifically concerning stimulus-reward learning and decision-making, and general stimulating behaviors (Strathearn, 2011).

Strathearn (2011) hypothesizes that dopamine, a neurotransmitter released in the mother in response to infant behaviors, e.g. cooing, gaze, and tactile stimulation, stimulates the release of oxytocin in the infant via the hypothalamus. This process is representative of the dopaminergic pathway system, which is presumed to facilitate and maintain behavior reinforcement and long-term preference to social cues (Strathearn, 2011). Also implicated in the stimulation of neural growth and under epigenetic control is the brain-derived neurotrophic factor (BDNF; Cozolino, 2012). The BDNF supports the growth of new neurons and is especially important for long-term memory. Specifically, high levels of BDNF buffer the hippocampus from cortisol, thus regulating infants' neuroplasticity and long-term memory processes. Therefore, when there is a BDNF deficit, high levels of stress inhibit this function initially meant to support neural growth (Cozolino, 2012).

The complexity of the human brain requires extended postnatal development, making the first few years of life critical to brain growth. Early parent-infant bonding is crucial because of

the impact it has on the complexity of neural integration with emotional communication, or attunement (Siegel, 2001). This critical first year of development is dominated by right brain activity. The right brain of the mother attunes to the right brain of the infant, and “this resonance plays a fundamental role in brain organization and the development of regulatory processes of the central nervous system” (Rich, 2006, p. 252).

As infants develop beyond the first year, they rely more heavily on nonverbal, implicit-procedural memory systems, again processed and stored in the right hemisphere (Schoore, 2000). Specifically, recent literature implicates distinct neural regions responsible for this experience-dependent plasticity, most notably in the prefrontal cortex. The prefrontal cortex is thought to contain the mechanisms that shape attachment schema, particularly the orbital and medial prefrontal cortices (OMPFC; Cozolino, 2012). Implicated in the orbitofrontal cortex are mechanisms of memory, emotional control, fear arousal, and regulation.

The limbic system formulates the baby’s affect-regulation and social information by processing stimuli, such as their mother’s facial expressions and gaze. The amygdala is especially critical in emotional and fear appraisal, placing meaning and emotional value to external stimuli. Schoore (2000) purports that this process influences behavior at an unconscious level and is in line with Bowlby’s theory of internal working models guiding future behavior. The processes implicated within the limbic system, located within the temporal lobe, are considered the most directly affected by attachment (Rich, 2006).

Given the role it plays in long-term memory, the hippocampus is deemed to be a vital mechanism in establishing attachment schema. Considered to develop at a slower rate, maturing into early adulthood, the hippocampus specializes in organizing learning and memory and when exposed to prolonged stress is particularly vulnerable (Rich, 2006). For instance, the

hippocampus is hypothesized to play a vital role in logical and cooperative social functioning and early trauma and chronic stress can derail this process (Cozolino, 2012). Research using an adult attachment picture system and functional magnetic resonance imaging (fMRI) supports the hypothesis that there is greater limbic activation in attachment systems characterized by a history of traumatic experiences. The experiences of trauma involved in the unresolved category correlate with increased activation in the amygdala and hippocampus (Buchheim, Erk, George, Kächele, Ruchow, et al., 2005). These findings are in line with the notion that the amygdala is central in processing negative emotions; individuals classified in this unresolved style of attachment are inundated with negative affect.

The posterior cingulate and anterior cingulate cortex are critical in processing environmental information such as a mother's touch, movement, and emotional information (Cozolino, 2012). Connected to the *omgfc*, the anterior cingulate is associated with the ability to problem-solve and regulate affect. More specifically, research suggests that the anterior cingulate is associated with social relationship stimuli such as grief and exclusion (Buchheim, Erk, George, Kächele, Kircher, et al., 2008). In a study of patients with borderline personality disorder and history of trauma, fMRI imaging revealed activation in the anterior cingulate cortex when viewing images loaded with trauma indicators. This study appears to support attachment research in localizing areas of the brain associated with the attachment system, in that this finding may be interpreted "as a neural signature of pain and fear associated with attachment trauma" (Buchheim, Erk, George, Kächele, Kircher, et al., 2008, p. 233). Rich's (2006) early work supports the theory that early stressful events, or trauma, may result in deterioration of connectivity within the limbic system.

More recently, researchers have examined the association of attachment schemas to structures in the brain (Benetti et al., 2010). Specifically, Benetti et al. (2010) hypothesize that the impact of significant interpersonal stressors, or affective loss, such as separation or death of a loved one, would be moderated by attachment style and represented in the volume of grey matter. Further, research focused on regions involved in emotion regulation, such as the anterior cingulate cortex, amygdala, and orbitofrontal cortex. Using voxel-based morphometry, a neuroimaging technique that reveals structural brain differences, this investigation revealed that the greater experiences of affective loss were correlated with reduced grey matter volume (Benetti et al., 2010). Results of the study extend upon earlier findings that attachment anxiety and avoidance moderates the effect of stressful life events on brain structure, notably grey matter volume.

Though several neural structures have been associated with systems implicated in attachment, it is necessary discuss the inner regulatory mechanisms underlying these regions. One such mechanism central to the inner workings of the physiological processes and regulatory effects of attachment relationships is the autonomic nervous system (ANS). Though not the only biological system involved in attachment, the structures involved in autonomic regulation are “a core component of cortical-limbic networks that modulates arousal, inhibition, and habituation” (Cozolino, 2012, p. 65).

Specifically, when the attachment system is activated, the ANS determines how the individual responds, whether by maintaining homeostatic balance or approaching/avoiding the environmental stimuli. If the activating event is appraised as threatening or fear inducing, the ANS heightens activation of the sympathetic nervous system (SNS) initiating the fight-or-flight response (Diamond, 2001). Regarded as up-regulation of the SNS in times of threat,

physiological responses include increased heart rate, blood pressure, and sweating. The parasympathetic nervous system (PNS) is responsible for the down-regulation and return to baseline, or homeostasis. The ability to down-regulate is crucial for survival, as prolonged stress resulting in the continuous release of cortisol is “associated with patterns of neuroendocrine and immunological response that have negative implications for long-term health” (Diamond, 2001, p. 280).

As indicated in the discussion of mammalian caregiving behaviors, research on squirrel monkeys supports this notion that the presence of attachment figures provides a stress-buffering effect. Another key mechanism involved in the PNS is the tenth cranial vagus nerve. As part of the sympathetic nervous system, the vagus nerve modulates arousal during interpersonal exchanges and mobilizes behaviors during a fight-or-flight response (Porges, 2001). This vagal system can be regarded as a kind of volume control for arousal, in that “it allows us to modulate autonomic and emotional arousal in ways that promote sustained contact, emotional attunement, and enhanced caretaking” (Cozolino, 2012, p. 67). In the ability to regulate and suppress emotion and sustain focus and attention, humans are able to relate to others and interact without activating the fight-or-flight response. Developing healthy vagal tone is experience-dependent and reliant on the earliest mother-infant interactions.

As briefly mentioned in the discussion of caregiving behaviors of animals, a salient feature of the regulatory mechanism underlying attachment is the hypothalamic-pituitary-adrenal (HPA) axis of the endocrine system. The HPA axis plays a significant role in the physiological response to stress in that “the hormones released by stress-induced HPA activity facilitate the formation of social bonds” (Diamond, 2001, p. 284). Also relevant in this system is the corticotrophin-releasing factor (CRF) produced in the hypothalamus and responsible for the

production of dopamine. When the CRF is triggered, the hormones released are dependent upon the proximity to and separation from the attachment figure. When there is insufficient down-regulation and return to baseline, the surge of cortisol may damage the regulatory system involved in memory, emotion, and stress control. This interaction of the HPA response to the parasympathetic nervous system in regulating stress ultimately facilitates emotional and physiological functioning. Researchers support the claim that this regulation, or attunement, is a defining feature of the attachment bond (Diamond, 2001).

Research supports this link between affect regulation and the quality of the attachment system, particularly regarding the perception of social meanings (Vrticka, Andersson, Grandjean, Sander, & Vuilleumier, 2008). Utilizing self-reports and fMRI imaging, a recent study performed a closer examination of the associations between attachment style, the amygdala, and striatum activation. Based on appraisals of facial expressions in different scenarios (e.g., ones depicting threat), this study supports extant research that social meaning is associated with affective processing. Adding to the discussion of dopaminergic function in reward, the striatum can be understood as a mechanism that integrates affective and cognitive information in shaping behavioral responses (Strathearn, 2011). As such, there was a lack of activation in the region associated with affect amongst individuals scoring high on avoidant attachment (Vrticka et al., 2008).

This is consistent with earlier research regarding how individuals classified in the avoidant attachment style maintain a comfortable emotional and physical distance from others and generally abstain from support seeking behavior (Vrticka et al., 2008). Also in line with behavioral findings of individuals classified in anxious attachment style, those individuals evidenced higher left amygdala activation in response to appraisals of anger and threat (Vrticka

et al., 2008). This study lends itself to a deeper understanding of the role that social stimuli has on affecting appraisal and response systems. This supports current understanding of the influence that distinct caregiving figures have on the brain circuitry in that it shapes the ability to regulate affect, impulses, and emotions (Cozolino, 2012).

Recent research supports the notion of attachment figures as having distress-alleviating effects (Coan, Schaefer, & Davidson, 2006). One such study sought to examine the effects of holding the hand of an attachment figure versus a stranger in alleviating the pain of an electric shock. A network of regions, including the ventral anterior cingulate, right anterior insula, hypothalamus, and posterior cingulate, were measured through fMRI imaging in order to understand how the underlying neural mechanisms are involved in response to threat (Coan et al., 2006). This study yielded the anticipated results: that spouse hand-holding attenuated “threat-related neural activation in areas implicated in the regulation of emotion...and emotion-related homeostatic functions” (Coan et al., 2006, p. 1037).

Further, another study found an attenuation of distress or threat associated with an attachment figure, specifically when they acted as a safety signal. Fear reduction was correlated with the activation of the ventromedial prefrontal cortex (VMPFC). This region is presumed to activate during fear extinction and have inhibitory control over the amygdala (Eisenberger et al., 2011). Results of this investigation revealed that, in comparison to viewing a stranger’s image, viewing an attachment figure while experiencing physical pain resulted in greater activity in the VMPFC. Studies such as these indicate that the presence of the attachment figure has a measureable effect on one’s ability to regulate response to stimuli such as pain and threat.

In an optimal caregiving environment, there is adequate right brain to right brain attunement between the mother and infant. However, adverse neurobiological development may

result from the effects of trauma and prolonged stress, generating lifelong coping and self-regulatory skills deficits (Rich, 2006). When the brain is over-stimulated with a persistent release of cortisol, it “may result in extensive pruning (cell deterioration or death) of the higher limbic connections of the orbitofrontal, cingulate, and amygdala system” (Rich, 2006, p. 245).

The receptor gamma aminobutyric acid (GABA) plays a prominent role in the regulation of the ANS. The inhibitory function of GABA is critical in down-regulating the ANS. When limited GABA is available, this may result in prolonged electrical stimulation in the brain and sustained high amounts of stress (Rich, 2006). Compromised functioning of the limbic system, primarily the hippocampus and amygdala, limits one’s ability for new learning and problem solving in stressful situations. Rich (2006) posits that when neurons are constantly diverted to other resources to manage stress, dominated by emotional and spatial functions of the right hemisphere, there is a lack of integration between the right and left hemispheres. This may result in reduced central processing, specifically the ability to process and appraise stimuli, emotions, or behaviors, and respond accordingly.

Researchers contend that these biological processes may be characteristic of avoidant and anxious attachment styles. Avoidant attachment styles are associated with a rigid deactivation of emotional responses due to the “over-modulation” (Rich, 2006, p. 244) of emotional stimuli; researchers suspect that the left-brain may be dominating over the emotional processing of the right hemisphere. Conversely, Rich (2006) postulates that the anxious attachment style is associated with an “under-modulation of affect,” (p. 245) which in effect may result in abrupt emotional and behavioral responses to environmental cues.

These findings support the assumption that stress-induced neurobiological damage in early development has lifelong implications on one’s ability to manage stress and regulate

emotional responses. The adult who displays rapid emotional responses to stress-arousing conditions may have been subject to early stress-inducing environments that lacked emotional attunement and failed to promote affect regulation.

Literature has also focused on the intersection of temperament and attachment and their developmental and social outcomes. Temperament may be understood as “individual differences in reactivity and self-regulation assumed to have a constitutional basis” (Rothbart, Ahadi, & Evans, 2000, p. 123). This constitutional basis refers to the biology of the individual as shaped by experiences, and self-regulation depends on certain neural processes and autonomic reactions. Researchers have identified specific structures and systems in the brain responsible for the motivational and inhibitory characteristics of temperament. This includes the reactivity of the HPA axis and indicators within the sympathetic and parasympathetic nervous systems, specifically heart rate variability and skin conductance (Vaughn, Bost, & Van Ijzendoorn, 2008). Researchers have studied the connection of temperament and attachment, specifically the associations with physiological stress response. For example, in a sample of 18-month-old toddlers, those with inhibiting behaviors and classified as insecurely attached showed higher elevations of cortisol than those securely attached infants equipped with resources to manage the activation of the HPA response (Nachmias, Gunnar, Mangelsdorf, Parritz, & Buss, 1996).

More recently, researchers have provided empirical support for the integration of the attachment system and temperament. Specifically, in a study examining compliance behaviors, attachment, and negative reactivity, those infants measured as securely attached scored lowest in negative reactivity, and were highly compliant in the given task (Lickenbrock, Braungart-Rieker, Ekas, Zentall, Oshio, & Planalp, 2013). Additionally, infants showing higher temperamental negative reactivity (displays of anger and resistance to parental cues) were categorized as

insecurely attached and exhibited highly defiant behaviors during a task delay (Lickenbrock et al., 2013).

Of note, the expression of temperament and stress response is influenced by environmental/external factors, supporting the psychobiological theory of temperament. This is where there is a large overlap with attachment theory. Both attachment and temperament involve the organization of behaviors (regulatory behaviors), cognition, and emotion that shape personality, adaptation, and future interactions. However, researchers pose that a key differentiation between the two is “temperament remains an attribute of the child and it is not situated *between* the child and salient others at any developmental period” (Vaughn et al., 2008, p. 198). The attachment system is a unique construct in that it is born out of the relationship between the infant and caregiver, building upon biological structures. Nevertheless, researchers agree that the two constructs go hand in hand. For instance, a child’s temperament, specifically the highly irritable infant high in negative reactivity, is likely to affect a parent’s responsiveness and sensitivity, and therefore the attachment bond; this may pose particular difficulty for even the most sensitive and attuned parent (Mikulincer & Shaver, 2007; Sroufe, 1985).

The current state of the literature highlights the extensive applications of attachment theory to healthy socio-emotional relationships and neural development. As such, this review is meant to serve as a strong foundation for the development of resources and reviews that draw upon this salient link between the attachment system and social-emotional well-being. By understanding the potential applications of attachment, one can consider the implications of the attachment relationship across settings, including the workplace among leadership roles. When the importance of the role of attachment is adequately understood, resources and treatment recommendations can be more helpfully made.

Statement of Problem and Need for Further Study

There is a growing body of literature focusing on the dark side of leadership. Research is validating what most of us have experienced first hand; supervisor's negative behaviors have a damaging impact on worker performance, job satisfaction, and emotional well-being. For the purposes of this review, abusive leadership can be defined as "subordinates' perceptions of the extent to which supervisors engage in the sustained display of hostile verbal and nonverbal behaviors, excluding physical contact" (Tepper, 2000, p. 178). When the employee is subject to these hostile displays, including public ridicule, silent treatment, and scapegoating, it is understandable that the consequences of these behaviors are vast and extend far beyond the workplace environment (Schyns & Schilling, 2012).

Earlier research findings identify the costs of employees enduring this behavior, from emotional exhaustion and the strain on family relationships, to the financial cost of the organization resulting from absenteeism and early terminations (Tepper, 2000). While much of the preliminary research has focused on American corporations, these behaviors are culturally relevant worldwide. A sample of hotel industry employees across Sweden, Poland, and Italy revealed similar results; destructive leadership behaviors, brought on by self-centered leaders, were tied to a decreased level of psychological well-being among employees (Nyberg, Holmberg, Bernin et al., 2011).

Beyond the emotional consequences, literature sheds light on the effects on learning and creativity within the workplace, which is especially relevant in organizations competing in a global and diverse market. One such investigation focused on employees' learning errors as mediated by both aversive and positive leadership styles of their supervisors (Yan, Bligh, & Kohles, 2014). This is particularly relevant in high stake businesses such as aviation and

healthcare systems, where mistakes can result in not only financial costs, but may also have life-threatening consequences. This study highlights the influence leaders have on this error learning, as they “not only directly influence the learning attitudes and behaviors of individuals, but also create or inhibit a climate of learning at the group and organizational levels” (Yan et al., 2014, p. 235).

Yan et al. (2014) describe aversive and laissez-faire leadership, which often involves criticism or offering little to no feedback, respectfully. Positive correlations have been found among these suboptimal leadership styles and higher stress, negative team cohesiveness, greater resistance, and more complaints among employees. When employees do not receive corrective feedback or effective communication from supervisors, they may have less motivation to learn from their mistakes. This study represents an important area in error learning in businesses in that it is relational. Meaning, whether or not the individual can learn from a mistake and develop skills is contingent upon the quality of the relationship with their leader.

Suboptimal and destructive leadership also hinder creativity. One study utilized a path analysis to investigate the cascading effect of managers’ abusive behaviors (Liu, Liao, & Loi, 2012). Confirming the initial hypothesis, authors explained that the department leader’s abusive supervisory behaviors have an indirect negative effect on the creativity of the employee, as moderated by the team leader. This line of research is especially relevant in the current study, as this creativity and capacity to explore are key tenets of attachment theory.

Attachment theory is based on a biopsychosocial system of behaviors that becomes activated in response to a stress. As first tested by Ainsworth (1978), there are three styles that represent a child’s response when the attachment system is activated: secure, anxious/ambivalent, and avoidant. The latter two are characterized as insecure styles and all

three will ostensibly determine the responsiveness of the caregiver (Popper, 2011). Main and Solomon (1986) later added the disorganized/unresolved attachment style to Ainsworth's categorization of insecure attachment. This style consists of seemingly contradictory behaviors, comprised of characteristics from both the avoidant and anxious/ambivalent categories. Recent literature has identified correlations between this insecure category and unresolved trauma or loss experienced early in the caregiver's life (Holmes, 2004). Optimal responsiveness of the caregiver is key; when the attachment system is activated, the child uses their caregiver as a *secure base*. When the attachment figure is optimally responsive, the child is able to seek protection and engage in subsequent exploration.

Over time, it is theorized that the child will develop an *internal working model* of their caregiver that becomes generalized to the individual's self and others, promoting self-reliance in the face of threat and danger (Collins & Read, 1994). It is thought that this system is active across the life span, and as the individual moves into adulthood these working models are "impacted by a wide variety of relationship-specific contextual factors" (Hinjosa, McCauley, Randolph-Seng, & Gardner, 2014, p. 4). In addition to the context of the nuclear family, Hazan and Shaver (1990) were the first researchers to apply attachment theory to workplace relationships. The leader in an organizational context has a complex role, they must be secure in their attachment needs in order to provide employees the support required to navigate the stresses and challenges of the workplace (Hudson, 2013). More specifically, Hazan and Shaver (1990) paralleled infant exploratory behaviors resulting from a secure base and the exploration and mastery involved in work activity in adulthood. The findings of this study point out that those workers with secure attachment styles report satisfaction concerning co-workers and openness to challenges and opportunities for promotion (Hazan & Shaver, 1990). On the other end of

insecure attachment, those individuals reported overall dissatisfaction in their work and working relationships, and understandably so as “preoccupation with attachment needs...inhibits exploration” (Hazan & Shaver, 1990, p. 274).

This work was a springboard for research linking the parent-child bond to the leader-follower dyad in workplace relationships. More recently, research has focused on examining a leader’s capacity to lead based on their attachment style. Popper and Amit (2009) identify attachment style as a central mechanism of leadership. Similar to the patterns seen in the parent-child bond, an effective leader serves as an attachment figure to provide guidance and support while fostering the follower’s self-worth (Popper & Amit, 2009). Their research yielded a significant association between officers of the Israeli Defense Force’s (IDF) secure attachment style and their followers’ ratings of their capacity to lead. This literature sheds light on the connection between the relational competencies of leaders and their attachment style, and even more importantly, on the negative implications of insecurely attached leaders.

When considering the impact, both positive and negative, that leaders have on the morale of their followers and subsequent success of the organization, it should come as no surprise that researchers support relationship competence as grounds for leadership selection (Manning, 2003). Manning (2003) describes that it is this ability to be responsive to followers’ demands, in addition to empathy and social interest, common to secure attachment, that is characteristic to effective and culturally-competent leaders. Though the research literature in psychology points to the potential importance of including measures of attachment style in selecting leaders, organizational psychology has yet to explore this potentially rich area of research. In part this may be due to the fact that current self-report attachment measures suffer the problems of face

validity and social desirability, making them less than ideal for leadership selection (Harms, 2011).

When considering the review of the deleterious effects of harmful leadership, its connection to adult attachment styles, and the need for leadership selection to take into account these factors, this current study is the first step in the development of an assessment resource. Before delving into the proposal of a novel assessment method, it is important to examine the current state of adult attachment theory and assessment. At this time there are two distinct methodologies: self-reports and interview. While both methodologies are relevant in the proposed study, attention will focus on one self-report instrument in particular, the Experiences in Close Relationships Questionnaire, as this has been adapted into a self-report measurement for workplace attachment relationships (Young, 2010). Taking a critical look at this self-report measure and its adaptation to the workplace will be an important stepping-stone for the current study. This was an innovative application of attachment, and a deeper understanding of the strengths of this approach to assessment, as well as its limitations, will be critical in developing a similar instrument for leadership selection.

Chapter 2: Methodology and Procedures

This section will illustrate the methods used to organize a theoretical review and assessment for adult attachment pertaining to leadership. This investigation merges concepts of adult attachment, neurobiology, assessment, and leadership, in order to propose a method for leadership selection.

The current study will consider the adaptation of a structured interview for the workplace from the Adult Attachment Interview, often regarded throughout the literature as the “gold standard” (Ward, Ramsay, Turnbull, Steele, Steele, & Treasure, 2001, p. 497; Warmuth & Cummings, 2015, p. 200) of adult attachment assessment. By focusing on specific scales that evaluate the state of mind of the individual during the interview, this is one avenue into exploring the implications of the neurobiology of attachment. This is particularly relevant as leaders operate according to their social brain and therefore early developmental influences should be considered (Arvey & Chaturvedi, 2011). This approach to measuring adult attachment via interview is especially relevant when considering the selection of a leader, as the Adult Attachment Interview is regarded as a predictor of attachment in the next generation (Hudson, 2013). Similarly, attachment theory can provide a predictive component regarding leader’s success or failure in coping with the complex issues affecting organizational performance (Hudson, 2013). Findings of numerous studies outline the connection between secure leadership and optimal employee behaviors and mental health. Subsequent to laying the groundwork for this novel approach to attachment, this study will conclude by proposing a validation study to test the feasibility of this instrument to be conducted at a later time.

In the development of a synthesis of topics that comprise this review, information will be collected from a wide range of sources. First, it will be important to review the breadth of

concepts and their relatedness, specifically concerning the following areas: adult attachment; adult attachment assessment instruments, both self-report and interview-based; early development and leadership; leadership styles; the neurobiology of attachment; workplace relationships; the leader-follower dyad; the effects of destructive leadership; secure and insecure attachment styles of leaders; behavioral outcomes of insecure leadership; and the state of mind scales regarding attachment instruments. The following online databases will be utilized throughout the review: EBSCOhost, Google scholar, PubMed, PsychInfo, JSTOR, PsycCritiques, PsycArticles, Primary Search, ScienceDirect, and Research Gate. To obtain the most comprehensive search of resources, the following key terms and phrases will be used: attachment theory, adult attachment styles, adult attachment instruments, adult attachment self-reports, workplace attachment, assessment and workplace attachment, impact of insecure attachment, neurobiology of attachment, leadership and attachment, secure leadership behaviors, insecure leadership behaviors, destructive leadership, transformational leadership, transactional leadership, socialized leadership, personalized leadership, Adult Attachment Interview, narrative coherence, coherent narrative, state of mind scales, attachment instruments and validity. To ensure that the information obtained from these aforementioned online resources is most up-to-date and relevant, databases will be revisited throughout the dissertation writing process. Lastly, additional key terms and phrases may be incorporated that are pertinent to the review.

This review will draw upon a breadth of literature, including seminal and recent peer-reviewed articles, books, handbooks, published dissertations, and information from personal contacts. The focus of scholarly peer-reviewed literature will include both qualitative and quantitative methodologies, as well as meta-analyses. The review will draw upon study-generated and synthesis-generated evidence drawn from empirical and theoretical works that

cover a broad range of industries. This will include literature focusing on military and non-military contexts, as well as top department leaders and executives, supervisors, middle managers, and team leaders. It is important to note that in order to conduct a comprehensive review of attachment measurements that are germane to this current study, literature focusing on categorically based attachment styles, as well as dimensional, will be relevant. Similarly, this review will not include attachment measurements created to assess the parent-child bond. While it will be important to discuss the foundations and development of assessment instruments, for the purposes of this study there will not be a comprehensive review of the multitude of instruments that are not relevant to workplace attachment. A comprehensive review across available resources will guide the development of an attachment instrument, and will be organized by the following three sections: *theoretical basis of workplace attachment*, *assessment considerations*, and *resource development*.

Before considering the development of this proposed study, a thorough and extensive search of the literature was conducted pertaining to the current state of attachment theory and its connection to leadership in the workplace. This search also included the theoretical work of the neurobiology of attachment and the connection to the development of a secure leader. There is a considerable amount of literature available related to the theoretical basis of the attachment styles within the leader-follower dyad and the connections to adverse consequences in the workplace. This search also revealed that the instruments utilized in these studies were not developed to measure the specific leader-follower relationship, but were rather broad self-report tools measuring attachment coupled with assessment tools for leadership. It appears that there has been one self-report tool developed to measure workplace attachment relationships (Young, 2010), however this was not developed for leadership selection use. Additionally, there is a

considerable amount of literature available that denotes the practical implications of using attachment theory as a basis for leadership selection, however no work can be found regarding the creation of a specific measure that taps into the importance and relevance of neurobiology, attachment, and leadership (Harms, 2011; Hudson, 2013). This study will be among the first attempts to navigate this area and in doing so will explore the depths of attachment and its' relevance in the workplace.

It is the goal of this review to contribute to the current state of attachment theory in the workplace and initiate interest in the development of a leadership selection tool. Crucial to an integrative literature review, this dissertation will “carefully examine the main ideas and relationships of an issue and provide a critique of existing literature” (Torraco, 2005, p. 361). As indicated earlier, this review will be organized into three parts, *Theoretical Basis of Leadership and Empirical Outcomes*, *Assessment Considerations*, and *Resource Development*.

This section, entitled *Theoretical Basis of Leadership and Empirical Outcomes* will lay the foundation for the dissertation in that it will introduce the theoretical concepts upon which the study is based. Before expanding on the leader-follower dyad in workplace attachment relationships, the first part will focus on the developmental foundations and the genetic basis of leadership, drawing links to early attachment relationships. Upon laying the developmental framework of leadership development, the next subsection will explore empirical works that have examined workplace attachment. It will be especially important here to explore how this has been studied across settings, specifically corporate and military contexts, and the behavioral outcomes of employees. Additionally, the relevance of the following distinct leadership styles and their connection to attachment will be considered: transformational, transactional,

personalized, and socialized. Issues related to cultural consideration and sensitivity, including factors related to gender, will be discussed throughout.

The following section, *Assessment Considerations*, will examine the mechanisms by which these concepts have historically been measured. The first part will focus on how measuring attachment has been done in the past, drawing attention to criticism surrounding the two camps of assessment research: self-report and interview. The following subsection will then narrowly focus on the Experiences in Close Relationships (ECR) scale and explore its adaptation into a self-report specifically developed for the workplace. This section will end by exploring the application of the interview and projective measures, with specific attention to the Adult Attachment Interview (AAI) and Adult Attachment Projective (AAP). It is important to take a comprehensive look at the state of mind scales and the concept of narrative coherence. Attention will focus on the neurobiological implications of a coherent narrative and why that is relevant to leadership.

The final section, *Resource Development*, will bring the concepts and considerations discussed earlier together with the goal of proposing a leadership selection tool. The proposed resource will draw upon the relevance of the state of mind scales, narrative coherence, and neural integration that is only tapped into by the interview method. Thus, the first part will parallel the adaptation of the ECR to a workplace inventory and introduce the development of a semi-structured interview for leadership selection adapted from the AAI. Rationale will be given for the development of sample items and the terminology used, as well as reasoning for coding decisions. This study will conclude with a focus on the strengths and limitations that exist with the use of this instrument, as well as the consideration of a validation study in future directions.

Chapter 3: Analysis and Presentation of the Topic

Theoretical Basis of Leadership and Empirical Outcomes

Developmental foundations of leadership. As research has shed light on the value of integrating attachment theory and leadership, it is important to gain a deeper understanding of the common developmental foundation of the two constructs. Taking a comprehensive look at the early and common factors of attachment and leadership, including the genetic basis, is an important step in synthesizing these two concepts. As attention has been brought to the developmental foundations of attachment in the workplace, the same can be done for leadership.

It is important to explore the many facets of leadership development and the nuances that are involved, e.g., genetics, early relationships, and personality traits (Arvey & Chaturvedi, 2011). The development of leadership is a combination of genetic and environmental factors, and the exploration of twin studies helps delineate work outcomes. Specifically, Keller, Bouchard, Arvey, Segal, and Dawis (1992) conducted a thorough review examining work values, genetics, and environmental influences on work satisfaction. This investigation revealed that 40% of job satisfaction variations were due to genetic predisposition (Keller et al., 1992). This is a significant finding, as prior to this investigation it was assumed that work values strictly arise via environmental factors or influences. This brings attention to the genetic variables at play in the shaping of behavioral outcomes. Following this inquiry, Arvey and Bouchard (1994) strengthen these findings again reviewing the results of twin studies that explore the connection between genetics and behavior in organizations. When monozygotic twins who are reared apart are the focus of study, it is possible to tease apart genetic versus environmental contributions towards job satisfaction. Part of the person-situational debate, this research confirms earlier studies, in that general work satisfaction was accounted for by about 30% of genetic factors (Arvey &

Bouchard, 1994). The common elements and most significant heritable work values found across these investigations were the following: achievement, comfort, status, safety, and autonomy (Keller et al., 1992). It is curious that these factors share similarities with characteristics of secure attachment; this point will be expanded upon later in this section.

In addition to the genetic contributions to work values, Johnson et al. (1998) explored specifically the genetic components to leadership. A sample of 247 twins completed three self-report measurements for leadership, including the Multifactor Leadership Questionnaire, and all measures delineated several adjectives to classify leadership preferences. Using univariate genetic analysis, the study showed significant heritability in several dimensions of leadership, specifically across two factors, transformational and transactional leadership styles (Johnson et al., 1998). Transformational leadership style is understood as one motivating, encouraging, and contributing to the workers' efficacy and agency, and therefore producing beyond what was asked of them (Johnson, Vernon, Harris, & Jang, 2004). In contrast, a transactional style encompasses the leader-follower relationship as more of an exchange of rewards and benefits for the employee's work and loyalty. Both styles also show a significant correlation at the genetic level when compared with personality traits. For instance, transactional leadership was found to negatively correlate with conscientiousness and extraversion, and transformational style showed a positive correlation with conscientiousness, openness, and extraversion (Arvey & Chaturvedi, 2011). More recently research has correlated these constructs with attachment styles and will be elaborated upon later in this discussion.

While many of these factors are deemed heavily genetically loaded, authors note that one still must reach developmental readiness for one to emerge as a leader (Avolio & Vogelgesang, 2011). Following this developmental model, key variables that lead to this readiness are self-

regulatory capabilities, as well as motivation, having a goal-oriented approach, and self-efficacy (Avolio & Vogelgesang, 2011). Again, there are commonalities here with secure attachment, specifically the ability for the individual to appropriately self-regulate in order to effectively respond and provide safety to the distressed other. Further, Avolio and Vogelgesang (2011) indicate this self-regulation capacity has two parts: approach and avoidance as it pertains to achieving some aim. This line of thinking is consistent with attachment relationships when children learn these behaviors based on parental interactions. For instance, they may see their parents overly worry about performing, exploring new tasks or projects, or parents may offer encouragement to engage in more challenging tasks. Parents either foster a degree of exploration (approach), or a cautious stance (avoidance). Another piece of this developmental readiness is motivation. As previously indicated, the motivation to lead encompasses aspects that are largely relational (Manning, 2003). In other words, one can assume that leaders take on the role in large part because of the enjoyment of emotional connectivity.

Research has built upon this notion and has integrated aspects of social intelligence with the biology of leadership (Goleman & Boyatzis, 2008). Expanding upon the relational intelligence piece, authors offer a perspective on social intelligence that integrates neuroscience. In this way, social intelligence can be defined as “a set of interpersonal competencies built on specific neural circuits (and related endocrine systems) that inspire others to be effective” (Goleman & Boyatzis, 2008, p. 3). Further, Goleman and Boyatzis (2008) noted the benefits of high-level leaders who elicit laughter and positivity from their employees. These authors added that this positive state of mind that this type of leadership creates fosters creativity in the followers and even impacts the way they process information. Specifically, it is spindle cells that account for this influence in information processing. These cells make up a fast acting circuit that

transmits thoughts and feelings, and is activated when our emotions, judgments, and beliefs are required in any given situation (Goleman & Boyatzis, 2008). These authors parallel this with intuition. When tied back to leadership, the role of a leader requires fast and thoughtful decision-making, largely built upon experience and intuition; this intuition operates largely on the neural level.

Ample research has integrated these early foundations of leadership with the development of the attachment system beginning with responsive caregiving. Specifically, the secure caregiver lays the groundwork for secure attachment, building the ego resources to handle the leadership role (Popper, 2011). The psychology structures that are formed early in life are paramount for the development of leadership qualities. Additionally, the concurrent development of personality and internal representations ultimately guide behaviors and interactions with others. For instance, Popper (2011) indicates that low trait anxiety and high level of openness to new experience fits with secure attachment. These children are able to regulate when stress levels are activated in threatening situations, and the secure base figure then acts as a safe haven for exploration, consistent with openness to new experiences. These repeated experiences lead to the formation of working models, or internalized representations and expectations of the attachment figure. Popper (2011) also theorizes that within these internal working models are models of the self, specifically regarding one's locus of control. Depending on one's sense of agency to influence events in their life, one either has an internal or external locus of control (Popper, 2011). Popper (2011) further describes that the building blocks of leadership, including the caregiver's response and support of one's openness to experience, self-efficacy, exploration, and inquiry, contributes to the development of distinct types of leaders. In particular, *distant* and *close* leaders appear to resemble attachment styles of caregivers that

would shape secure and insecure attachments (Popper, 2011). *Distant* leaders are often compared to political leaders who may use rhetorical and representational strategies to lead. *Close* leaders are thought of as everyday leading figures, those who lead by example with specific behaviors. These behaviors include guiding, coaching, directing, and being physically present. This description fits that of the good parent. It is clear that these behaviors help shape secure attachment, as well as a healthy representation of an attuned and responsive figure. Given the parallels of these behaviors associated with leadership and attachment theories, it is understandable that attachment theory is “the most appropriate theory for predicting and explaining the development of such leaders” (Popper, 2011, p. 118).

Before further elaborating upon the link between leadership development and attachment, it is important to address the role of gender. Though there is little research available in the area of female leaders with respect to attachment, this is an important area to review and will determine a salient limitation to this study.

There is a strikingly low representation of women in positions of organizational and political power, as they only hold leadership roles in 3% of Fortune 500 companies (Catalyst, 2008). However, this is not surprising given the gender stereotypes that dominate views of women and men’s roles and behaviors. For example, communal qualities related to sensitivity, warmth, and nurturance are attached to women (Hoyt & Johnson, 2011). Men are given the stereotype of having more agency, or an active role, specifically decisiveness, assertiveness, and independence (Hoyt & Johnson, 2011). This is supported historically, at least in the United States. Women typically remained working in the household, whereas men were more likely to participate in the paid workforce. Perhaps this was the birth of gender stereotypes, as the attributes and behaviors were appropriate to those contexts at that time. Throughout time, these

roles determined others' expectations and behaviors, seen in gender differences throughout the lifespan, all of which contributed to women pursuing leadership roles. Hoyt & Johnson (2011) note that women are more likely to underestimate future performance, report lower levels of confidence across a wide breadth of situations, and when asked to determine their own salary, would assign less than men.

In addition to this lower self-confidence, authors further detailed barriers to women pursuing leadership roles. Hoyt & Johnson (2011) indicate that current work in leadership development combats these societal expectations of stereotypical gender roles. The stereotypical attributes of leadership include aggression, ambition, and dominance, are incongruent with the stereotypical gender roles of women. This is more aligned with male stereotypical behavior. When women's behavior as leaders is incongruent with these expectations, this significantly negatively impacts their evaluation as an effective leader. It is understandable that this would then impact women securing leadership roles and being seen as effective by others. Because of this imbalance of expectations, often time women have more responsibilities at home and cannot participate in networking activities that come with leadership (e.g., drinks, golfing, etc.). This is another barrier that has maintained this underrepresentation in leadership roles. One proposed way to overcome these barriers is developing and nurturing qualities that support a transformational leadership style. This involves qualities related to support, responsiveness, and motivational leadership. Of course, one of the most important factors is one's self-perception and self-confidence, which begins at home with caregivers and parents.

Given the relevance of the early childhood relationships in overcoming gender stereotypes and developing into a secure leader, Keller (2003) takes a closer look at how these early experiences impact self-perception. More specifically, the author moves beyond examining

leadership roles as described by traits that have been described earlier (e.g., assertiveness, confidence, strength) that are often attached to gender stereotypes and expectations. Instead, Keller (2003) proposes that attachment theory elucidates the behavioral expectations in certain situations, specifically the follower's perception of the leader. In other words, this is a reciprocal, or transactional exchange, as one's "behavioral adaptation to different leadership models may be positively associated with superiors' perceptions of satisfying performance as well as follower reports of satisfaction with the leader" (Keller, 2003, p. 143). This describes the *implicit leadership theory*.

Research has indicated the link between implicit leadership theories, (one's schema, or mental model, of leadership expectations) to parental traits. Studies have built upon this notion that implicit leadership models reflect perceptions of parental traits, providing further support that effective leaders activate an emotional bond (Berson, Dan, & Yammarino, 2006). Linking back to internal working models (IWM) of self and others, Keller (2003) notes the parallel between descriptions of parents and leaders. As parental relationships possess an affectional bond, so too must the leader-follower relationship. The following factors are necessary to establish this relationship: a sense of security and nurturance, offering acceptance and promoting a sense of self worth and competence, and guidance and direction (Keller, 2003). When these factors are provided, it lays the foundation for an emotional bond that meets attachment needs.

Keller (2003) looks further into the transaction of behaviors between leader and follower. When both the leader and the follower have secure attachment styles, the leader is responsive to the followers' needs, and the follower is receptive. Here there is a general climate of support and attunement to the others' needs and promotes exploratory behaviors, generating creativity and intellectual ventures. With an anxious/ambivalent leader and secure follower, the leader is

sensitive to the followers' needs, yet doubtful of their abilities even though the follower may be competent. As a result, the leader may create a sense of insecurity and dependence where there may not be. Finally, with a secure follower and avoidant leader, there lacks the responsiveness, attention, and sensitivity that come with a secure attachment style. There is generally lack of support and unresponsiveness to the others' needs and lack of emotional attunement. As a result, the secure follower may modify their strategies and adopt a more independent style in order to avoid interacting with the leader.

It is clear that attachment styles influence leader-follower exchanges, as they are operating according to these schemas that have been laid down early in life, reinforced in the workplace through this reciprocal influence. Each party involved brings their own IWMs, or scripts, into the exchange by which they interpret behaviors. When the styles do not match up, research suggests that followers will adapt their leadership schemas, supporting the notion that the schemas are stable and the individual can shift and adapt to meet contextual demands (Keller, 2003). This line of research supports the notion that attachment theory and leadership is moving in an increasingly dynamic and interpersonal direction.

Mack et al. (2011) take a closer look at the dynamics of the interpersonal exchange of the leader-follower relationship. Specifically, a qualitative analysis synthesizes these concepts related to early developmental influences, attachment relationships, and leadership behaviors. This qualitative support on positive outcomes of successful leaders is derived from interviews with business executives and leaders who reflect on their behavior, early influences, and life patterns. These leaders are described as interdependent, rather than independent. This is consistent with the dynamic reciprocal exchange described previously. This interdependence is

understood as combining “the autonomous ability to act and the relational dimension to maintain long-term healthy commitments to and support for others” (Mack et al., 2011, p. 148).

Prior to literature integrating the importance of the relationship, previous research examined the common factors of successful leadership, considering positive stress management, education, prayer, and leisure activities. Related to concepts previously discussed, the most significant factors were social support, self-reliance, and secure attachment (Quick et al., 1984). Building upon these variables, Mack et al. (2011) used qualitative data to test the positive dimensions of leadership from the executives’ point of view. This study was conducted based off the 28 interviews of presidents, CEOs, chairpersons, from a wide array of settings (e.g., financial sector, advertising, transportation, and construction). The interview protocol was generally focused on perceptions of leadership, how and why they became successful as a leader, and actions they have done to grow their leadership skills. The first core element identified from the interviews was Purpose. This involved the leaders promoting acceptance and understanding in collaboratively working towards a common goal. The second core element identified was the quality connection to people. This involves communication/listening skills, people skills, emotional connection, empathy, allowing risk-taking, creating trust, safety, learning from mistakes, and early parental influence (Mack et al., 2011). This element of parental influence came from 79% of participants. Responses from the interviews highlighted this strong influence, often times mentioning the role of their father and/or mother and how they instilled in them certain values, e.g., valuing people.

These common elements elucidated in this study are strikingly similar to qualities of secure attachment: Sensitivity, attunement and responsiveness to followers’ needs, providing a safe haven from which the individual can explore and foster creativity. Additionally, in this

study, the authors note that each of the participants described similar role models and impactful relationships throughout their life. Though this investigation provides a small sample, it gives us rich data into how successful leaders conceptualize leadership. This is an important piece of data from which to develop other models or interventions towards leadership development. It is certainly a useful source of data for this current project, as it supports the utilization of a model that takes advantage of the interpersonal, interdependent nature of attachment relationships as applied to leadership.

These early developmental considerations of both leadership and attachment have important implications for the methodology of assessing leadership. As it pertains to this study, these developmental influences are theorized to have neurological implications, and this current study will consider ways in which these factors can be measured. This will be expanded upon in the following section, however here it is first necessary to examine recent empirical works that support the investigation of leadership and attachment.

Empirical support for leader-follower attachment. The different contexts in which attachment relationships operate are vast. In order to evaluate the large scope of the theory, a variety of contexts of adult attachment relationships will be explored. Before delving into the different styles of leadership and their correlation to attachment, it is important to first explore empirical work that highlights attachment, emotion regulation capabilities, and effective leadership outcomes.

More recently, Kafetsios, Athanasiadou, and Dimou (2014) explore emotion regulation skills, general affective experience, and work satisfaction in relation to supervisor and subordinate's attachment style. In regards to the emotion regulation strategies that characterize an anxious attachment style, there is a hyper-activation of the attachment system that involves a

hypervigilance towards perceived threats (Kafetsios et al., 2014). In contrast, the strategy of avoidant attachment style involves the deactivation of the attachment system, suppressing uncomfortable reactions and memories associated with interpersonal interactions. The authors hypothesized that leaders' anxious and avoidant attachment styles would negatively correlate to their own positive affective experience and satisfaction at work. Additionally, they hypothesized that leaders' insecure attachment styles will negatively correlate to their ability to regulate their emotions effectively. Most importantly, they hypothesized that these insecure attachment styles of leaders will correlate with subordinate's low job satisfaction and negative affect. This investigation not only looks at leaders' attachment styles and the effect on their emotion regulation capabilities, but the impact on the subordinates' affective experience and overall satisfaction at work. To increase validity and generalizability, the study included participants from social services organizations, as well as public schools. In doing so, the authors measure relationships that have close contact and interactional style, specifically school directors/supervisors, and teachers (subordinates).

Results confirmed the first hypothesis, that director's insecure attachment styles significantly correlated to their negative affect and lower satisfaction at work (Kafetsios et al., 2014). But more surprisingly, leaders' avoidant attachment styles were significantly correlated with subordinates' higher than expected job satisfaction. Perhaps this is due to the hands-off style of avoidant attachment that is generally void of emotion (distant, controlled), this may be ideal for those employees with similar styles. One can theorize that this may allow an increased level of autonomy and control that may not be present with secure or anxiously attached leaders. This highlights the moderating effects of followers, or subordinates' perceptions of the leaders and their interactions with them. Regarding leaders' effective emotion management strategies,

this had a strong effect on work satisfaction and positive affect, for both leaders and subordinates. Here we see empirical support for the impact of leaders' abilities to effectively manage their emotions on the functional outcome of subordinates, i.e. their positive affect at work and their work satisfaction.

Additionally, these results extend attachment theory to a group-level approach regarding leadership. This has important implications for leadership training, particularly for those with anxious attachment styles, focusing on their emotion regulation strategies and how that is communicated to subordinates. Finally, this research is consistent with a broader conceptualization of attachment and organizational behavior. Specifically, those with secure attachment are more likely to have a positive attitude toward the organization in general and derive more satisfaction from job-related activities (Mikulincer & Shaver, 2007).

Mikulincer and Florian (1995) were among the first researchers to apply attachment theory to the military context, an ideal setting for this type of research. Researchers view the IDF specifically as an optimal laboratory for examining leadership because unlike the U.S. military, ranks are not determined through academies, or institutionally. In the IDF, there is an ongoing ranking/selection process throughout the training periods. Therefore, all recruits begin on an equal playing field (Popper, Amit, Gal, Mishkal-Sinai, & Lisak, 2004). As such, researcher's focused on IDF cadet's response to highly intensive combat training as it related to their attachment style and nominated a colleague for a leadership role (Mikulincer & Florian, 1995). After 4 months of training, results showed that those cadets categorized as having a secure attachment style were most likely to be perceived and associated with leadership qualities to become an officer. This is in contrast to those cadets identified as having an anxious-attachment style who were not perceived as having these same leadership qualities.

Expanding on earlier empirical as well as theoretical works, Popper, Mayseless, and Castelnova (2000) were among the first to empirically link transformational leadership with attachment style in the military context. Broadly defined, transformational leadership not only involves leaders empowering and encouraging their followers or subordinates, but as “having a vision and as inspiring trust and respect in subordinates” (Popper et al., 2000, p. 268). This style is also associated with satisfaction, effectiveness, and the followers’ own sense of self-efficacy. This is in contrast to transactional leadership, as mentioned earlier this style involves setting and meeting expectations that establishes a stronger link between task and reward. Popper et al. (2000) examine the developmental antecedents and the social and emotional piece of transformational leadership. This involves “the person’s keen interest in others and a general inclination to invest in interpersonal relationships,” (Popper et al., 2000, p. 270) in addition to positive self-regard. The authors hypothesized that to become an effective leader, one must have a positive model of the self, as well as the other. This is a key component of secure attachment.

The first of three studies examined 86 men in the Israel Police, divided into teams with cadets and a commander. Popper et al. (2000) utilized two self-reports on leadership and attachment evaluation, measuring leadership potential of the cadets as measured by the commanders. Secure attachment style was significantly and positively correlated with the specific variables of transformational leadership: charisma, individualized consideration, and intellectual stimulation (Popper et al., 2000). In contrast, the fearful style was significantly and negatively correlated with these three same variables. Ambivalent (preoccupied/anxious) negatively correlated with charisma and intellectual stimulation, and dismissing style was significantly and negatively correlated with individual consideration. These results were

consistent with the initial hypothesis of the study. Finally, the fearful style of attachment involves negative models of self and other, and offered further support of the initial hypothesis.

The second study consisted of a new group of IDF cadets, however they now reported on themselves instead of their commander after a 6-week training course. The commanders filled out the questionnaires pertaining to leadership. In addition to using measures of attachment and leadership, a social desirability questionnaire was also included. This study yielded similar results to the first study as far as secure attachment's positive correlation with transformational leadership, and negative correlations between insecure attachment and transformational leadership. Specifically, dismissive attachment style had a negative correlation to intellectual stimulation. In contrast to first study, the fearful style was not significantly correlated to anything.

Finally, in the third study the commanders completed the attachment style self-reports, and their cadets reported on their leadership style (Popper et al., 2000). Again, significant positive correlations were found between secure attachment and all three variables of the transformational leadership style. In general, there was strong validity in this research, particularly across the first two studies. The participants were training in a leadership course, and the officers were deemed experts in their field in this area. Also in line with initial hypotheses and conceptualization, secure attachment styles were not positively correlated with transactional leadership. This offers further support for the significance of transformational leadership in line with secure attachment, as "only certain types of leadership, those which involve empathy and emotional investment in one's followers, are expected to be associated with secure attachment" (Popper et al., 2000, p. 283).

Popper (2002) built upon these results and looked further into specific leadership styles and their correlation with attachment. In the first study of two, Popper (2002) empirically investigates the differences between socialized and personalized leaders, and identifies narcissism as a significant factor that separates the two. Personalized leaders can be understood as a leader using their power, or influence, for their own benefit, uses a team to foster his/her own success, and regards their success as more important than the group/team. In contrast, socialized leaders prioritize the team above their own self-interest, promoting justice and equality within the team, and encouraging self-efficacy in team members (Popper, 2002). This first study's aim was to confirm the author's conceptualization that narcissism is indeed correlated to personalized leadership, and results were significant. But, an even stronger result was the negative correlation between socialized leaders and narcissism.

Using these results, Popper (2002) further investigated the source, or development of these types of leaders, identifying the relevance of attachment style. Popper (2002) hypothesized that personalized leaders would be significantly and positively correlated to avoidant attachment style, and socialized leaders would be correlated with secure attachment style. The author also hypothesized that those characterized as personalized leaders will score higher in narcissism than those characterized in a secure attachment style. IDF squad commanders completed self-report questionnaires on attachment style and a narcissism inventory. Consistent with the hypotheses, personalized leaders scored higher on narcissism than socialized, and they also were characterized as having avoidant attachment patterns. Particularly significant from these findings is those with personalized leadership styles and avoidant attachment have particular attitudes towards others. Specifically, they lacked an emotional investment and empathy in the other.

Popper et al. (2004) further expanded upon these results, looking specifically at the different factors, constructs, and traits, between personalized and socialized leaders. The differences between leaders and non-leaders were examined in three distinct capacities: self-confidence, proactive orientation, and secure attachment style. Inherent in these factors is the motivational component, specifically that the leader has a future oriented stance and offers the guidance and support to face and overcome challenges. The authors noted that trait anxiety and self-efficacy were variables related to self-confidence. Authors hypothesized that people who perceive themselves as leaders will have lower trait anxiety and higher self-efficacy (Popper et al., 2004). This sample size consisted of 400 IDF soldiers, and psychometric questionnaires were used both to distinguish between leaders and non-leaders, as well as leadership potential self-reports. Confirming the authors' expectations, significant differences were revealed between leaders and non-leaders. Namely, leaders scored low in trait anxiety, high in self-efficacy, and were significantly higher than non-leaders in secure attachment. More importantly, using a regression equation, these were found to be significant predictors of leadership.

Davidovitz, Mikulincer, Shaver, Izsak, and Popper (2007) conducted the most extensive study up to this point by synthesizing the earlier work of leadership and attachment styles. This research also incorporated the behavioral, performance, and mental health outcomes of followers. Again using officers and cadets in the IDF, the authors examined attachment styles of leaders in relation to three leadership constructs: motivation, perception of self (looking at self-efficacy), and leadership style (personalized vs. socialized). Davidovitz et al. (2007) devised self-report scales to measure the leadership variables, and used a widely used attachment self-report, the Experiences in Close Relationships inventory. Unlike previous studies, this sample included women, as well as managers from the public and private sectors. Results support authors'

predictions, that those with insecure attachment styles correlated with personalized leadership styles with self-focused leadership motives. Specifically, anxious attachment was significantly associated with this self-focus, in that they were doubtful in their abilities in task-focused situations. Those classified in avoidant style were dismissive of prosocial leadership motives. This is congruent with this style's focus on self-reliance and disinterest in interpersonal interactions.

In addition, Davidovitz et al. (2007) also examined officer's report on their attachment style, cadets' report on their leaders' leadership styles, as well as their perceived efficacy of their leaders in both task- and emotion-focused situations. Further, the attachment styles of the cadets were measured to see how this impacted their perception of the officers. This sample consisted of 60 units, with 60 officers, all male. Using complex equations and analyses, results showed that officers measuring high in avoidant attachment style were rated low on socialized leadership by their cadets, and had an even lower rating of their ability to handle emotion-focused situations. Additionally, these same cadets had lower appraisal of their unit's cohesion and their own socioemotional functioning. Regarding leaders classified in anxious attachment style, their cadets rated them as high in personalized leadership style, as well as having doubts in their abilities to handle task-focused situations. With regards to outcomes on cadet functioning, there was a negative effect on the soldier's instrumental (task) functioning having an anxiously attached leader.

Finally, Davidovitz et al. (2007) specifically examined the leader's attachment style and the effect on the cadet's wellbeing. This considers the leader's role as the stronger and wiser other who can act as a secure base, providing support and acceptance in times of need, rather than criticism and rejection. To get the most accurate rating possible, authors measured their

behaviors during a 6-month high stress combat training and assessments were given before, and two months after. As authors predicted and consistent with the two earlier studies, those officers classified in avoidant attachment style were not characterized as a secure provider, and more importantly had a negative impact on the mental health of the cadets (as measured by a mental health inventory). These studies clearly reveal associations between a leader's attachment orientation, their motives to lead, willingness to act as the supportive, secure base, and the impact on the followers' performance and mental health. Although these results are limited to the military context and mainly involve men, it is a clear example of the interaction of leadership and attachment when the system is activated in high stress situations.

When considering these abovementioned results, it is important to take a closer look at the cost of sub-optimal leadership. For instance, Ronen and Mikulincer (2012) build upon the IDF studies, looking specifically at the impact of manager's attachment styles on burnout and employee satisfaction. This work is significant in that it increases the generalizability of these conclusions, looking specifically outside of the IDF. These authors build upon their earlier work that links employee's insecure attachment style to their burnout (Ronen & Mikulincer, 2009), now expanding this to leadership and caregiving behaviors of leaders. Ronen and Mikulincer (2012) highlight the difficulties that leaders with insecure attachment behaviors have in providing employees the support that is required. Specifically, "anxious leaders might doubt followers' mastery and capability and thereby undermine their sense of competence" (Ronen & Mikulincer, 2012, p. 832). In addition, leaders' inattention and lack of emotional support are likely to contribute to these unfavorable employee outcomes. Authors examine 483 subordinates and 85 managers from Israel holding various jobs, including banking, accounting, and sales. Results showed that managers with anxious attachment styles, paired with employee anxious and

avoidant styles, predicted higher burnout levels and significantly lower job satisfaction. Interestingly though, managers with avoidant attachment orientations did not correlate with burnout or job dissatisfaction of employees. Regarding the managers' caregiving behaviors, results showed that those managers with hyperactivated caregiving styles added to the employee's feelings of burnout and dissatisfaction. This is understandable, given that this hyperactivated style is consistent with anxious attachment behaviors. Surprisingly, there were no significant results for a negative effect on employee burnout and job dissatisfaction for managers classified with avoidant attachment styles. Authors theorize that because of their hands-off, emotionally devoid, and likely cold demeanor, these managers may portray a false sense of security that does not negatively affect the employee's perception of job satisfaction.

Building upon work that confirms transformational leadership's positive influence on job satisfaction (Bruch & Walter, 2007), recently researchers have examined more thoroughly authentic leadership and employee wellbeing. Specifically, the author explores the mediating role of attachment insecurity on employee wellbeing and authentic leadership (Rahimnia & Sharifirad, 2015). This authentic leadership is defined as a style that "promotes both psychological capacities and a positive ethical climate, [fostering] greater self-awareness...and relational transparency on the part of leaders working with followers, fostering positive self-development" (Walumbwa, Avolio, Gardner, Wernsing, & Peterson, 2008, p. 94). This study consists of a sample of 212 healthcare providers from Iran. This study is significant in that it builds upon the generalizability of this line of research. This is the first study examining the effects of attachment insecurity, employee wellbeing, and leadership in the East. Additionally, the authors examined specific components of wellbeing: job satisfaction, perceived stress, and symptoms related to stress as mediated by attachment insecurity (Rahimnia & Sharifirad, 2015).

Results revealed that secure attachment did not have a significant effect on stress symptoms or perceived stress, although it did have a significant influence on job satisfaction. Further, a path analysis showed that followers' attachment insecurity mediated the effects of authentic leadership and perceived stress, as well as symptoms of stress. Overall, in addition to revealing more about leader's impact on job satisfaction, the results of this study showed how the attitudes of leaders "curtail insecurity in followers" (Rahimnia & Sharifirad, 2015, p. 372).

A thorough review of the concepts elucidated here is meant to link attachment, components of leadership development, and data related to leadership outcomes. In doing so, this illuminates the importance and need of a resource that helps promote more positive employee and organizational outcomes, as well as healthy and secure leaders.

Assessment Considerations

Commentary on self-reports vs. interview. In order to explore the development of a novel assessment tool, it is first critical to examine how attachment measurements have been developed thus far and applied to the research base. This approach will specifically focus on the criticism surrounding the two camps of research: self-report and interviews. Gaining a deeper understanding of the commentary that exists regarding the two methodologies will have relevant implications for the development of an innovative resource.

To this point, measuring attachment has resulted from two ends of the research, as researchers clarify the distinction between "measurement of attachment within the nuclear family (the developmental approach), or measurements of attachments to contemporary peers (the social/personality approach"; Bernier & Dozier, 2002, p. 171). This current study is an attempt to bridge the gap between the two camps. Authors even indicate the need for the field to move "toward integration and open-minded communication between the two traditions" (Bernier &

Dozier, 2002, p. 171). Regardless of the differences between the distinct camps of research, it is understood that both approaches assume that the development of internal working models guide and influence behavior well into adulthood (Bouthillier, Julien, Dubé, Bélanger, & Hamelin, 2002).

To gain a thorough appreciation of the differences between methodologies, it is necessary to illuminate their different assumptions and content of the various assessment instruments. Beginning the interview method, the Adult Attachment Interview (AAI) was among the earliest assessment methods, followed by two other interviews: the Peer Attachment Interview (Bartholomew & Horowitz, 1991) and the Current Relationship Interview (Crowell & Owens, 1998). More specifically, the Peer Attachment Interview examined models of the self and other in friendships, romantic, and close attachment relationships. Interviews are scored based on their match to four prototypes of attachment styles that describe experiences of support seeking, response to separation, conflict, as well as acceptance and rejection (Griffin & Bartholomew, 1994). The Current Relationship Inventory examines the reciprocal, adult couple relationship (Crowell & Owens, 1998). This specifically measures the degree to which their partner serves as a secure base. This scoring is consistent with that of the AAI, in that the content, as well as discourse style (coherence) is rated and the individual is classified as secure, dismissing, or preoccupied. This interview method has been found to predict different aspects of relationship qualities, including overall satisfaction, divorce, and even violence (Ravitz, 2010).

Regarding the AAI, one particularly unique and important element of the scoring method is the focus on the rating of one's state of mind, which denotes the relevance of a coherent discourse, defensive processes, as well as assessing one's relational style (Bifulco, Moran, Ball, & Bernazzani, 2002). Additionally, authors note a key aspect of the AAI which sets it apart from

every other measure, even the other interviews, indicating that it is “the only measure which has been used to examine intergenerational transmission of attachment and the relations between adult attachment status, parenting behavior and child outcome” (Crowell & Treboux, 1995, p. 13). A further deconstruction of the AAI and examination of the specific scales that are unique to this interview will be elaborated upon later in the discussion.

It is also important to address the different terminology used across measures that ultimately are measuring the same construct. For instance, one of the earliest categorizations used in the AAI, delineates four attachment styles: “free and autonomous,” “enmeshed and preoccupied,” “dismissing,” and “unresolved” (Ravitz, Maunder, Hunter, Sthankiya, & Lancee, 2010, p. 421). This nomenclature aligns with the following attachment styles: secure, anxious, avoidant, and disorganized. The use of the nomenclature differs across different instruments.

Regarding the development of the self-report assessment method, the first approach was executed in the field of social psychology with Hazan and Shaver’s (1987) self-report method. This self-report assessed secure, enmeshed, and dismissive attachment styles within romantic relationships. Insecurity is based on two dimensions: avoidance of close intimate relationships, or anxiety concerning abandonment. Specifically, the individuals were to rate their own feeling about themselves in relation to a romantic relationship. This yielded strong test-retest reliability across 4 years.

In relation to cultural consideration, following Hazan and Shaver’s initial study in which the 3-category measure was developed, replication studies were conducted across cultures around the world (Karakurt, Kafescioglu, & Keiley, 2010). Classifications were similar throughout several studies, classifying the majority of participants as securely attached in Australia, Israel, Canada, and Portugal. To assure validity and to ensure that the structure of the

original version is maintained when translated into the other languages, bilingual translators were used. This measure has been regarded as a reliable, brief and generally easy tool to administer and thus has been utilized quite frequently across cultures.

There have been a number of self-report measures developed that make slight modifications from the original. These self-reports are largely based on a *categorical* approach. In this approach, the individual is assigned into a particular category of attachment, where there is no overlap between the classifications. This is in contrast to the *dimensional* approach: this is an organizing system of attachment assessment instruments that measures the extent of a particular attachment style, falling along a continuum, or *dimension* (Ravitz et al., 2010).

Bartholomew and Horowitz (1991) built upon Hazan and Shaver's (1987) first 3-category self-report and organized the styles into four categories and developed the Relationship Questionnaire. This is organized into the following four classifications: secure, preoccupied, dismissing/avoidant, and fearful/avoidant. This speaks to the variety in the terminology. Some self-reports have categories of avoidant attachment, while others utilize dimensions of avoidant attachment (i.e. fearful). These are important considerations to keep in mind when these self-reports are used across studies, specifically regarding their effect on concurrent and discriminant validity.

Building upon these forced-choice self-reports, Griffin and Bartholomew (1994) developed the Relationship Styles Questionnaire, a 30-item measurement that classifies individuals along the dimensions of positive and negative views of the self and others. This has been used across several studies in different countries, including Finland, German, and Hungary. However, this measure did not yield consistent results regarding the factor structure of the attachment categories across cultures, specifically the factor structure did not hold up between

the Hungarian and English versions (Karakurt et al., 2010). Additional studies would be beneficial in expanding the adaptability of this scale.

Further expanding upon the self-report instruments, the Attachment Style Questionnaire (ASQ; Feeney et al., 1994) was developed to reexamine the interpersonal dynamics within close relationships, and has increasingly complex scale structures to do so. Specifically, individuals are classified into attachment styles based on ratings across five subscales (five-factors). These scales include discomfort with closeness, need for approval, preoccupation, viewing relationships secondary to achievement, and lack of confidence. Individuals are classified into an attachment style based on their ratings of items that load on two dimensions: anxiety and avoidance. This instrument was validated across studies with both adults and adolescents, and has provided information linking attachment with coping styles in high stress situations, as well as with support, and relationship satisfaction (Ravitz et al., 2010). Additionally, the ASQ has been developed into Italian and German versions, with an Italian psychiatric, and nonclinical population. This was one of the first studies of a clinical population to be tested with the ASQ (Fossati et al., 2003). To strengthen its validity and correspondence to the original English version, a back-translation was used. These results supported the original classification into five-factors of avoidance and anxiety (Fossati et al., 2003).

All of the modifications and adaptations of the previous self-report questionnaires ultimately led to the development of the Experiences in Close Relationships Questionnaire (ECR; Brennan, Clark, & Shaver, 1998). This is regarded as one of the most widely used self-reports, used in studies across contexts and relationships (e.g. military, romantic, close relationships). As discussed earlier, this was developed from the plethora of measures preceding it, and it was even revised (ECR-R; Sibley, Fisher, & Liu, 2005). This measure has been used

across studies that examine the link between attachment styles of romantic partners, social support, and negative affect.

Whereas the ECR measure was originally meant to examine one's style in romantic relationships, the Reciprocal Attachment Questionnaire for Adults was not necessarily developed for romantic relationships (West & Sheldon-Keller, 1994). This measure gave license to the respondent to rate the person they considered as an attachment figure. This is based on several scales, including proximity seeking, feared loss, availability, compulsive caregiving and self-reliance, and reliance on this attachment figure (West & Sheldon-Keller, 1994). Additionally, the subscale Angry Withdrawal is a relatively newer conceptualization of anxious attachment (West & Sheldon-Keller, 1994). West and Sheldon-Keller (1994) identified anger as a notable reaction to the caregiver's unresponsiveness, or withdrawal when the attachment system is activated. This measured general feelings of anger toward the attachment figure.

As this current study synthesizes these measures of attachment with concepts related to affect regulation, it is important to detail the validity of adult attachment measures. This study of emotional regulation is directly tied to neural integration and one's ability to regulate oneself in high stress situations. Therefore, studies that reveal the concurrent and predictive validity in relation to emotion regulation capabilities using self-reports and interview are particularly salient (Bouthillier et al., 2002).

Generally, there have been mixed findings related to this line of research. Specifically, in one study there was no concurrent validity between self-reports and the AAI when also using the Adult Attachment Style self-report (AAS) and ASQ (Bouthillier et al., 2002). In fact, it was only the AAI that yielded this predictive validity of communication and emotion regulation behaviors. In addition, regarding a spouse's ability to effectively communicate and utilize perspective

taking with their partner, secure attachment classified using the AAI predicted the use of these skills that would ultimately help regulate negative affect (Bouthillier et al., 2002). It was hypothesized, and confirmed that those same individuals were more likely to utilize supportive-validation behaviors with their partners than those classified using self-report measures. The AAS and ASQ gave insignificant results regarding this predictive capacity. Authors pose a hypothesis: perhaps this is because the two methodologies are measuring attachment in different ways. AAI looks at internal working models (IWM) by way of coherence, how those memories are integrated and revealed in their behavior during the interview. The self-report does not measure this mental organization or integration. However, another study does reveal concurrent validity between the AAI and Adult Attachment Questionnaire when predicting support-giving behaviors among women in romantic relationships (Simpson, Rholes, Oriña, & Grich, 2002). Additional studies need to be done to gather more information on where the two methodologies converge. Lastly, authors note the relevance of discriminant validity. This assesses whether those constructs in these self-report measures are separate and distinct from constructs that are not associated with the attachment system (Bernier & Dozier, 2002). Authors discuss that if attachment theory is stretched too far to capture personality and human experience on too broad a level, it is in danger of losing its credibility as a distinct theory that predicts behavioral outcomes. This is an important point to keep in mind, especially when tying attachment theory to leadership and neurobiology.

Taking all of these instruments together and the literature examining their reliability and validity, several issues remain. There has been an inconsistency of measurements across studies utilizing self-report. Bifulco et al. (2002) offer their conceptualization of this phenomenon and offer the following relevant factors: diversity of classification styles, utilizing a dimensional vs.

categorical approach to classifying attachment styles (i.e., forced-choice measures), and the relationship that is being measured (i.e., romantic, parental, peer). Authors regard the secure-insecure dimensional style as the most useful strategy for assessing the dynamics of interpersonal relationships (Bifulco et al., 2002). A comprehensive review was conducted to further examine these factors regarding validity of the AAI and self-report research in order to empirically examine where the two different measures converge and whether or not they produce the same outcomes (Roisman et al., 2007). Interestingly, results of this meta-analytic study revealed trivial overlap between attachment security as measured on the AAI and attachment dimensions of self-report measures, which supports earlier research regarding the lack of convergent validity between methodologies (Bouthillier et al., 2002).

Much of the criticism surrounding methodology, and particularly around self-report measures, is centered upon the categorical approach. This method of classification does not consider context or individual variations that may exist in an individual's attachment style (Ravitz et al., 2010). This method of categorization assumes a homogeneity that is incongruent with the nuances of human experience.

Some authors take their commentary on the inconsistencies across measurements one step further and express their skepticism about what these instruments are actually measuring (Stein et al., 2002). For instance, are they measuring expectations about forming or future relationships, personality traits that are present across relationships, or expectations of self and the other in a specific relationship? The following is one example that illustrates these inconsistencies: on the Relationships Questionnaire, 70% of participants assigned themselves ratings across all four attachment styles, whereas two individuals gave themselves one classification (Stein et al., 2002). This is relevant in that it brings into question whether self-

reports should measure a global attachment style or relationship specific style, achieved by targeting specific relationship targets in the measure used. This is also additional support for attachment ratings to be organized dimensionally, rather than categorically.

Shaver and Mikulincer (2002) also provide commentary on the many variables and concerns related to methodology. These researchers view self-reports as providing a broad abstract model of attachment processes, a perspective that has its limitations. As alluded to earlier, these measures do not address the context, nuances, or unique attachment history of each individual being studied. While the dimensional approach to self-reports may not be the answer to this difficulty, it at least this does not label someone into a cut and dry category. Even so, it still does not place the individual in a particular context.

Authors consider reasons why individuals might receive a certain attachment classification that may not be entirely reflective of their actual attachment style. This is specifically the case regarding those individuals who might be characterized as avoidant or anxious, and whether or not self-reports would accurately reflect these behaviors (Mikulincer & Shaver, 2007). For example, avoidant individuals may not be aware of their behavior, specifically their detached stance in their interpersonal interactions, and therefore may not accurately rate their behavior on a self-report. Similarly, those individuals characterized as anxiously attached may not report their behavior for reasons of social desirability; perhaps they are biased in the sense that they have a negative view of the self and would view rating their behavior as such as a weakness. However, Mikulincer and Shaver (2007) argue against this critique, indicating that these contentions do not theoretically align with the intentions of these individuals. For example, an individual with avoidant attachment may in fact accurately rate their behaviors without judgment; this emotional distancing is an adaptive way that they have

managed relationships. Similarly, anxiously attached individuals may deliberately present themselves as feeble (which is consistent with the theoretical notion of negative view of self), in order to gain the support and attention of others.

Taking these critiques into account, several researchers offer commentary that ultimately steers this investigation towards a method utilizing an interview. For instance, Baldwin and Fehr (1995) note the instability of attachment ratings found using Hazan and Shaver's 3-category measure, finding that across a few months 30% of the sample changed their attachment rating. Rather than a problem with validity or reliability of the measure, this finding holds more support for the notion that assessing attachment style is more of a reflection of the relational schema that is activated in the moment. This can be taken as further reason to take a more deliberate shift to the interview methodology, as this activates the attachment system within the test-taking interaction. Additionally, Bernier and Dozier (2002) note the secondary strategies that those individuals classified with avoidant attachment utilize in the face of strong uncomfortable emotions (avoidance). These authors argue that self-reports do not tap into this level of information processing. In contrast, the state of mind scales used in the AAI take into account this behavior, for example this may be scored on the Lack of Recall scale. It is unique that a methodology can activate and measure this level of information processing and relational schema. Researchers further support the benefits and rationale for using an interview method, indicating the utility of "being able to assess the social context of attachment in terms of individuals' ongoing relational interactions and difficulties and the use of investigator-based judgments to avoid potentially contaminated self-report rating at levels for assessing dysfunction" (Bifulco et al., 2002, p. 56).

This relates to a final critique of the self-report method, that these require the individual to make a conscious decision to rate their attachment. This is labeled as a “passive” (Ravitz et al., 2010, p. 420) approach. Meaning, the attachment system is not likely activated when the individual is assessed, and this may not yield an accurate assessment. This conscious evaluation that the self-reports push for may be biased by the individual’s defenses and may keep the attachment system from being activated. Self-reports are likely to elicit conscious ratings of their thoughts, feelings, and behaviors regarding their relationships. While some of these appraisals may indeed be accurate, one’s biases and distortions and other unconscious processes still may not be accounted for in the self-report (Jacobvitz, Curran, & Moller, 2002). Some researchers hold that self-report measures may be more appropriate for measuring attachment-specific relationships (Agrawal, Gunderson, Holmes, & Lyons-Ruth, 2004). Even so, the current study seeks to challenge this notion and apply this kind of specificity to the interview.

Self-report applied to the workplace. Before delving into the adaptation of an interview that targets a specific leader-follower relationship, it is important to review and analyze a unique self-report measure that has been developed to examine workplace attachment relationships. Specifically, the Experiences in Close Relationships Questionnaire has been adapted and validated in a study measuring attachment in the workplace (Young, 2010). Though this is a unique and innovative application of adult attachment, it will be important here that this analysis focuses on why this is not a sufficient method that can be applied to leadership selection.

First, it is curious that the ECR was originally developed for the use of examining attachment in romantic relationships and has been used in studies across romantic and general close relationships. The ECR is indeed one of the most widely used self-reports of adult attachment. In the prompt of the test, it asks the respondent to assess their feelings in romantic

relationships. Items are loaded on two dimensions (18-items each), attachment-related anxiety and avoidance, and are divided into four categories: secure, preoccupied, dismissive, and fearful. These four categories are consistent with the Bartholomew and Horowitz (1991) four-category classification. Brennan et al. (1998) developed the ECR from a factor analysis of all of the self-reports developed up to this point. This is a key factor in its reliability and validity across studies. Across hundreds of studies, it has had reliability of .90 or above and test-retest reliability between .50 and .75 (Mikulincer & Shaver, 2007). It is especially peculiar that a measure originally developed for romantic relationships has been used across studies on the IDF. In these cases, respondents were asked to consider *close* relationships, without focusing on anyone in particular (Davidovitz et al., 2007).

Modifications and diverse applications of the ECR have been found across the literature. For instance, it has been modified into a short-form consisting of 12 items, the ECR—Short Form, yielding construct validity and test-retest reliability that is equivalent to the original (Wei, Russell, Mallinckrodt, & Vogel, 2007). Additionally, it has been used cross-culturally and translated into several languages, including Hebrew and Dutch (Conradi, Gerlsma, Duijn, & Jonge, 2006; Davidovitz et al., 2007). Critics have invited further developments of attachment measurements, and given the trajectory of self-reports to this point, it is understandable that this measure was adapted for workplace relationships.

Young (2010) was among the first to develop and publish a self-report measure that synthesizes the current research on adult attachment and workplace relationships. In the Working Relationships Inventory (WRI; Young, 2010), the ECR was adapted to pertain to workplace relationships, rather than romantic. The author of this validation study used psychologists with expertise in adult attachment research to reword items of the ECR to apply to the workplace. All

36 items were adapted into 18 attachment-related anxiety and 18 attachment-related avoidance items. For example, the following item of the ECR reads, “I worry that romantic partners won’t care about me as much as I care about them” (Wei et al., 2007, p. 190). This has been adapted into, “I worry that I care more about the people I work with than they care about me” (Young, 2010, p. 118). Another item of the ECR reads, “I don't feel comfortable opening up to romantic partners” (Wei et al., 2007, p. 189). This was adapted into the WRI mirror item, “I don't feel comfortable opening up in close working relationships” (Young, 2010, p. 117). The degree to which someone agrees or disagrees with this statement places them in either the attachment-related anxiety or avoidance dimension.

To increase the WRI’s validity, this was used along with several measures to determine convergent and divergent validity. These included the Relationship Structures Questionnaire (RS), ideal for this study because it can be adapted to target a specific relationship. For the purposes of validating the WRI, target relationships included a supervisor, close coworker, a general coworker, and best friend. Hazan and Shaver’s (1987) 3-category measure was also used, as well as the Experiences in Close Relationship Questionnaire (ECR). The WRI was validated using a student population of 477 undergraduates and 38 graduates in a Masters of Business Administration program. The mean age was 24 years old, 55% of participants were male and 45% female. Additionally, although only 57% of participants were employed at the time of this study, 85% had prior work experience. Only 14% of the sample of participants had experience as a supervisor or manager.

Regarding the structure of the items, to test the fit of the items to a two-dimensional structure (attachment anxiety-avoidance), a confirmatory factor analysis was conducted, and Cronbach’s alpha measured the reliability of its internal consistency. The internal consistencies

of the anxiety and avoidance scales were .89 and .88 (Young, 2010). In addition, the WRI yielded strong and significant convergent validity between the avoidant scale and the avoidant scales of the Relationship Structures Questionnaire. Further, the WRI anxiety scale was most strongly correlated with the ECR anxiety scale, though it yielded convergent validity with all the other measure's scales of anxiety. Finally, the anxiety scale had significant negative correlation with the avoidant scales of the other measures. Altogether, it was determined that the WRI produces strong convergent and divergent validity.

With the exception of one item, which Young (2010) attributed to the need to reword the item so it better matched to its mirror item of the ECR, all items load on two primary factors, anxiety and avoidance. The WRI avoidance and RS avoidance of a close coworker yielded the strongest correlation, and the weakest correlation was that to a best friend. This brings up an interesting point regarding the RS, noting that this correlation has a theoretical significance pertaining to the target relationship, as the wording of the items on the RS does not change pertaining to the relationship. The author explains this as the measure tapping into the working model, or mental representation that one holds of workplace relationships, and this may not be congruent with the relationship to a close friend. Finally, regarding the WRI's acceptability, or 'ease of use,' it was generally determined that participants were comfortable completing these ratings. Interestingly, and unexplained by the author of the study, Asian participants did not find this measure as acceptable, or easy to use, as Caucasians.

This self-report measurement is germane to this present study, as it is an important starting point for the further development of measures such as this that examine workplace relationship dynamics. Though ample studies have been done, and thoroughly discussed earlier

that look at these dynamics, none of these studies use an instrument specifically developed to study the distinct relationships within the workplace.

Coleman (2012) built upon this research and specifically utilized the WRI to assess the association between attachment and leadership styles in a population of nurses. Specifically, the author examined the associations between nurses' attachment styles and the attachment and leadership styles of the managing and supervising nurses. This study brings together theoretical constructs discussed throughout this study, specifically regarding transformational and transactional leadership and the relationship with adult attachment. This adds to the research that, primarily to this point, has been empirically tested in a military context. Not only does this study offer further support for the conclusions made in the literature, but it does so with a more precise and focused measurement, devised specifically for assessing these attachment dynamics.

More specifically, Coleman (2012) hypothesized that those nurse supervisors classified in secure attachment will have a transformational leadership style, or active transactional style, instead of a laissez-faire, passive style. Additionally, it was hypothesized that those supervisors classified in anxious attachment will have a passive style, and those supervisors who are classified as avoidant will be less likely to have a transformational style. Further, a hypothesis examined the satisfaction of a supervisee with their supervisor, depending on the supervisor's attachment style.

This study utilized the WRI along with the Multifactor Leadership Questionnaire (MLQ). This instrument has five scales specific to transformational leadership. 91% of the sample was female, 9% male; this is a stark difference from the majority of studies in this area to this point. Results were significant in that those supervisors classified as anxiously attached had a more passive style, suggesting a preoccupation in attachment and interpersonal needs that interfered

with their leadership. In addition, in this group there were negative associations with two of the five scales of transformational leadership. More striking, those classified in avoidant attachment were negatively associated with four of the five scales of transformational leadership, including inspirational motivation. This is consistent with the attitudes and behaviors of avoidant attachment style; this inspirational style involves the motivation to empower and support the other, which is uncharacteristic of the emotionally devoid, distant nature of one with avoidant attachment. Regarding supervisee satisfaction with their supervisor, there were no significant findings found between nurse attachment style and supervisee satisfaction.

Though this study is a novel application of attachment with an inventive assessment tool (WRI), it does not go without its limitations that warrant a critique. Though this study was validated with nurses, the WRI was originally developed with a sample of undergraduate and graduate students. Only 57% were actually working in the original validation study. This needs further validation with adults in a wide breadth of organizations that are more representative of workplace dynamics, beyond the dynamics of students in a classroom. Additionally, it is important to remember that not everyone in the WRI study had work experience. Nevertheless, this assessment instrument certainly has its use in the field of adult attachment regarding workplace relationships. So far, it has shown strong validity and reliability across student samples as well as adults in the workplace. However, the same limitations that apply to a self-report measure apply to this tool, including the assumption that one has awareness of their attachment behaviors and are willing to disclose this in a study, touching upon the social desirability issues. For instance, an individual may be answering favorably to appear secure to the examiner, and the unconscious relational processes may not be addressed, as might be in an interview.

While this is a creative application of attachment assessment to the workplace, it is limited to the self-report and self-awareness of one's own attachment behaviors. This method does not consider the interactional piece of attachment relationships that are exclusively activated within the interview method.

Application of the interview and projective measures. As the ECR served as a point of departure for the development of a workplace adult attachment inventory, this discussion will narrow in on the AAI in the service of modifying the protocol for use in workplace relationships, specifically identifying leadership potential. Specifically, it is important to take a comprehensive look at the state of mind scales, the connection of these scales on a projective test for adult attachment, and the concept of narrative coherence. Attention will focus on the neurobiological implications of a coherent narrative and why that is particularly relevant to leadership.

As introduced earlier, the Adult Attachment Interview (AAI) was originally developed by George, Kaplan, and Main (1985) to examine adult's working models, or representations of attachment. Attachment ratings were primarily based on the language of their recollection of early childhood relationships. Coding is not primarily based on the content of their narrative, but rather on the *coherence* of their narrative. In other words, scoring is based on *how* they describe and evaluate these early experiences and their ability to comment on the effect of these early relationships. Not only did this semi-structured interview classify the adult's attachment style, but it was also meant to predict their attachment relationship with their child and whether they could act as a responsive attachment figure. The questions are presented at a rapid pace, often with follow-up probes. Because the respondent must reflect on their past experiences while considering the impact on the present day, while addressing the specific question asked of them,

there are plentiful opportunities for one to contradict themselves (Hesse, 2008). The task during the interview is to integrate the wealth of experiences, past and present, in a coherent way.

One unique aspect of the AAI is the focus on the experiences of loss. This aspect of the protocol is unique in that it extends beyond childhood, the speaker is asked to elaborate on losses that have occurred throughout their life (Hesse, 2008). The speaker is typically probed with questions that promote their reflection on feelings experienced in regards to the loss, how it affected their parenting, as well as their adult personality.

The particularly distinctive element of the AAI is the classification based on the ‘State of Mind Scales,’ secure-autonomous, dismissing, and preoccupied (Hesse, 2008). The state of mind scales, as well as their corresponding subscales, will be described in order to illuminate this unique method. Within the secure-autonomous scale, the *coherence of transcript* subscale generally refers to a smooth flow of ideas in the participant’s narrative, speaking with ease and occasional pauses. There are likely to be some violations of maxims (to be elaborated upon in the following section), but there is generally a “singular” (Hesse, 2008, p. 565) mode of conveying and reflecting upon one’s experience. Also falling in the secure-autonomous scale is the *metacognitive monitoring* subscale. This involves the speaker monitoring the way they are expressing and reflecting upon their experiences. Even though the speaker makes some contradictions, if they are able to comment on this and reflect on their process, they still can achieve the highest rating.

Hesse (2008) provides a thorough detail of the dismissing scale, which consists of the *idealization of the primary attachment figure* subscale. This relates to the discrepancy between the speaker’s overall depiction of the attachment figure and what the rater infers from the transcript. For instance, one may infer that the attachment figure was significantly critical or

rejecting, and they were described as an outstanding parent. Another subscale within the dismissing scale is *insistence of lack of memory of childhood*. As the name of the subscale describes, this is when there is a repeated lack of memory, or “I don't remember/I don't know” to the questions. Additionally, the *active, derogating dismissal of attachment-related experiences and/or relationships* subscale involves blatant dismissal, or minimizing the importance of attachment relationships, or losses experienced. Highest ratings on this scale go to those who do not even attempt to soften their rejection of their attachment relationships. Within the preoccupied state of mind scale are the *involved/involving anger expressed toward the primary attachment figure* and *passivity or vagueness in discourse* subscales. The first of the two subscales refers to run on explanations and even unsolicited descriptions of anger involving the parent. In addition, this might be accompanied by the speaker's efforts to get the interviewer to side with them against the attachment figure. The latter subscale relates to vagueness in speech, difficulty finding words or using nonsense words, as well as reverting back to speaking as if one were a child.

While not part of the original classification, the unresolved/disorganized scale was formed years later after the other three scales were established (Hesse, 2008). These behaviors consisted of an unresolved or prolonged grief reaction, or a total lack of a grief reaction when there is a significant loss of an attachment figure. However, researchers found the difficulty in coding this type of attachment, indicating that the language and discourse markers were not explicitly related to grief or mourning. Rather, this manifests in “lapses of judgment” when discussing traumatic memories. For instance, when the individual speaks of someone who is deceased as if they are still alive, or when there is the presence of contradictions or incompatible

beliefs (Hesse, 2008). Typically, this rating is assigned when there is incoherence to the narrative. The implications of this, and particularly on neural integration, will be detailed below.

In addition to coding based on the narrative of coherence, Kobak (1989) developed a scoring method that assesses behavioral processes and mental representations as they are manifested in language. This Attachment Q-Sort method is an alternate strategy for scoring that focuses on affect regulation concerning representations of attachment. Transcripts are coded based on descriptors of ways of regulating affect, consisting of 100 different items that are sorted into their corresponding dimensions. Specifically, scores fall on a continuum of secure versus anxious, and deactivation vs. hyper-activation. Crowell and Treboux (1995) note that the deactivating strategy correlates to a dismissive, or avoidant strategy, and a hyper-activation correlates to a preoccupied, anxious strategy.

In addition to gaining a deeper understanding of the coding scales and scoring methods, it is important to examine the validity and applicability of the AAI. As this is the assessment tool that will lay the groundwork for this study's proposed interview, it is important to take a comprehensive look at empirical works that have explored in depth its predictive validity, as well as the strength of its other psychometric properties. For example, one of the earliest studies to examine the psychometric properties of the AAI was conducted in the Netherlands wherein 83 mothers were interviewed two times by two different interviewers, two months apart (Bakersmans-Kranenburg & Van Ijzendoorn, 1993). This investigation's aim was to further establish the AAI's test-retest reliability, intercoder reliability, and discriminant validity. This also brings up an important point regarding cognitive abilities and how that impacts producing a coherent narrative. Someone with stronger verbal abilities may be able to provide richer detail, using metaphors and analogies, whereas someone with lesser abilities might not be able to give

such a detailed narrative. As such, to help interpret the results of this study, measures related to memory, intelligence, and social desirability were also given. Results showed no significant influence of the interviewer on test-retest reliability. Results also indicated that 78% of the mothers were categorized in the same category in both trials. Further, 46 of those individuals were rated as autonomous/secure in the first interview, and 83% received the same classification the second time. More specifically, 20 mothers were classified as dismissing, and in the second interview 70% received the same rating. Similarly, 17 mothers were rated as preoccupied, and 76% of those individuals received the same rating in the second interview. The authors regard this as strong test-retest reliability and remarkable discriminant validity. Additionally, there were no differences found regarding intelligence and social desirability across each of the groups. No differences were found between the groups in one's ability to remember their answers between the interviews.

Van Ijzendoorn (1995) extended the results of this study and conducted an extensive meta-analysis to explore the strength of, as well as any issues related to, the predictive validity of the AAI. One issue that was considered concerns the validity between the parent's classification on the AAI and the infant's attachment rating. The author also examined the correspondence between adult's responsiveness to their child's attachment needs. Using a meta-analysis that looked at 14 studies in order to explore these validity issues, it was hypothesized that the coherence of the parent's narrative to the AAI would correspond to their responsiveness to their child's needs. Importantly, the AAI showed predictive validity across several classifications: autonomous, dismissive, preoccupied, and unresolved/disorganized (Van Ijzendoorn, 1995). Bearing mention, results showed that preoccupied and dismissive categories do not significantly differ in their ability to predict their corresponding Strange Situation classifications. In addition,

the preoccupied category of the AAI had the weakest predictive validity, and was found to be only “marginally related” (Van Ijzendoorn, 1995, p. 397) to the ambivalent category of the Strange Situation. However, this was also found to have the smallest number of participants compared to all other categories.

Regarding the role of the father, their attachment security did not appear to be as strongly related to the child’s attachment as the child-mother relationship. The authors have a few hypotheses for this. Authors theorize that the original sample on which the Strange Situation was validated, was primarily focused on the mother-infant relationship, rather than the father-infant dyad. Secondly, this draws on the typical gender role issues earlier discussed. Fathers have historically occupied the breadwinner role and are not fulfilling the role of the caretaker; this has clear implications as far as fulfilling different attachment needs as the mother might do so. The authors do acknowledge, however, that the different attachment relationships that the child has with each parent should be a future area of study. Finally, this study reveals that parents express their attachment patterns in terms of responsiveness, finding that those with a secure attachment are more attuned, and respond more quickly, to the child’s cues and signals than parents with insecure attachment (Van Ijzendoorn, 1995). There is a significant gap in this study, as it does not appear to consider the role of the ecological context or other cultural factors. Most of these studies up to this point were done in industrialized societies, therefore it seems important to take a closer look at the literature in terms of cultural differences here as it relates to the predictive validity of the AAI.

Due to the very nature of this assessment and its primary use of language, a question becomes, is this translatable across cultures and languages? As reviewed earlier, a study assessing the attachment of Dutch mothers produced high reliability (Bakersmans-Kranenburg &

Van Ijzendoorn, 1993), and yielded similar results regarding its psychometric properties when translated into Hebrew (Sagi et al., 1994). However, there have been challenges in coding when translated into Japanese (Karakurt et al., 2010). The authors note that incomplete or open-ended sentences may be culturally normative, but according to scoring methods may be labeled as vague and passive, which would strongly affect scoring. In these cases, it is particularly important for researchers to utilize back-translations and further study Japanese tests to differentiate between culturally normative and non-normative language. Additionally, Morgenstern and Magai (2010) note the challenges encountered in their research with a Caribbean population. The children participants in their research were raised moving between multiple homes and raised by multiple family members, thus the participants had difficulty naming a primary caregiver. Though a mother may live in the same community, the child may be raised by aunts, uncles, or grandparents. Even so, researchers hold that regardless of the immediate caregiver, the attachment security of the child can still be formed based on the continuous interaction of the caregiver (Van Ijzendoorn & Sagi, 1999). Still, with the use of the AAI, Morgenstern and Magai (2010) protest that in order to produce a valid profile, the individual must identify key attachment figures and early experiences with those individuals. Researchers should continue to consider these cultural differences before applying this interview method to diverse communities.

As the AAI has been well validated across studies and utilized around the world, it's scoring method and focus on the internal working models serves as the foundation for another assessment measure, the Adult Attachment Projective (AAP). This instrument specifically explores how mental representations of attachment relationships are told through story. This is the first adult projective measure of attachment that examines and scores adults' responses to

pictures representing hypothetical attachment situations related to separation, physical and psychological injury, trauma, and rejection (George & West, 2001). The instrument consists of 7 drawings that represent scenes of attachment, and one neutral, and were gathered from several sources, including psychology textbooks and children's literature.

The AAP was validated in a study of 13 men and woman, who also took the AAI (George & West, 2001). Comparing the transcripts of both measures allowed the authors to develop the corresponding classification of the AAI, autonomous/secure, preoccupied, dismissing, and disorganized/unresolved. The AAP was then empirically validated on a sample of 75 participants from both clinical and community populations, and yielded strong convergent validity and interjudge reliability. The scoring classification differs slightly from the AAI and is organized by three dimensions: discourse, story content, and defensiveness. The discourse is evaluated both by the degree to which the person creates a boundary between themselves and the character in the story, and the coherence of their narrative. If the individual references him or herself, it is theorized that they are so overwhelmed with their attachment that it interferes with their ability to attend to the external stimulus. Similar to the AAI, coherence is judged according to the absence of violations of Paul Grice's (1975) maxims, i.e. quality, quantity, relation, manner (George & West, 2001). Content is measured by an individual's *agency of self*, or the ability to serve as one's own secure base. This is understood as one's ability to regulate oneself and achieve security when the attachment figure is not physically present. Classification of attachment security is largely, and predominately based on the quality of the internal representation and whether this facilitates self-reflection, or self-exploration. Content is also evaluated in terms of synchrony, or the degree to which the characters are engaged in an attuned, goal-directed, and interactive partnership. Finally, defensive processes relate to the deactivation,

or disconnection of the attachment system. This corresponds to dismissive, and preoccupied attachment classifications, respectively. Specifically, when the individual shifts away from or devalues the impact of feelings or distress that are evoked related to the attachment stimuli, they are minimizing influence of attachment. Finally, unresolved attachment is represented by segregated systems, when the individual makes extreme efforts to exclude painful emotions from consciousness, often related to loss and trauma. When applied to story lines, this may evoke themes of “helplessness, fear, failed protection, or abandonment” (George & West, 2001, p. 47).

The development and application of this assessment tool is an important depiction of the applicability of evaluating attachment processes by way of the coherence of internal representations. This is further support for the developmental approach to measuring adult attachment styles. The measuring of these defensive processes is unique to the interview and projective measures and there is ample support for this approach to adult attachment. For instance, Mikulincer and Orbach (1995) empirically study this connection of attachment and repressive defensiveness, taking a more dynamic approach. Specifically, these processes were studied empirically and examined the association of attachment styles and regulation of negative emotions in a sample of 100 Israeli students (Mikulincer & Orbach, 1995). The authors looked specifically at the repressive defensiveness construct. This consists of the degree to which the individual avoids (or defends against) negative emotions, as well as the expression of anxiety. The measures included in the study comprise of self-reports, including Hazan and Shaver’s (1987) 3-category classification system, as well as self-reports measuring anxiety and social desirability to assess repressive defensiveness.

Mikulincer and Orbach (1995) present significant data concerning the emotional regulation capabilities and defensiveness across three attachment styles: secure, anxious-

ambivalent, and avoidant. Securely attached individuals had moderate levels of defensiveness; they showed variability in the intensity of different negative emotions across situations with low ratings of anxiety. This supports the notion that secure individuals are able to process negative memories and emotions without becoming so overwhelmed that these emotions are spilled over into more neutral situations. This is in contrast to an anxious-ambivalent style, those individuals reported higher levels of anxiety, and lower levels of defensiveness. This is consistent with the behaviors of those with anxious attachment; these individuals experience higher levels of intensity to negative emotions, have difficulty repressing their affect, and experience high levels of anxiety. This speaks to a general inability to regulate their inner world. This is congruent with the hyperactive nature of anxiously attached individuals who are overwhelmed by affect. Finally, avoidant individuals had moderate to high ratings of anxiety, high levels of defensiveness, and low ratings of emotional intensity. This is consistent with the way avoidant attachment is conceptualized; their effort to distance themselves from, and avoid negative affect produces higher levels of anxiety and inhibits their general emotional experience. In doing so, they are distanced from others in an emotionally intimate way, as well as from themselves.

Berant, Mikulincer, Shaver, and Segal (2005) offer additional support for the use of a dynamic perspective to assessing attachment, specifically with the use of self-reports and the Rorschach. This expands the generalizability for unlocking defensive processes and using this developmental approach as an important basis for adult assessment. Perhaps this study, through the use of self-reports of attachment and the use of a projective, is another attempt to bridge the gap between the developmental and social psychological camps of adult attachment.

Berant et al. (2005) specifically considered the association between attachment anxiety and avoidance with markers of affect regulation on the Rorschach. Specifically, anxious

attachment ratings were correlated to Color Shading Blends, which typically “indicate the intrusion of negative feelings into positive emotional states, thereby increasing emotional uncertainty and confusion” (Berant et al., 2005, p. 78). This supports early research findings that this anxiety leads to a lack of control, or inhibition, of emotions across situations, even ones that are neutral. Negative affect is profuse across memory, including working memory. Additionally, attachment anxiety correlated to markers of situational stressors and feelings of helplessness (Berant et al., 2005). A significant finding related to ratings of avoidant attachment was the association to low FM on the Rorschach, a marker of primary needs not being met. This reflects the deactivation inherent to this attachment style, showing emotional constraint to avoid potentially distressing emotions and interpersonal interactions. While this is an important portrayal of the self-reports’ ability to tap into some of the dynamic processes of attachment, some researchers argue that the interview method reveals the unique ability to uncover information-processing strategies as it occurs in the here-and-now.

The activation of these dynamic and defense processes in the here-and-now is a distinctive feature of the AAI. As the state of mind scales have been reviewed, it is critical to explore why this is relevant to this current study. As indicated earlier, this type of scale, ‘state of mind,’ has particular importance as it pertains to our neurobiology, thus potentially creating a unique method of assessment. This is a key integration of concepts; this is where ideas related to attachment, interview methodology, and neural integration merge. A state of mind can be understood as “the total pattern of activations in the brain at a particular moment in time” (Siegel, 1999, p. 208). In addition, one’s perceptual biases, behavior patterns, emotional regulation, internal working models, and memories, are all occurring simultaneously (Siegel, 1999). The interview is a salient method to assess one’s state of mind as it relates to their

attachment patterns, beliefs, and feelings about previous leaders who served as attachment figures. This is a dyadic process, in that emotions are evoked in response to these interactions. These unconscious, relational dynamics unfold in the here and now.

These deactivating and hyper-activating attachment strategies are ways of information processing that can be understood as a state of mind. Not only do these states reflect behavior and other outcomes in the moment, but this consistent activation of circuits in the brain during high stress interactions makes it likely that this activity will continue in the future (Siegel, 1999).

Building upon the neurobiology of attachment discussed in the earlier literature review, it is important to briefly review the ways in which attachment relationships impact brain development, and the following discussion will reveal its relevance in this line of study. First it is necessary to link the concept of state of mind with neural integration. Neural integration can be understood as the integration of complex systems of the brain that comprise a sense of self. Specifically, it is when various systems merge, specifically the limbic system and prefrontal cortex, and guide one's emotional and behavioral responses. Siegel (1999) describes one system in particular that has important implications for mediating behavior, the basal ganglia. The connection between the frontal cortex and the basal ganglia merges explicit processing and implicit coding, respectfully. With adequate integration of these systems, encoded rules and behaviors can be integrated and applied with new behaviors that are context-dependent.

It is important to ask, how does neural integration relate to self-regulation, specifically in terms of leadership and attachment? In terms of attachment, these early relationships are encoded in the neural structure, and these organizations of memory and neural activity shape behaviors throughout life. This alludes to the anticipatory function of brain circuitry, in that "the ways in which neural circuits anticipate experience may help us understand how the mind develops

through a set of recursive set of interactions” (Siegel, 1999, p. 305). Researchers note the role of neuroplasticity and the potential of myelination to influence synaptic connections, the growth of new cells and neural activity well into adulthood (Benes, Turtle, Khan, & Faro, 1994). This speaks to the integration of memory and new learning, as laid down by emotionally relevant events. Additionally, researchers associate neural integration with bilateral hemispheric integration (Siegel, 1999). That is, the logical, cognitive processing of the left hemisphere, integrated with the emotional processing of the right, allows the individual to make informed decisions while considering the affective piece. This also reflects adequate emotional regulation strategies and is key for any healthy social interaction. In terms of attachment, the highly rational individual who acts alone on logic, describes the deactivated, dismissive attachment style. In contrast, the highly reactive emotional individual who operates based on emotional reasoning, describes the hyperactivated, anxiously attached (Rich, 2006).

As the social brain is nurtured and constructed beginning in the earliest interactions, this brain growth continues throughout life and extends from the family unit, to partners, peers, and colleagues (Cozolino, 2012). Regarding workplace relationships and leaders, it is through repetitive and emotionally salient events that these behaviors and interactions are implicitly encoded in our neural circuitry and guides future behavior. The encoding of experiences, memories, and new learning forms the perception of self and others and makes up ones internal working models.

The structure of neural networks and specifically neural integration is not only disrupted in early traumatic experiences, but within suboptimal attachment relationships, as well. The lack of, or disrupted integration, as is seen with trauma or loss, is coded in the unresolved/disorganized attachment style on the AAI. It is understandable why an individual

with this classification cannot produce a coherent narrative that reflects flexibility and adaptability; these individuals are inundated with negative affect and unconsolidated memories of their loss and/or trauma. In fact, researchers note that early relational trauma is one of the most salient consequences on one's emotional regulation capabilities, resulting in dysregulation of the right brain (Schoore, 2002).

Touching back upon the AAI, this aforementioned description of neural integration is manifested in the coherent narrative, wherein the past, present, and future can be examined. Schlafer et al. (2015) offer recent empirical support for the predictive value of state of mind and narrative coherence. This longitudinal study measured parent's attachment style through the AAI and their parenting quality by way of observation of their infant children in order to generate significant predictive validity. To examine the stability of one's state of mind, the interview was administered at two different developmental periods, at emerging adulthood (age 19), and adulthood (age 26). Parental quality was observed during two different task interactions and interviews when participants were 32 years old. This investigation yielded significant results for the authors' *developmental task* model, in that the state of mind scales had stronger predictive validity of the parenting quality when assessed at a developmentally salient period (at age 26) (Schlafer, 2015). Although the coherence of mind scales as measured at age 19 did not result in a significant association to parenting quality, the authors theorize that this is a non-normative time in which one becomes a parent, thus these results were to be expected.

Schlafer et al.'s (2015) research mirrors the task of this study, that one's attachment style related to the leader-follower relationship as classified in a semi-structured interview, will have significant predictive implications for their leadership potential and the attachment security of their employees. This brings the investigation back to leadership and workplace dynamics, and

how these concepts are theoretically transferrable to the leader-follower dyad. In the interpersonal neurobiology research, we see how these early behaviors are hardwired into brain circuitry. This is translatable here with the attachment behaviors within the leader-follower dyad that are repeated over time. These interactions build these networks of social connections within workplace relationships, and as they are repeated, they become engrained into the behaviors and attitudes of employees, shaping their working models of workplace attachment. The quality of the integration of these structures is theorized to manifest in the quality of one's state of mind. Finally, when considering the development of the various assessment measures for adult attachment and their validity and applicability to workplace leadership attachment relationships, it is important to examine their cultural sensitivity. This is an essential area to consider, particularly due to the growing diversity within the workplace and the need for culturally sensitive assessment tools.

As discussed early, the majority of the leadership positions held in Fortune 500 companies are represented by Caucasian males, a demographic whose values have been well-represented in much of the research. However, with the changing climate and growth of diversity, it is wise to implement culturally diverse and sensitive instruments to keep up with the growth. Although issues related to assessment and validity have been explored in various cultures throughout this discussion, attention will focus on methodological issues concerning translating and adopting measures across languages and cultures. While the International Test Commission (ITC) Guidelines for Test Adaptation outlines a thorough step-by-step approach to help ensure that clinicians develop, administer, and score measurements in a culturally sensitive way (Hambleton, Merenda, Spielberger, 2006), it is important to review some considerations here.

Much of these concerns pertain to issues encountered in a self-report questionnaire when the meaning of a particular construct may not translate to the same meaning in a different language. For instance, authors have noted the questionability of the term “romantic,” indicating that the meaning of this term may not even translate across cultures (Shaver, Mikulincer, Alonso-Arbiol, & Lavy, 2010). Specifically, when translating the Experiences in Close Relationships Questionnaire into Spanish, because *romantic partner* has a different meaning, only *partner* was used in the test because they could not achieve semantic equivalence. Additionally, Shaver et al. (2010) indicate that several studies using adult attachment measures have been widely used on adolescents who may not be involved in a romantic relationship; some of these adult measures were originally developed to examine couples relationships. This brings attention to the importance that when these measures are adapted, that they are appropriate for the sample on which they are being used. This extends to language, age, and target relationship. A common issue encountered throughout the literature is the importance of well-trained translators and the use of accurate back-translations. This is just as important as using trained coders and scorers, as the adequacy of the translation has important reliability and validity implications.

When considering these aforementioned methodological concerns, it is interesting to note that researchers claim that one way to address these challenges is through the use of interviews and open-ended questions (Shaver et al., 2010). In this way, the participant is able to provide a context to, and interpret or conceptualize the meaning of the construct in their unique way. Through the thorough review of existing methodologies, validity concerns, and cross-cultural sensitivity, this development of an interview is built on a strong theoretical foundation and attempts to bring these considerations together to create a tool for a unique workplace culture.

Resource Development

Much of the extant research linking attachment theory and leadership provides outcome data that supports the significance of applying the theory to workplace relationships. This exploration addresses the following research question: Can the well-established Adult Attachment Interview be modified for the purpose of leadership selection? While one instrument has been developed to measure specific workplace attachment relationships, (Young, 2010), this measure of self-report still comes with its limitations that have been elucidated earlier. Taking into consideration the critiques made of both self-report and interview methodologies, this proposal of a semi-structured interview adapted from the AAI is an attempt to address the following call made to researchers:

A combination of the respective strengths of developmental research (interview methodologies and longitudinal designs) and social/personality research (self-reports and observational and experimental procedures), following a thoughtful and well-informed integrative model, will provide unprecedented insight into the manifestations and meanings of attachment throughout the life-span. (Bernier & Dozier, 2002, p. 177)

As the AAI classifies adults' attachment styles and predicts the security of their children's attachment based off of their account of their childhood experiences and relationships, this interview will assess individual's accounts of their relationship with former leaders (i.e. supervisors, managers). This is in line with the intergenerational transmission of attachment within the leader-follower dyad, and the internal working models that guide future behavior. The goal is to produce "a coherence within the here-and-now core self as well as in the past-present-future integrating autobiographical self" (Siegel, 2001, p. 86). This kind of coherence reflects the neural integration that is vital for a well-regulated and reflective self and leader who is emotionally available and optimally responsive to their followers. Further, Hazan and Shaver

(1994) associate attachment theory to a communication theory; this extends to the coherence of narrative scales on the AAI. Inherent to any effective leader is their ability to communicate. An interview is a key avenue into assessing one's capacity to effectively communicate a plethora of attachment experiences in the here and now. As indicated throughout, the development of an interview for leadership selection is based on the unique predictive component of the AAI. As various studies have shown, the AAI classification of adults has shown predictive validity concerning the attachment classification of their children. In addition, this interview addresses much of the validity concerns with previous methods of measurement, specifically concerning the target relationship of study. The aim of the proposed modification of the AAI is to classify individuals who aspire to hold a leadership role into their respective attachment style, and in turn make predictions of the attachment behaviors that they are likely to generate in their employees.

Modification of the AAI for leadership. The following interview proposal is born from a synthesis of concepts, including adult attachment assessment, neurobiology, and the leader-follower dyad. As the AAI protocol consists of 20 questions, including follow-up probes (George, Kaplan, & Main, 1985), a modified protocol will consist of questions that closely mirror its structure, some of which will be introduced here. Rather than the adult reflecting about past experiences with a parent, here the examinee reflects on experiences with previous significant leaders, or supervisors. Similarly, whereas the parent describes experiences with current or hypothetical children they may have later on, this interview asks the speaker to reflect on experiences with past employees. As the AAI assesses the parent-child bond, this modification for leadership assesses the leader-follower dyad. It is the goal that this interview, held within a high stakes setting, will activate attachment schemas related to security and safety, separation, and loss as they pertain to past relationships with significant leadership figures.

In order to establish rapport and create a safe environment for the speaker, the interview first begins with the examiner outlining the line of questions that will follow. Specifically, the examiner should indicate that the speaker will be interviewed about their relationship with a significant supervisor, manager, or leader in their professional work experience. Additionally, the speaker will be asked to reflect on the way those experiences have influenced their leadership style, and their beliefs about how these experiences have affected them. Questions will focus mainly on the most significant relationship. This interview may take between 45 minutes to an hour and a half, the standard administration time of the AAI.

The examiner may open the interview by asking, “Can you familiarize me to your earliest, most impactful work experience? Where did you work, what was your position?” The purpose of this opening question is to warm-up the speaker to the interview, as well as for the examiner to gain an understanding of the structure of their early workplace. The purpose is not to elaborate on the quality of the relationships, but to produce a *who* and *when* concerning their early work relationships. If the speaker has a work history consisting of multiple relationships with superiors, the opening question instead may ask, “Who was your most significant boss/supervisor/manager?” The task for the interviewer is to identify one leader in the speaker’s past who has acted as a primary attachment figure in the workplace. Once a significant figure has been identified, the speaker may be asked to describe this relationship in greater detail. The speaker should be prompted to remember the earliest, most impactful experiences. As this question jumps immediately into the task, the speaker may have difficulty producing descriptions of their experience. The interviewer should normalize the difficulty of the task and encourage them to give a general description of their experience.

At this point in the AAI, the speaker is asked to produce five adjectives that describe their relationship with their parent. Consistent with this structure, the potential leader participant is asked to choose five adjectives that reflect their relationship with their significant past supervisor. It is especially important here to speak clearly and stress the word *relationship*, so as the speaker does not just give adjectives to describe the person, i.e. “nice,” “productive.” If the speaker has a difficult time understanding what an adjective is, the interviewer can clarify that these are words or phrases that describe the relationship with this supervisor. Upon generating five adjectives, the examiner will ask a set of probes to help the speaker elaborate on each word choice. It is recommended that if, and when, the speaker has difficulty, that the examiner is patient and encouraging. This support will be helpful in the speaker’s participation throughout the interview, as well as in the analysis of the interview. Additionally, if the speaker has difficulty producing a memory and does not understand the concept of a memory, they can be encouraged to consider an image of something that has happened in the past, much like a movie might portray.

The ability for the speaker to provide five words, provide a general overview of the relationship, and reflect on specific incidences and memories, will form the basis for the analysis of the interview. Because of this importance, it is critical for the interviewer to urge the speaker to provide the general adjectives, and only allow less if reasonably certain that the speaker cannot offer any more. The interviewer should continually supply reassurance and normalize that taking as long as one minute to recall adjectives is not problematic. If it appears that the speaker is thinking and considering their answers, it is acceptable to allow periods of silence. However, if it appears that the speaker is embarrassed by the silence or the amount of time they are requiring, and it has been more than a few minutes, it is important to offer words of encouragement, such

as, “this isn’t easy, take your time.” The interviewer should be mindful of their tone, being sure not to display any impatience or frustration with the interviewee. One prompt following a word choice may be, “I will now go through some questions about your description of your experiences with your supervisor. You mentioned that your relationship with him/her was (phrase provided). Can you think of a particular time or event that can help me understand why you chose that word?” These questions are repeated for each adjective that the speaker provided in the beginning of the question.

It is recommended that the interviewer continue through all five adjectives in a natural manner. This is most likely the longest portion of the interview. Additionally, if the speaker provided adjectives that are generally synonymous, it is important to treat them as two different descriptors and obtain different examples, or memories, for each one. Similarly, if the speaker uses an adjective to describe another adjective, for example, “Dependable, he/she was admirable,” the interviewer would prompt the speaker to describe again the first word. For instance, one would ask “Can you think of a specific time when the relationship was dependable?” If the interviewee continues to elaborate on the supervisor being admirable, the interviewer should not explicitly continue to lead the speaker back. This kind of response meets criteria for violation of discourse task and is relevant in the analysis of the narrative.

During this line of questioning and reflection of past experiences, the speaker may describe relationships with multiple leaders, or supervisors. This is comparable to an adult taking the AAI who may describe their relationship with both parents. In this instance, the interviewer may ask, “I wonder if you can tell me, to which supervisor or manager did you feel closest? Why is there not this feeling with the other supervisor?” This is an opportunity for the speaker to reflect on the differences between two significant figures in their life.

Through this persistent line of questioning and reflection of past workplace attachment relationships, it is likely that the attachment system will be activated. This will likely stimulate affective responses, and this response will be further initiated with questions related to loss or highly emotional situations, a critical aspect of attachment relationships. As modified for the workplace, the interviewer may ask, “When you were upset as an employee, what would you do?” This is an important question, as speakers may have different interpretations of what being *upset* looks like, and may vary person to person. Consistent with the cultural considerations discussed throughout, it is important that the interviewer encourage using the word *upset* whichever way the speaker understands it. Once an answer to this initial question is given, the interviewer follows up with several probing questions. For instance, “When you were upset in the workplace, how would you cope? Is there a particular time that comes to mind?” This helps the interviewer gain a window into the speaker’s strategies for affect regulation, and whether this strategy is one of hyper-activation or deactivation. Although the AAI includes questions related to physical injury and is understandable when exploring childhood experiences, this question still may be relevant for the workplace. Workplace injuries are common in the U.S. workforce within a variety of settings, (construction, military, commercial organizations), and thus is a relevant question in a modified protocol. The speaker may ask, “Were you ever hurt physically? Can you think about a particular time that happened?”

If the speaker describes a time when they went to their supervisor or manager for safety or reassurance, it is important that the interviewer pay attention to the details that are spontaneously provided. The way in which the supervisor is said to have responded to this help seeking behavior has important implications as far as one’s working model for the other, whether it is positive or negative. Pay particular attention to the way the supervisor responded to this help

seeking behavior. If warranted, it is recommended to ask a few clarifying questions to gain an understanding of their affect regulation strategies.

Questions pertaining to coping with loss or separation are an important element of an attachment bond and can be explored within the leader-follower relationship. To understand an individual's response to separation, they might be asked, "What is the first time you recall an extended period of time being separated from your supervisor? How did you respond? How did your supervisor respond?" This question is important as the speaker may elaborate on differences between themselves and other employees. This may give the interviewer a better understanding of the speaker's general attitudes about attachment and their proximity seeking behavior. Similar to loss and separation, issues of rejection within the attachment bond are important to explore. The following question addresses this, "Did you ever experience rejection as an employee? Even if as you recall now you may not see it as rejection, at the time did you experience something as a rejection?" As a follow-up, and to better understand their affect regulation capabilities, the speaker is asked, "When did this happen and what did you do in response?" Additionally, to explore the speaker's understanding of the attachment figure's responsiveness, the interviewer poses the questions, "Why do you think your supervisor acted in that way? Did he/she realize that their behavior might have been perceived as rejection?" If the speaker cannot provide examples of rejection, the following probe can be given, "Did you ever experience feeling devalued in the workplace?" As indicated earlier, allow the speaker to respond spontaneously, and interpret the questions as they understand it. If the interviewer describes particularly traumatic or painful memories, it is important to not overly probe, as there will be a later time to elaborate.

In the same vein of exploring responses to experiences of loss, separation, and rejection, situations of threat or danger should also be investigated. For instance, the speaker might inquire, “Was your supervisor threatening in any regard? Was this a disciplinary action?” This is where abusive leadership is relevant to the attachment bond and is pertinent to explore. The interviewer may inquire into these experiences with the following prompt, “Some people might recall instances of some form of abusive or threatening behavior, did anything like that ever happen within your company/organization?” To examine the way the speaker can synthesize their experiences in the here and now while regulating their emotions that are likely stirred up in response to this question, they can be asked, “Do you think this experience affected you now as someone in a position of leadership?” To further synthesize their experience as a past employee with their current status as a potential leader and future attachment figure to employees, the speaker offers the prompt, “Does it influence your approach to your employees?”

While some speakers are likely to deny that these experiences have occurred, if some have indeed experienced abuse in the workplace, they may appear in distress as they recall these memories. In this instance, it is necessary for the interviewer to allow silence when it is warranted, and offer empathic statements to help give the speaker relief when they are observed to be in distress. Additionally, before the interviewer queries any further it should be clear that the speaker is comfortable disclosing the distressing incidences. It is critical to keep in mind that the wellbeing of the interviewee must come before the task of the interviewer. If the speaker is clearly in distress, it is appropriate to forgo this line of questioning and move on.

To facilitate the exploration and reflection of the way these past experiences are integrated into the speaker’s present day role as a potential leader, questions dedicated to this self-awareness should be utilized. For instance, the following prompts this self-reflection, “In

general, how do you think your experiences as an employee with your supervisors affected your leadership style?” To further explore the way in which negative experiences are integrated and processed, the speaker is given the follow-up, “Did you have any experiences as an employee that you felt were a setback to your development as a future leader/supervisor/manager?” If the speaker does not understand what is meant by setback, it is acceptable for the interviewer to clarify by emphasizing if any aspect of their experience as an employee negatively affected their growth into a leader. To further understand the speaker’s experiences and response to negative experiences, they may be asked to elaborate on experiences of loss. For instance, the interviewer might query, “Did you ever experience any unexpected losses in the workplace, or was a supervisor/manager who was particularly close to you unexpectedly removed/terminated from their position?” It would be helpful to probe further regarding emotional reactions to this experience, and whether this has affected beliefs and attitudes about leadership in general, as well as their approach to their employees. This parallels the AAI line of questioning that might seek a parent’s reflection on the role of a parent amidst these negative experiences.

If the speaker becomes distressed by the experiences of loss that they recall and the interviewer observes contradictions, lapses, or incoherence of speech, they may meet criteria for ratings of unresolved/disorganized classification. These observations are critical for the analysis of the narrative. These reactions may be particularly evident when probing about traumatic incidences that may have occurred in the workplace. The following inquiry may elucidate such a response, “In addition to some negative memories that you have discussed, can you recall any others that have been particularly traumatic?” It is important for the interviewer here to not permit *any* negative experience that has occurred within the speaker’s life to be elaborated upon. For the sake of this interview, probes should remain to those experiences within the scope of the

workplace. Additionally, the interviewer should only prompt the speaker to elaborate when it appears they are comfortable and can voice their experiences effortlessly.

The following questions serve to further reflect the speaker's capacity to integrate past experiences with their current relationships with others, as well as with themselves. For example, the speaker may ask, "Were there any changes in your relationship with your supervisor as you transitioned out of your position as an employee to a higher leadership position?" Even further, questions should be directed at the speaker's perception and description of their relationship with this leadership figure in the present day. Within the following prompt contradictions might surface, "Now I would like to ask you what your relationship is like with this supervisor now. Are there any areas of satisfaction, or dissatisfaction, within this professional relationship?" These leadership figures may have been described earlier in a positive light, yet now as they are reflected on in the present they may be portrayed differently.

The last questions of the interview should focus on the speaker's relationship with current employees, as this sheds light on their current attitudes and experiences of leadership. The interviewer should note this shift in the line of questioning, informing the speaker that the following questions will focus on their relationship with current employees. For instance, they may be given the prompt, "Do you ever feel worried when separated from them for an extended period of time?" If the speaker has never been in a position where they have managed or supervised employees, this question can also be posed as a hypothetical. For instance, "I would like you to imagine that you have a group of employees. If you took a period of leave from these employees, would you feel worried about them?" Further expanding upon this role shift from employee to leader, the speaker may be asked, "When you consider all of these past experiences as an employee, is there anything you feel you have learned from these experiences?" The

speaker should be allowed some time to consider their response. This is an opportunity for them to integrate their feelings concerning the past, present, and future experiences, from employee to a leader.

Finally, the interview may be brought to a close by acknowledging that the discussion has largely focused on the speaker's past experiences as an employee and what they have learned from these experiences. As one last query, the participant may be asked to think into the future as someone in a position of leadership and consider what he or she hope an employee may learn from them. This is a final moment of the interview to foster self-reflection in the integration of past, present, and future experiences as one shifts into a leadership position.

Scales and scoring methods. As George and West (2001) mirrored the scoring methods of the AAI in the development of the AAP, the modified AAI for leadership will similarly do so through the analysis of discourse. It is the *coherency* of the answers to the questions that determine one's attachment classification. Specifically, the transcripts will be coded based on violations of maxims and will be organized into four classifications based on the speaker's state of mind: secure, dismissing, preoccupied, unresolved/disorganized. Additionally, as was developed later in further validation studies, the "cannot classify" (Hesse, 2008, p. 569) category will also be used.

A thorough examination of Grice's (1975) maxims will serve to clarify the way in which the discourse can be classified into discrete categories. The first of the four maxims is *Quantity*. This relates to the amount of information that the speaker provides, giving no more or no less, being as succinct as possible. Violations of this maxim are reflected in frequent "I don't know" responses that do not allow for additional prompting and elaboration. The second maxim relates to *Quality*, discourse that is "genuine and not spurious" (Grice, 1975, p. 47). That the

information is truthful is an important element of this maxim. Violations of this maxim include contradictory information, for instance when memories are given that depict the attachment figure in a way that contradicts early adjective descriptors. Additionally, this may also include a lack of evidence to support the descriptions. The third maxim is *Relation*. This concerns the relevance of the material that is provided by the speaker. For example, when the speaker is prompted with a question regarding their current relationship with their employees and they elaborate on their past relationship with their supervisor, this is a violation. While that is important information, it is not relevant in that particular line of questioning. The last maxim is *Manner*. This relates to the way the information is being presented, for instance using jargon, vague language, and even incomplete sentences.

While subscales will not be applied at this time, it is feasible to hypothesize prototypical attachment classifications based on the coherence of the narrative that form the state of mind scales. For instance, a *secure* classification consists of a general coherence within the transcript. Ideas are easy to follow and understand, language is clear, and speech is spontaneous at times. Additionally, these individuals are able to reflect on experiences of loss, rejection, or disappointment, and their ability to cope with stress. Though there may be a few violations of maxims, there is generally a consistent and open manner in the way the individual discloses their experiences with past supervisors. It is important to note that, similar to the AAI, individuals who describe either traumatic or negative experiences with past caregivers, or leaders, can still be classified in *earned-secure attachment* style. A highly coherent narrative with a low number of maxim violations may still warrant earned-security, even though the content may be wrought with traumatic experiences (Pearson, Cohn, Cowan, & Cowan, 1994).

In contrast, there are likely to be far more inconsistencies in the narrative of the individual who warrants a *dismissing* classification. The quantity of the narrative is generally brief, and may even dismiss, devalue, or minimize the role that past supervisors have played in their professional development. Further, there are likely to be contradictions between memories that are described and the five adjectives given towards the beginning of the interview. Additionally, the language will likely be vague, and the speaker may appear to minimize the impact of negative and potentially traumatic experiences.

A *preoccupied* classification can be expected to contain narrative that is excessively long with run-on sentences, a clear violation of the *quantity* and *manner* maxims. This manner is also consistent with a hyper-activating strategy, providing excess details that may get off topic from the original prompt and thereby violating the *relation* maxim. Additionally, there may be an effort to get the speaker to “side with” them against their supervisor when describing memories involving rejection or loss.

As indicated earlier, a classification of *unresolved/disorganized* is warranted when there are blatant lapses in monitoring. That is, speaking as if memories with supervisors are happening in present day, or acting as if they are still in the position of an employee when the individual was actually terminated years before. This also includes unexpected changes in one’s speech that is incongruent with their discourse. Finally, an individual may obtain a *cannot classify* categorization if their speech and behaviors are characteristic of more than one category, refuses to answer the questions, or the narrative is so incoherent that it cannot be organized into any classification.

These scales and classification categories serve as a departure point for future applications of this instrument, at which time subscales and further categories may be created.

Consistent throughout these scales and scoring methods is the role of emotion regulation and the strategies that the individual uses to regulate their responses to the line of questions. It is theorized that this interview will activate that attachment system as it pertains to workplace relationships and the internal working models of self and others, which subsequently initiates an emotional response. Whether the speaker provides a coherent narrative of their workplace attachment relationships, or exhibits a hyper- or de-activated response, this interview method offers a window into the way one integrates leadership roles with emotional and cognitive processing.

Chapter 4: Conclusion and Discussion

Overview

It was the purpose of this study to explore the following questions: 1. What does the literature say about the integration of adult attachment, assessment, and leadership? And 2. Can the well-established Adult Attachment Interview be modified for the purpose of leadership selection? To answer these questions, the investigation highlighted empirical outcomes related to attachment in the workplace, developmental underpinnings of leadership, and the assessment methods that link the two. This study has brought to light the relevance of this connection, as seen in empirical works across both military and organizational settings. Additionally, literature revealed important links between attachment style and neurological structures related to emotion regulation strategies. While the strengths and weaknesses of both camps of assessment have been discussed, this study has attempted to show that it is the interview method that gives a glimpse into one's attachment and affect regulation strategies in the here and now. After a comprehensive review and analysis of adult attachment measures, this study proposes a modification of a methodology that synthesizes the information discussed throughout. This novel method of leadership selection, with a heavy theoretical basis in the leader-follower attachment bond, has important implications for the workforce.

Implications for Leadership Selection and Employee Outcomes

The purpose of this review is to stimulate the research base and produce provocative questions, addressing future applications for leadership selection and development methods. While this interview method's use is not intended to be a standalone tool for leadership selection, it certainly has implications for job placement based on the classifications of one's attachment style. For example, even though an individual may be classified in an insecure attachment style

based on their narrative in the interview, they still may be hired for a leadership role that plays to their strengths. Specifically, an individual classified in an avoidant attachment style might be more suitable for a leadership role that has limited direct contact with employees and might rely more on telecommunication. It is theorized that this limited direct interpersonal contact would create minimal distress both for the leader and the employee. Whether the individual receives a classification of secure, or anxious, fearful, or avoidant, this gives employers a window into the individual's communication and interactional style, as well as their delegation style. Insecure leaders show a greater tendency to rely on centralized structure (Johnston, 2000); that is they are less likely to involve employees in decision-making and in the delegation of tasks. With this in mind, these individuals may benefit from exercises or interventions that involve delegating tasks to include employees in the decision-making process. Ideally, this would increase reliance and trust in others while helping their employees grow their sense of competence, responsibility, and motivation. Not only is this knowledge valuable for hiring purposes, but in guiding interventions when there are problematic dynamics occurring in the workplace. In other words, this interview is a potentially valuable tool in structuring continuing education workshops, as well as office interventions.

For example, for the insecure, anxiously attached leader in place, an intervention that promotes flexibility and healthy stress management strategies may be relevant for their leadership development. As discussed, individuals with a preoccupied attachment style are likely to be concerned with fulfilling their personal needs, thus interfering with work obligations (Hazan & Shaver, 1990). Perhaps this insecurity leads to unhealthy coping strategies and decreased self-care, which may in turn result in a harmful or negative communication style with employees. With this kind of leadership, it is understandable why there are higher rates of

burnout and negative job satisfaction ratings in the workplace. Recommending a workshop that addresses these maladaptive behaviors and focuses on strategies to promote qualities that are characteristic of secure attachment and transformational leadership, such as support, trust, and perspective taking can be valuable. These interventions for the insecurely attached leader should consider promoting greater flexibility, loosening a rigid pattern of self-reliance. This may specifically help with leaders classified in avoidant attachment style. These individuals, who are generally distrustful of others, may benefit from slowly delegating tasks to others, and building their trust, ideally challenging their negative internal working model of others. Not only does this have positive outcomes for employees, such as greater morale, trust, and motivation, but there is potential to improve a leader's relational competency.

Strengths

When considering the strengths of the two camps of adult assessment, this interview is an attempt to synthesize the relative strengths of both methods. While some self-report methods do not specifically identify a target relationship, or the same measure is used across various relationships, this interview marks a clear target relationship. For instance, self-report measures used to assess romantic partners are also used for peers, and adult measures are used for adolescents. This interview is devised exclusively for the leader-follower dyad, targeting past relationships with leaders and employees.

Additionally, this interview attempts to synthesize the categorical versus dimensional classifications. Although there are categorically organized attachment styles that are assigned to the individual, the method of arriving at a classification utilizes a dimensional approach. That is, it is the degree to which maxims are violated, and the quality of the narrative, regardless of the content, that places the speaker into a classification. Further, while some measures of self-report

require a degree of self-awareness of the individual's relational patterns as well as a willingness to disclose, this interview does not necessitate this awareness. This interview is entirely a relational, in vivo process that does not require the speakers to classify themselves into a category. This contributes to a marked strength of this method and sets it apart from extant self-reports in that it has the strong potential to be low on social desirability.

Finally, this interview has the potential to bridge the gender role gap that exists in leadership. Specifically, an important correlation found across studies links transformational leadership qualities to secure attachment and positive employee outcomes. Transformational leadership involves qualities such as support and encouragement, and is regarded as a nurturing style. These are in direct opposition to stereotypical male gender roles that are historically found in leadership roles, qualities related to aggression and power. Utilizing a selection tool that has theoretical roots in concepts that link secure attachment and transformational leadership, and positive employee outcomes, is a novel approach to leadership selection. These outcomes are empirically supported in the military and organizational contexts, linking transformational leadership qualities to secure attachment with employee's work satisfaction, trust, motivation. Much of the strength of this assessment method lies in its' foundation of empirical studies that support its' theoretical constructs, while maintaining cultural sensitivity in its' reliance on the nuances of human experience.

Limitations

Although the value of this proposal of an adult attachment interview has been discussed throughout, there are several limitations to this study. First, there is a significant limitation to the further development of the interview, primarily concerning the expense and time required. Learning the scoring method and scoring the narrative of transcripts takes a significant amount of

time; the AAI requires 2 weeks of intensive training at a high cost. Researchers have historically used self-report instruments for good reason, it is cost effective. Funding the validation study that can ultimately bring this interview to life is a serious challenge and limitation.

Secondly, this study and proposed measure was extrapolated from attachment theory based on empirical literature and conceptual understanding of the theory. Longitudinal studies and experiments should be conducted to test the reliability and validity of these concepts proposed in this study before explicit conclusions can be made between leader's attachment style as classified by narrative coherence and certain functional outcomes of employees. When this challenge is met, this interview can then contribute to a more complete and expanded theory of adult attachment.

Third, there may be a limitation regarding the results of a validity study and it's generalization across genders, as men hold most leadership positions in the U.S. It is likely that when individuals reflect upon their previous significant experiences with leaders, they will most likely be referring to men. This consideration will have important implications for the research design of a validation study.

Additionally, how factors related to cultural biases and barriers are accounted for in one's narrative is an important aspect, and it is a limitation in this initial development. For instance, cultural factors are at play within any interview setting and this may affect testing. Specifically, the speaker may disclose their accounts of experienced discrimination or racism in their relationships with leaders. How this is articulated in the interview, or if topics are evaded, or if speech is vague, will all affect coding. The examiner needs to be mindful and sensitive as to how this affects coding the transcript.

Future Directions

Before this modified version of the AAI can be used for leadership selection and/or evaluation, a pilot study should test its psychometric properties and establish its predictive, construct, and discriminant validity. Researchers recommend that a study's methodology should utilize "designs using a combination of self-reports and interview with observational and experimental procedures...to obtain a thorough picture of attachment-related processes in adulthood" (Bernier & Dozier, 2002, p. 177). Taking this into consideration, to obtain optimal results of both the interview method as well as understanding workplace attachment in leaders, the combination of self-reports of attachment and leadership should be used.

Regarding the design of a pilot study, it is best to devise a longitudinal study to track outcomes over time in order to obtain optimal predictive validity. Additionally, because of the high stakes of selecting an executive with this instrument, this should first be validated on a sample of executives, or supervisors, who are already holding a position, and the corresponding attachment of their employees who are already in place can be measured over time. It is of note that this mirrors the administration of the AAI along with the Strange Situation, where attachment of the parents are correlated with their children's classifications. In regards to the current proposal of a pilot study, because of the highly sensitive nature of this interview and concerns for negative repercussions of participating in the study, it is critical that strict confidentiality is established before administration. When used in leadership and executive selection, it must be made clear that the employers may only see the attachment classification and reasons they earned that classification, not the content of their responses to the interview. This is a critical consideration to keep in mind in any future use.

One setting where this may be done is within the administration of a university, where managers and supervisors might have held their positions for many years and established emotional bonds. Within this setting, these various leaders are likely to have one or several assistants or long-term employees. The managers and supervisors who complete this interview may also complete the Working Relationship Inventory (WRI) to help determine construct validity. To measure the workplace attachment style of the followers, or employees, they too should be administered the WRI, and to obtain their leadership preferences, the Multifactor Leadership Questionnaire (Bass & Avolio, 1990) should be administered. This is a relevant measurement for a pilot study, as the MLQ has been validated across studies of adult attachment and leadership. On this questionnaire the employees rate the frequency that their supervisor/manager engages in these behaviors. Although this is not a measurement of attachment, these transformational and transactional leadership behaviors and scales on the MLQ have shown statistically significant associations with attachment security throughout the literature (Popper et al., 2000).

This proposed initial study may serve to determine the interview's psychometric properties, and possibly in the future a longitudinal study will reveal the interview's predictive validity. This investigation and synthesis of adult attachment, leadership, and narrative coherence is a novel method of assessment and perhaps its use will strengthen workplace dynamics, placing more secure, attentive, and regulated individuals into positions of leadership.

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APPENDIX

IRB Review Letter

PEPPERDINE UNIVERSITY

Graduate & Professional Schools Institutional Review Board

June 10, 2016

Project Title: Modification of the "Gold Standard?" Leadership Selection from an Attachment Lens:
A Critical Analysis

Re: Research Study Not Subject to IRB Review

Dear Ms. Pearlstein:

Thank you for submitting your application, *Modification of the "Gold Standard?" Leadership Selection from an Attachment Lens: A Critical Analysis*, to Pepperdine University's Graduate and Professional Schools Institutional Review Board (GPS IRB). After thorough review of your documents you have submitted, the GPS IRB has determined that your research is **not** subject to review because as you stated in your application your dissertation **research** study is a "critical review of the literature" and does not involve interaction with human subjects. If your dissertation research study is modified and thus involves interactions with human subjects it is at that time you will be required to submit an IRB application.

Should you have additional questions, please contact the Kevin Collins Manager of Institutional Review Board (IRB) at 310-568-2305 or via email at kevin.collins@pepperdine.edu or Dr. Judy Ho, Faculty Chair of GPS IRB at gpsirb@pepperdine.edu. On behalf of the GPS IRB, I wish you continued success in this scholarly pursuit.

Sincerely,



Judy Ho, Ph. D., ABPP, CFMHE
Chair, Graduate and Professional Schools IRB

cc: Dr. Lee Kats, Vice Provost for Research and Strategic Initiatives
Mr. Brett Leach, Compliance Attorney
Dr. Louis Cozolino, Faculty Advisor