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Emotional Intelligence and Leader Development: Measuring Trait Emotional Intelligence Scores of Mid- Career Commissioned U.S. Army Officers

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EMOTIONAL INTELLIGENCE AND LEADER DEVELOPMENT:
MEASURING TRAIT EMOTIONAL INTELLIGENCE SCORES
OF MID-CAREER COMMISSIONED U.S. ARMY OFFICERS

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By
LTC Stephan Walters

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EMOTIONAL INTELLIGENCE AND LEADER DEVELOPMENT:
MEASURING TRAIT EMOTIONAL INTELLIGENCE SCORES
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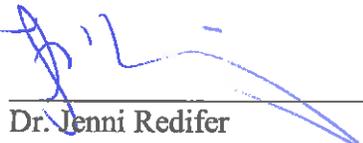
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PREFACE

This study embraces the following five ideologies: (1) adaptive leadership requires both cognitive (thinking) and affective (emotional) physiological capabilities; (2) organizations that develop leaders are able to determine program effectiveness via psychometric instruments which measure individualized growth in leader attributes (what a leader is) and leadership competencies (what a leader does); (3) organizations such as the U.S. Army, that are developing adaptive leaders, require psychometric feedback instruments that inform both the cognitive and the affective domains of adaptive growth; (4) the purpose of leadership is to influence other humans, and regardless of context or setting, all humans (leaders, followers, peers, the opposition) have emotions; (5) the foundation of leader development is self-awareness, and self-report (self-efficacy) emotional intelligence instruments (and various other psychometric measurements) could provide the U.S. Army a means to both inform and shape leader identity.

The overarching purpose of this study was to help all leaders throughout the U.S. Army determine if current leader development practices and instruments adequately provide individualized feedback on the leadership traits required for the organization's sustained success. This research could influence decisions about future leader development practices (Ways) and instruments (Means), while helping the U.S. Army achieve the strategic goals (Ends) related to developing adaptive and self-aware leaders who are open to the constant changes of the modern operational environment. In addition, this research creates the opportunity to gain knowledge that may be transferable to the corporate sector, to nonprofit organizations, and to other governmental institutions.

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OF MID-CAREER COMMISSIONED U.S. ARMY OFFICERS

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The United States Army is preparing for the ambiguous and consistently changing realities of the modern world by developing leaders who are adaptive, mentally agile, and open to change. However, without instruments or tools that purposefully measure adaptability within each individual leader, it is challenging to determine the U.S. Army's effectiveness at the strategic goal to develop adaptive and self-aware leaders.

The dependent variables of interest are the trait emotional intelligence scores of commissioned U.S. Army leaders who have at least 10 years of military experience. This quantitative survey based study samples ($N = 28$) mid-career U.S. Army Majors using a credible self-report trait emotional intelligence instrument called the Trait Emotional Intelligence Questionnaire-Short Form (TEIQ-SF). The TEIQ-SF measures 15 facets that nest within the Army Leadership Requirements Model (ALRM). Scores on the four primary factors measured by the TEIQ-SF (Emotionality, Self-control, Sociability, and Well-being); and scores on the independent facet of Adaptability provide insight into the U.S. Army's effectiveness at developing adaptive leaders for a complex world. The independent variables of focus are gender, military specialty, and the Big Five personality traits measured by the Ten-Item Personality Inventory (TIPI).

The results of this study suggest there are no significant differences in trait emotional intelligence (EI) between females and males within the sample of U.S. Army

Majors. The results also suggest trait EI does not differ based on military specialty. The independent trait EI facet Adaptability was significantly correlated with the personality trait Conscientiousness, $r = 0.39$, $n = 28$, $p < .05$. The coefficient of determination indicated that 15% of the variance in Conscientiousness is explained by Adaptability. Adaptability was also significantly correlated with the personality trait Emotional Stability, $r = 0.55$, $n = 28$, $p < .01$. The coefficient of determination indicated that 30% of the variance in Emotional Stability is explained by Adaptability. Additionally, the trait EI factor of Self-Control was significantly correlated with the personality trait Emotional Stability, $r = 0.69$, $n = 28$, $p < .01$. The coefficient of determination indicated that 48% of the variance in Emotional Stability is explained by Self Control.

CHAPTER I: STATEMENT OF THE PROBLEM

Introduction

As the modern world gains in complexity and ambiguity, many organizations are preparing for success in an unknowable future by developing leaders with enhanced adaptive capabilities (Department of the Army (DA) [DA], 2014f, 2015d, 2014h; Heifetz, Grashow, & Linsky, 2009; Kotter, 2012; Northouse, 2016). Hence, the United States (U.S.) Army is focused on developing adaptive leaders for a complex and unpredictable world (DA, 2014f). In recent years, the U.S. Army has made significant changes to a historically proven leadership development program while working toward the goal of fostering adaptive leadership. However, the U.S. Army has not yet embraced the emerging science of emotional intelligence in regard to leader development, nor has the U.S. Army developed an instrument that measures individualized growth in adaptability of leaders at all levels within the organization from both a cognitive and affective learning domain perspective.

This chapter outlines a brief historical background of the U.S. Army while defining the organization's purpose, goals, challenges, and expectations. In addition, this chapter highlights the U.S. Army's responsibility to develop leaders for the nation, and the organization's strategic need for adaptive leaders. The overarching problem defined for this study pertains to the methods and instruments that organizations such as the U.S. Army use to assess and develop their leaders, specifically via instruments that provide both cognitive and affective assessment, while providing constructive feedback to each individual leader within the organization. The purpose of this exploratory study is to

begin the process of determining if trait emotional intelligence measuring instruments could help large organizations such as the U.S. Army develop adaptive leaders who are more open to change and have an enhanced sense of self-awareness.

The United States Army

Established on 14 June 1775, the United States Army is one of America's oldest organizations (DA, 2012a). As an enduring institution which has sustained relevance and resilience, America's Army has consistently evolved and transformed throughout its storied lineage (Donnelly, 2007; Kotter, 2012). While helping to establish, build, and defend the nation, the U.S. Army directly influenced America's identity and presence in the world (DA, 2012a; Giangreco, 2011). In addition, the U.S. Army has served as an instrument of social and political change both internationally and domestically. From the American Revolution to current operations around the world, the U.S. Army helped the United States gain independence, survive a Civil War, win two world wars, and earn its current role as one of modern history's most influential world powers (Nelson, 2001).

On domestic issues such as racial desegregation and gender equality, the U.S. Army has consistently been a spearhead of social and cultural change (Gardner, George, & Kweisi 2003; Holm, 1982). As a truly American institution, the U.S. Army is engrained with many of the American customs, traditions, and social norms that are resistant to modification and transformation. Yet, as America evolves and adapts as a nation, so do the nation's enduring organizations (Crow, 2010; Kotter, 2012). A current example of the U.S. Army's propensity to evolve as American social norms and cultural expectations change is the recent initiative to allow females to serve in Infantry and Armor positions (Vergun, 2016). Despite the reality that women have served in the U.S.

Army for generations, and that "over a quarter of a million female Solders served in Iraq and Afghanistan from 2001-20013, of whom approximately 150 were killed in action and another 800 were wounded" (Cone, 2013, p. 29), the ground maneuver combat occupational specialties of Infantry and Armor were closed to women prior to April 2016. Thus, as a changing organization and as a geopolitical and social instrument for change, many aspects of the U.S. Army are enduring and steadfast, while other aspects must consistently adapt and evolve as the United States, the world, and the operational environment change and evolve (Crow, 2010; DA, 2011c, 2012a; Kotter 2012).

The United States Army's Purpose and Components

As outlined in the preamble to The Constitution of the United States, the purpose of the U.S. Army is to help a federalized government "insure domestic tranquility, provide for the common defense, promote the general welfare, and secure the blessings of liberty" (DA, 1999, p. F-1). The U.S. Army is structured into the following three components: the Active Army, the Army Reserves, and the National Guard. Together, the U.S. Army's three components serve as the nation's predominant land fighting force (DA, 2012a). Since the National Guard works directly for the governor of each state, and the Active Army and Army Reserves serve under the directives of the President of the United States, the U.S. Army represents one of the nation's multilevel governmental organizations (Donnelly, 2007). Inherently, the three components of the U.S. Army are products of America's history and culture. Together, the three components of the U.S. Army serve as a checks and balance enabler to help keep the 50 states and 16 territories united within a local, state, and federal governmental system. However, the principle purpose of the U.S. Army is to "prevent conflict, shape the security environment, and win

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the nation's wars" (DA, 2012a, p. 5) specifically in the land domain. Although the U.S.

Army has some air and sea capabilities, the U.S. Navy and U.S. Marine Corps

fundamentally retain America's maritime domain, while the U.S. Air Force primarily

upholds the air and space domains. During most modern operations, the four unique

American military services currently assigned to the U.S. Department of Defense (Army,

Navy, Air Force, Marines) work in support of each organization's ascribed domains

within a Joint Forces context (Department of Defense [DD], 2013). Yet, "conflicts in the

future, like those in the past, will ultimately be resolved on land" (DA, 2014b, p. i), and it

is the U.S. Army that is responsible for America's complicated and challenging land

domain.

The United States Army and Leader Development

Another principle legacy of the U.S. Army is the development of leaders for the

nation as reflected in the fact that 60% of America's Presidents earned leadership

credentials and leadership experience while serving in an Army uniform prior to being

elected as America's Commander-in-Chief (DeGregorio, 2005). Many active duty

Soldiers transition out of the Army and use the leadership training, education, and

experience gained during military service to assume leadership positions throughout all

sectors of America's economy (Sorley, 2004). Furthermore, current leaders in the

National Guard and Army Reserves often serve in both military and private citizen

leadership roles (Autrey, 2014). Hence, the topics related to leader development in the

U.S. Army have paramount significance to current and future generations of Americans.

Evaluating and analyzing current leaders in the U.S. Army helps inform, shape,

and guide the development of future organizational leaders, while increasing the

collective understanding about the topics of leadership and leader development outside an American military context. Leadership is about influencing humans (Bradberry & Greaves, 2009; DA, 2012L; 2015c), and despite having various nature and nurture related differences, all humans have emotions (Dalgleish & Power, 1999; Ekman, 1992a; Ekman 1992b; Fisher & Shapiro, 2005; Goleman, 2013). Research that measures the trait emotional intelligence scores of current U.S. Army organizational level leaders provides the opportunity to analyze the applicability of trait emotional intelligence science and emotional intelligence measuring instruments in relation to currently used leader development instruments that provide self-awareness and social-awareness enabling feedback.

Regardless of organizational affiliation, research on organizational level leaders broadens and informs the leadership field of study. Furthermore, research centered on the trait emotional intelligence scores of current organizational level leaders in the U.S. Army enhances the overall bodies of knowledge on a range of topics to include the following: emotional intelligence, leader development, and leader developing instruments and tools. This research endeavor creates the opportunity to gain both academic and practical application knowledge that may be transferable to the corporate and private sectors, to nonprofit organizations, and to other governmental institutions outside the U.S. Army.

Win in a Complex World

U.S. Army leaders are required to serve in complex roles and environments, within diverse partnerships and coalitions, against conventional and unconventional threats, and using complicated technology within ambiguous systems, all while operating

in the multifaceted land domain of the modern world (DA, 2012m, 2014f, 2014g).

Hence, the U.S. Army's most recent operating concept, "Win in a Complex World" (DA,

2014b). For the first time in the U.S. Army's history, the organization's current operating

concept "focuses on all three levels of war; tactical, operational, and strategic" (DA,

2014b, p. iii). In this context, the word "win" occurs at the strategic level and involves

more than just the application of combat land power. "Win" requires the successful

application of leadership at all three levels of war. "Win" also requires the collective

application of leadership within the following four instruments of national power to

achieve the nation's strategic objectives: diplomatic, informational, military, and

economic (DD, 2011). These four instruments of national power are often referred to as

DIME. Inherently, the U.S. Army's role as a national instrument of power primarily fits

within the military construct of DIME, but U.S. Army leaders typically serve in roles and

environments that directly either enable or hinder the nation's DIME outcomes (DD,

2013). U.S. Army leaders of all ranks at all three levels of leadership (individual, team,

and organizational) are required to work directly or indirectly in support of the nation's

multifaceted diplomatic, economic, and informational paradigms (DA, 2014b). The

American war efforts in Vietnam and the unknown strategic outcomes of the current war

against terrorism provide recent historical examples of how the U.S. military could win

every battle at the tactical level, and not win the war at the strategic level (DA, 2012m;

Paret, 1986). U.S. military and civilian leaders at the highest levels of government are

required to help translate national strategy as outlined by America's elected and

appointed civilian political leaders (DD, 2013). Yet, U.S. Army leaders at all levels are

required to apply the operational art of end, ways, and means to create adaptive options to

help solve complex strategic, operational, and tactical problems (DD, 2011, 2013; DA, 2014b, 2015c).

At the tactical and operational levels of war, today's U.S. Army leaders are asked to perform a broad range of military operations that typically go far beyond the traditional kinetic operations of offense and defense (DA, 2011a, 2012e, 2012f, 2012h). The following are some U.S. Joint doctrine examples of the various types of military operations that today's Army leaders are required to help plan, coordinate, synchronize, and execute: stability operations, civil support, foreign humanitarian assistance, noncombatant evacuation, peace operations, combating weapons of mass destruction, foreign internal defense, counterdrug operations, combating terrorism, defense support of civil authorities, and counterinsurgency (DD, 2011). In most operational and tactical settings, Army leaders are asked to achieve unity of effort while working directly with other U.S. military forces (Joint), US governmental departments and agencies (Interagency), nongovernmental organizations, (Intergovernmental) organizations, and (Multinational) forces which in both Army and Joint U.S. doctrine is referred to as the (JIIM) environment (DA, 2014e; DD, 2011). Adding to the complexity is the reality that most of America's military operations are conducted outside the national boarders of the United States, and U.S. Army leaders from all three components are required to operate in foreign lands that usually have cultural, political, economic, social, and information realities that are very different than America's (DA, 2014f; Salmoni & Homes-Eber, 2011).

The operational dynamics and variables of the modern world are gaining in complexity and ambiguity (DA, 2014f). "Future operational environments will be

characterized by uncertainty, complexity, rapid change, and a range of potential threats"
(DA 2014e, p. 8). Adding to the complexity of the traditional battlefield is a new type of
mixed conventional and nonconventional warfare that is currently being conducted in the
Ukraine during 2015-2018. This new style of Russian hybrid warfare doctrine
implements a lethal mix of cyber and electronic warfare tactics with new and old
battlefield weapon systems and capabilities along with an asymmetrical insurgent,
diplomatic, economic, information, and terrorist threat (Bartles, 2016). While testifying
before the Senate Armed Services Committee in 2012, the former U.S. Army's Chief of
Staff, General Raymond Odierno, outlined the following related to the U.S. Army's
current and future strategic, operational, and tactical levels of war environments:

> Today's force is qualitatively different from the army of a decade ago…. It is
> more combat seasoned, more tightly integrated with the other military services…,
> and more technologically advanced…. The army will make sure it firmly embeds
> one of the most costly lessons it has learned over the last decade: how to deal with
> the challenge of hybrid warfare…. In the future, it will be increasingly common
> for the U.S. Army to operate in environments with both regular military and
> irregular paramilitary or civilian adversaries, with the potential for terrorism,
> criminality, and other complications…. Advanced technology and the information
> revolution have fundamentally altered the battlefield…. Now, any activity a
> Soldier undertakes can rapidly evolve into a combination of combat, governance,
> and civil support missions, and any individual… can alter the trajectory of an
> operation. (Odierno, 2012, p. 31)

Organizational Need for Adaptive Leaders

General Odierno's (2012) statement helps to highlight the importance of developing every leader within the U.S. Army, regardless of rank, position, or title. Each individual leader must be developed, because the actions and decisions of each person within the U.S. Army have the potential to have either lasting positive or enduring negative effects to the outcome of the assigned mission, battle, operation, or war. In order to *win in a complex world*, senior leaders in the U.S. Army clearly understand that the organization has to become more adaptive, and that it must manage the task of developing critically thinking organizational leaders who are open to constant change in all three levels of war (DA, 2014g). "Management is about coping with complexity…. Leadership, by contrast, is about coping with change" (Wren, 1995, p. 114). The 2013 version of the Army Leader Development Strategy outlined the following vision: "The Army will produce professional leaders that practice the mission command philosophy whether conducting unified land operations or Army generating force functions…. These leaders possess emotional intelligence and achieve credibility with external JIIM partners, allies, internal agencies, and stakeholders" (DA, 2013, p. 6). Within the U.S. Army's 2014 Strategic Planning Guidance, the organization's top strategic priority was developing "adaptive Army leaders for a complex world" (DA, 2014f, p. 18). Recent hard-earned lessons while fighting hybrid threats on the asymmetrical battlefields of Iraq and Afghanistan help to highlight the U.S. Army's unequivocal need to make adaptive leaders. In 2010, while directly engaged in two of the nation's most protracted land combat operations, the United States Army officially began the transformation from a centralized command and control model to a decentralized operational concept called *mission command* (DA, 2010a, 2012k). This key doctrine and substantial real-world

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change highlights an added organizational need for adaptive leaders at all echelons of the

U.S. Army (DA 2012j, 2012L). According to Kotter (2012), most organizations have at

least a few members who are adaptive and open to constant change, but the U.S. Army's

goal is to make "every leader more agile, flexible, adaptive, and innovative" (DA, 2014f,

p. 18).

The Problem Defined

How does an organization develop adaptive leaders? Plus, how do organizations

like the U.S. Army measure whether each individual leader is truly becoming more

adaptive and open to change? Relative to Bloom's taxonomy and the three learning

domains of cognitive, affective, and psychomotor (Bloom, Engelhart, Furst, Hill, &

Krathwohl, 1956), is adaptive leadership a thinking (cognitive domain) or an emotional

(affective domain) psychological phenomenon, or are the human traits related to

successful adaptability an applied mixture of both emotions and thinking? The answers

to these challenging questions have far-reaching strategic, operational, and tactical

importance to the sustained national defense of the United States of America. In a

broader context, the answers to such questions directly impact the success of all

organizations that are working toward the goals of developing successful adaptive

leaders, while enhancing the capability to measure everyone's growth in traits and

characteristics related to adaptability, by implementing developmental instruments that

help individual leaders improve self and social awareness.

A study on the neurological basis for leader complexity, conducted in partnership

with West Point's Department of Behavioral Sciences and Leadership, indicates that

"adaptability is contingent upon leaders having the requisite cognitive and affective

complexity to facilitate effectiveness across a wide domain of roles" (Baltharzard et al., 2010, p. 2). Furthermore, adaptive leadership requires both "advanced cognitive and emotional capacity" (Baltharzard, Hannah, Jennings, & Waldman 2010, p. 3). "There is an emotional dimension to almost every thought we have and every decision we make" (Jones, 1998, p. 13).

The U.S. Army labels enduring organizational first-order problems as Army Warfighting Challenges (AWFCs). As of October 2016, the U.S. Army had 20 defined warfighting challenges. The research reported here addresses AWFC #10 titled "Develop Agile and Adaptive Leaders" (DA, 2015a). AWFC #10 asks the following: "how to develop agile, adaptive, and innovative leaders who thrive in conditions of uncertainty and chaos and are capable of visualizing, describing, directing, leading, and assessing operations in complex environments and against adaptive enemies" (DA, 2015a, p. 1). Change inherently requires individuals and teams to learn something new and unlearn something old, and the unlearning process is the source of most resistance to change (Schein, 1995). What does the U.S. Army need to change in order to produce more adaptive leaders, and what does the organization need to unlearn in order to become more adaptive, innovative, and open to change?

In recent years, the U.S. Army implemented new organizational and institutional focused doctrine, new concepts in professional military education, and training changes that directly address the defined organizational need to develop adaptive leaders (DA, 2011b, 2012n). The organization transitioned from a task, conditions, standards training and education concept to an outcomes-based model designed to foster and enable adaptability and flexibility (DA, 2011c, 2012m). In June 2015, the U.S. Army published

an updated leadership field manual (FM) titled *Leader Development*, which addresses

adaptive leadership and attempts to connect adaptability with the concepts of self-

awareness, comfort with ambiguity, and a few other key individual leader traits (DA,

2015b). Also during 2015, the U.S. Army's Combined Arms Center began an initiative

called Army University, "where the stovepipes of the 86 schools inside the Army were

broken down to increase the rate of innovation and foster partnerships outside the Army"

(Hames, 2015, p. A-1) with the goal and purpose of focusing on developing adaptive

leaders. In December 2015, Army University conducted a symposium of over 200

American colleges and universities focused on the topic of getting better "in the human

dimension elements of the Army's new doctrine about critical thinking, adaptability, and

innovation" (Walleman, 2015, p. A-4). Thus, after making significant education,

training, and published doctrine changes, perhaps the U.S. Army is currently successful

with the goal of developing agile and adaptive leaders, and the organization needs only a

means or an instrument that purposefully measures the various traits and qualities related

to adaptability? The U.S. Army currently uses leader evaluation and counseling

instruments, a web-based 360-degree review instrument, a multi-source assessment

feedback (MSAF) instrument, and an annually required training instrument called the

Global Assessment Tool (GAT) 2.0. Do those instruments accurately measure growth on

the various traits that are either consciously or subconsciously related to both the thinking

(cognitive) and the emotional (affective) mental processes related to adaptability?

At this point in time, the U.S. Army does not have a developmental instrument

that purposefully measures the affective (emotional) or thinking (cognitive) traits related

to adaptability. Specifically, the U.S. Army does not use an instrument that measures the

emotional intelligence scores of leaders within the organization. Thus, the problem defined is the reality that the U.S. Army not only needs to continue testing various ways of developing more adaptive leaders, but the organization also needs instruments and tools that measure growth in adaptability from both a cognitive and affective domain perspective. Since the U.S. Army's top strategic priority is to develop adaptive leaders, the organization needs instruments that provide personalized, reliable, valid, accurate, and trustworthy feedback to each individual leader specific to the traits related to adaptability. The U.S. Army needs an instrument or a battery of instruments that purposefully measure adaptability and provide enlightening feedback that enhances self-awareness about the traits related to adaptability. Perhaps the U.S. Army needs a trait emotional intelligence instrument, or the U.S. Army already has elements of trait emotional intelligence science built into currently used leader developing instruments? A trait emotional intelligence instrument could enable U.S. Army leaders to develop themselves while improving their ability to develop others.

In most scenarios, enlisted, commissioned, warrant, and civilian members of the Department of the Army (DA) are promoted from within the ranks of the organization. Hence, the U.S. Army relies heavily on the enduring practice of having current leaders develop into future organizational leaders (DA, 2012L). Starting in 2005, the Center for Army Leadership (CAL) began conducting annual surveys to assess and track the trends in Army leader attitudes about leader development, the quality of leadership, and the contribution of leadership to mission accomplishment (Riley, Hatfield, Freeman, & Fallesen, 2013). Of all the leadership variables measured by the Annual Survey of Army Leadership (CASAL), the leader competency, "Develops Others," has consistently been

the organization's weakest area (Riley, Hatfield, Freeman, Fallesen, & Gunther, 2014).

Hence, based on the U.S. Army's explanation of "Develops Others," a decade of CAL surveys indicate that regarding sustained perceptions throughout the ranks of the U.S. Army, supervisors, raters, and senior raters do not sincerely care about developing the leadership capabilities of their subordinates, that the majority of Army leaders are not very effective at developing others (push factor), or that the individuals being developed are not receiving and processing the developmental feedback (pull factor) (DA, 2012L). Are those types of sustained organizational challenges cognitive domain (thinking) issues? Are 10 years of a quantifiably measured organizational weakness at the leadership trait of "developing others" an affective domain (emotional) issue? Or are they a complex mixture of both psychological domains? When measuring organizational perceptions, do surveys like the CASAL measure just thoughts, just feelings, or both thoughts and feelings? Neurological research has established that different parts of the brain have different roles and functions, but each part of the brain works jointly; and, contrary to popular belief, feelings and perceptions are not generated in the heart or in the gut (Craik et al., 1999; Nolte, 1988). Instead, feelings and perceptions are generated in the brain (Kahneman, 2011).

For the U.S. Army, developing adaptive leaders is an issue directly nested in the concepts of leaders developing others and leaders developing themselves. In addition, adaptive leadership and the ability to develop others effectively are topics rooted in both the cognitive and affective domains of the human brain. The organizational problem that this study focuses on is the need for an instrument or a battery of instruments that develop and assess each individual leader's ability to adapt, while providing self-awareness

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enabling feedback that enhances the opportunity for leaders to develop others and themselves. Sinek (2009) coined the phrase "start with why, but know how" (p. 133). The U.S. Army clearly knows "why" the organization needs adaptive leaders. Yet, after making considerable changes, the U.S. Army is still discovering exactly "how" to develop adaptive and self-aware leaders.

Purpose of the Study

The purpose of this study is to assess the U.S. Army's effectiveness at developing adaptive and self-aware leaders by measuring the trait emotional intelligence (EI) scores of current organizational mid-career leaders, thus beginning the process of determining empirically if a self-report trait emotional intelligence instrument could (and should) have a role in the development of agile, adaptive, and self-aware leaders within the U.S. Army. Measuring the trait EI scores of mid-career commissioned officers allows for an assessment of the U.S. Army's ability to develop the affective (emotional) domains of leadership via training, education, and experience. Specifically, this study focuses on the notion that self-report EI measuring instruments could provide the individualized feedback currently needed in the U.S. Army to assess leader development from an affective perspective on a number of personalized attributes and competencies defined within the U.S. Army's most recent leadership requirements model and leadership development doctrine (DA, 2012L, 2015b). Research that measures the trait EI scores of current U.S. Army organizational level leaders provides the opportunity to analyze the applicability of trait emotional intelligence science and emotional intelligence measurement instruments in relation to currently used leader development instruments that provide self-awareness and social-awareness enabling feedback.

The proven U.S. Army leader development program is not broken; consequently, this research endeavor attempts to help determine only if the U.S. Army's leader development program and instruments should additionally emphasize a focus on emotional and social competence. As of 2018, the U.S. Army does not have a leader development instrument that purposefully measures the affective (emotional) or thinking (cognitive) human traits related to adaptability. In addition, the U.S. Army does not use an instrument that measures the EI scores of leaders within the organization. There are no known quantitative or qualitative studies that have purposefully measured the EI scores of any sample from the United States Army. Thus, this study provides a benchmark for determining empirically whether the cognitive and affective aspects of an emotional intelligence measurement instrument could be systematically and deliberately added to the U.S. Army's leader development program.

Emotional Intelligence

Throughout the literature, there are many definitions, ideologies, models, and measuring instruments related to the field of study on the wide-ranging topic of emotional intelligence. However, according to Goleman (1995), emotional intelligence means emotional literacy. "There is a great divide in human abilities that lies between the mind and heart, or more technically, between cognition and emotion…. Some abilities are purely cognitive, like IQ or technical expertise…. Other abilities integrate thought and feeling and fall within the domain of emotional intelligence" (Cherniss & Goleman, 2001, p. 14). Some EI models depict adaptability as a core aspect of intelligence about human emotions (Bar-On, 2006; Goleman, 2011; Goleman, Boyatzis,

& McKee, 2013; Petrides, 2017). Table 1 outlines one of the more popular and recently
revised emotional intelligence models.

Personal Competence		Social Competence	
Self Awareness	**Self-Management**	**Social Awareness**	**Relationship Management**
– Emotional Self-Awareness – Self Assessment – Self Confidence	– Emotional Self-Control – Transparency – Adaptability – Achievement – Initiative – Optimism	– Organizational Awareness – Service – Empathy	– Inspirational Leadership – Influence – Developing Others – Catalyst for Change – Conflict Management – Teamwork-collaboration

Figure 1. Goleman's Model of Emotional Intelligence Domains and Competencies.
Adapted from "Primal Leadership: Unleashing the power of emotional intelligence," by
Goleman et al., 2013. Boston, MA: Harvard Business School Publishing.

U.S. Army Leadership Capabilities

Nested within Army Warfighter Challenge (AWFC) #10, "Develop Agile and
Adaptive Leaders," are a total of seven "learning demand" questions (DA, 2015a, p. 1).
This study begins the process of determining whether measuring the trait emotional
intelligence scores of commissioned Army leaders could help address the seven learning
demand questions pertaining to AWFC #10. The literature review (Chapter II) bridges
the three main themes of Leadership and the U.S. Army, Leader Development
Instruments used in the U.S. Army and Trait Emotional Intelligence science, while
deliberately addressing aspects of the seven AWFC #10 learning demand questions (DA,
2015a, p. 2). The following AWFC #10 learning demand questions highlight the reality
that the U.S. Army is requesting research on the cognitive capabilities interrelated with
adaptability, research on developmental instruments that enable adaptive leadership, and
research on how to establish and maintain mutual trust:

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1. How can the Army *accelerate the development of cognitive capabilities* in support of leadership requirements?

2. What are the *requirements for the development* of agile, adaptive, and innovative leaders?

3. What *specific institutional systems and processes must adapt* to provide the level of agility and adaptability the Army requires and how will the adaptation occur?

4. How can the Army *identify and assess required leader capabilities* that enable an adaptive leader and an agile force?

5. What are the *most effective developmental tools* the Army can provide leaders to enhance the value derived from cumulative experiences?

6. What are the *science, technology, research, and assessment implications* for the future development of leaders?

7. How can the Army support *the development of "mutual trust"* and cohesive teamwork in its units and organizations?

The italicized aspects of these questions (emphasis added) directly influence the intent and direction of this study. It is important to note that the seven AWFC #10 learning demand questions address only "cognitive" domain capabilities and do not mention emotional (affective domain) capabilities. Yet, all seven questions outline an organizational need for "developmental tools" and instruments that "identify and assess leader capabilities" related to adaptive leadership. Plus, "there is no thinking without emotion" (Dorner, 1996, p. 8). The aim of this research is to discover answers to aspects of the aforementioned seven learning demand questions, while helping the U.S. Army

answer the persistent AWFC of how to develop agile and adaptive leaders for a complex world.

Research Questions

This study assesses current U.S. Army leaders to determine if and how trait emotional intelligence science will help the U.S. Army produce more adaptive leaders. The central research question for this study is the following: What are the trait emotional intelligence scores of mid-career commissioned U.S. Army officers? A mid-career Army officer is fundamentally a Major or Promotable Captain, and this exploratory question is rooted in the applied reality that all mid-career Army officers have a minimum of 10 years training and experience serving as a commissioned officer, have a bachelor's degree as a minimum civilian educational background, and have successfully completed all professional military education prerequisites while earning promotions to the rank of Major. Other preconditions that help define the majority of mid-career U.S. Army commissioned officers are the successful completion of at least one Company level command, numerous developmental positions at various echelons within the organization, and the all-encompassing fact that the United States of America has been a nation at war for the preponderance of a current U.S. Army Major or Promotable Captain's military career. Thus, most current U.S. Army mid-career commissioned officers in the National Guard (ARNG), in the Army Reserves (USAR), and on Active Duty have deployed at least once to a combat theater of operations. In addition, almost all mid-career U.S. Army commissioned officers have at least a decade of professional military experience assuring the universal responsibility to evaluate, counsel, develop, train, and mentor fellow members of a consistently changing combat force.

Despite the numerous commonalities pertaining to mid-career commissioned officers in the U.S. Army, there are a few biological, educational, training, and military experience variables that may facilitate different levels of trait EI scores within the relatively homogenous population of U.S. Army commissioned officers. Some of the variable differences within any formation of mid-career U.S. Army officers include gender; career focus and trajectory (type of civilian degree, commissioning source, military specialty); and basic personality differences. Thus, additional research questions that are fundamental to this exploratory quantitative research project are related to gender, military specialty, and personality differences. The following are the three empirical research questions for this study:

1. Is there a difference in the trait emotional intelligence scores of mid-career U.S. Army commissioned officers based on gender?

2. To what extent do trait emotional intelligence scores of mid-career U.S. Army commissioned officers differ based on military specialty (Branch) or Warfighting Function?

3. Do the trait emotional intelligence scores of mid-career U.S. Army commissioned officers differ based on personality differences identified by the Big Five personality dimensions?

Significance of the Study

Even though this study is specific to commissioned officers currently in the U.S. Army, the goal of this research is to provide data that could lead to important recommendations in leader development practices (ways) and instruments (means) generally. Hence, the research goal is the enhancement of organizational, institutional,

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and individual leader development capabilities for current and future leaders regardless of rank or organizational affiliation. Beyond insights from the literature review, this study is a quantitative survey-based research project. The outcomes of this research could help organizational decision makers and other key stakeholders determine if instruments that purposefully measure trait emotional intelligence provide the opportunity to improve and enhance each individual leader's ability to adapt, develop others, and increase self-awareness. This research endeavor highlights the concept that self-reporting trait EI instruments provide immediate and personalized feedback for the individual being developed and for the leaders responsible for the development of others. Using the same instrument over a period of time may help organizational leaders assess individualized growth on a number of leadership variables (traits) beyond just adaptability, developing others, and self-awareness. Hence, the trait EI measuring instrument used within the scope of this study is one of many options that the U.S. Army and other leader developing organizations could explore as a means of achieving the end state goal of producing more self-aware and adaptive leaders, while improving the capabilities of leaders within the organization to develop themselves and others.

As of 2018, there are no known systematic quantitative studies that have purposefully measured the trait emotional intelligence of any sample from the United States Army. Furthermore, there are no known studies that have examined a group of U.S. Army members emotional intelligence mean scores using any of the various types and forms of ability, trait, or mixed EI instruments. There is one known study related to the US Navy that used Bar-On's self-report trait-based EI model. That study discovered relationships with trait EI scores to performance, conduct, attrition, and gender within a

sample of over 1,000 Naval Academy students (Hoffman, 1999). There is also a study

related to US Air Force recruiters and EI levels (Handley, 1997). Yet, no known studies

exist that parallel these trait EI scores for other armed forces branches, nor a study that

has focused on the variables of gender, career experience, and personality types in

relation to trait EI scores within the context of the U.S. Army. Thus, this study provides

a benchmark for determining empirically if the cognitive and affective psychological

aspects of an emotional intelligence instrument could be systematically and deliberately

added to the U.S. Army's leader development program. Specifically, an EI instrument

that purposefully measures the trait of adaptability as either a leadership attribute (what a

leader is) or as a competency (what a leader does). This study could help the U.S. Army

and other organizations in the business of developing leaders determine if the trait

emotional intelligence instrument used within this study is applicable toward meeting the

needs and goals of producing more agile, innovative, and adaptive leaders. In addition,

this study could help the U.S. Army confront the weakness of *developing others* that was

identified by a decade of leadership surveys throughout the organization.

Assumptions and Limitations of the Study

A paramount assumption by the researcher is the idea that the U.S. Army is not

already systematically and purposefully using emotional intelligence instruments to

assess the development of organizational leaders (DA, 2011c, 2012L, 2014c). This

assumption is rooted in the reality that there are no known previous studies that have

focused on emotional intelligence scores of any sample from the U.S. Army. The

assumption is also based on the fact that the U.S. Army does not officially use the lexicon

of "emotional intelligence" within written doctrine or common organizational vernacular.

In fact, in all known current and previous published U.S. Army doctrine, the term "emotional intelligence" appears only once. This singular occurrence is in the reference section of the U.S. Army's 1999 *Leadership* manual. The authors of the U.S. Army's 1999 leadership doctrine recognized Goleman's 1995 *Emotional Intelligence: Why it can matter more than IQ* as one of the influencing sources. However, the two subsequent versions of the U.S. Army's leadership manual do not use the phrase "emotional intelligence" throughout the text nor as an influencing source in the reference sections (DA, 2006a, 2012L). Outside of official U.S. Army published doctrine, there is one other known reference to emotional intelligence which was previously quoted in this chapter from the Army's 2013 Leader Development Strategy (DA, 2013; Sewell, 2014). With the previously stated recognition, the most noteworthy limitation of the study is the reality that it is not feasible or practical to measure the trait emotional intelligence scores of all the current leaders in the U.S. Army within the scope of this research project.

Other Assumptions

A key assumption of this study is the idea that survey participants will read and follow the detailed instructions while taking an unsupervised web-based survey. This assumption is specifically relevant to the instructions related to the trait emotional intelligence aspect of the survey. A fundamental aspect of the Trait Emotional Intelligence Questionnaire Short Form (TEIQ-SF) is that participants "do not think too long about the exact meaning of the statement" (Petrides, 2009; Cooper & Petrides, 2010; Perez, Petrides, & Furnham 2005). Other assumptions related to this research endeavor also pertain to the target sample of this study. It is assumed that the 1,307 military students attending an intermediate-level commissioned officer's course in the year 2016

have access to the internet and a functioning email address. This technology allows the

researcher to invite each individual military student to participate in the self-reporting and

self-paced web-based survey. It is also assumed that because survey participation in this

study is completely anonymous, social desirability bias or the tendency for respondents to

answer questions in a manner that over-reports perceived favorable behavior will be

mitigated via a web-based survey instrument (Shih & Fan, 2008).

Limitations

A key limitation to this study is using only mid-career commissioned officers in

the rank of Major as a sample and not including the various other levels and types of

leaders within the U.S. Army. This study does not measure the trait emotional

intelligence scores of junior enlisted Soldiers, noncommissioned officers (NCOs),

warrant officers, Department of the Army (DA) Civilians, junior ranking commissioned

officers, and other field grade officers above the rank of Major. The training, education,

and experience variables for all leaders in the U.S. Army have many commonalities.

However, the differences in required civilian education, professional military education,

assignment opportunities, and job specific training and education for the numerous types

of leaders within the U.S. Army are beyond the scope of this study. This quantitative

research project evaluates and analyzes only the trait emotional intelligence scores of a

sample primarily consisting of National Guard (ARNG), Army Reserves (USAR), and

Active Duty Army Majors who were selected to attend a 10-month, intermediate level,

professional military education course for commissioned officers.

Another limitation of this study pertains to the U.S. Army's leader development

program, systems, instruments, and mechanisms. The literature review of this study is

primarily centered on a few key instruments used by the U.S. Army to help develop

leaders. Other fundamental leader development aspects related to U.S. Army doctrine,

professional military education, Army training, civilian education, and the multitude of

U.S. Army experiences are not analyzed in detail within the scope of this study. Yet, the

holistic role and function of all the U.S. Army's leader development variables inherently

influence the trait emotional intelligence scores of current mid-career commissioned

Army officers. The EI instrument used in this study (TEIQ-SF) has demonstrated

validity and reliability. However, the fact that the psychometrics of the TEIQ-SF have

not yet been applied to a U.S. Army sample or population may be a limitation.

Definitions of Key Terms and Concepts

Ability Emotional Intelligence: "A subset of social intelligence that involves the

ability to monitor one's own and others' feelings and emotions, to discriminate among

them and to use this information to guide one's thinking and actions" (Salovey & Mayer,

1990, p. 187). "The ability to perceive emotions, to access and generate emotions so as

to assist thought, to understand emotions and emotional knowledge, and to reflectively

regulate emotions so as to promote emotional and intellectual growth" (Mayer &

Salovey, 1997, p. 5). Ability EI instruments are performance-based measurements with

right and wrong multiple-choice items that assess an individual's *ability* to recognize

emotions in others.

Adaptability: "Adaptability reflects a quality that Army leaders and forces exhibit

through critical thinking, their comfort with ambiguity and uncertainty, their willingness

to accept prudent risk, and their ability to rapidly adjust while continuously assessing the

situation…. No prefabricated solutions to problems exist…. Army leaders adapt their

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thinking, their formations, and their employment techniques to specific situations they face" (DA, 2012L, p. 95). Of course, adaptability and adaptableness are the noun versions of the adjective *adaptable*, and Merriam-Webster defines *adaptable* as "able to change or be changed in order to fit or work better in some situation or for some purpose" (n.d.).

Emotion: According to Merriam-Webster, the word emotion has the following three definitions: "the affective aspect of consciousness, a state of feeling, or a conscious mental reaction subjectively experienced as strong feeling usually directed toward a specific object and typically accompanied by physiological and behavioral changes in the body" (n.d.).

Emotional Intelligence: "Emotional intelligence is the capacity for recognizing our own feelings and those of others, for motivating ourselves, and for managing emotions well in ourselves and our relationships" (Goleman, 1995, p. 43; cf. also, Sewell, 2014, p. 8). Emotional intelligence (EI) is a continuing process of developing specific emotional skills (Nelson & Low, 2011). Other models of EI add the following capabilities to the definition of EI: to discriminate between feelings and label them appropriately, to use emotional information to guide thinking and behavior, and to achieve one's goals by managing or adjusting emotions to changing environments (Bradberry & Greaves, 2012; Goleman, 2011)

Intelligence: According to Merriam-Webster, the simple definition of intelligence is "the ability to learn or understand things or to deal with new or difficult situations" (n.d.).

Leadership: There are "over 850 academic definitions" for the word leadership

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(Bennis & Nanus, 2007, p. 4). The U.S. Army currently defines leadership as "the process of influencing people by providing purpose, direction, and motivation to accomplish the mission and improve the organization" (DA, 2012L, p. 1). The U.S. Army's most recent definition for leadership is the definition used for this study.

Leader Development: The U.S. Army defines leader development as "a process that aligns training, education, and experience to prepare leaders who exercise mission command to prevail in unified land operations" (DA, 2013, p. 6).

Mission Command: "Mission command is the exercise of authority and direction by the commander using mission orders to enable disciplined initiative within the commander's intent to empower agile and adaptive leaders in the conduct of unified land operations" (DA, 2012k, p. 1).   Mission command is a decentralized operational concept or philosophy, and it is also one of the U.S. Army's six warfighting functions. The following are the guiding principles of mission command as an operational concept: build cohesive teams through mutual trust, create shared understanding, provide a clear commander's intent, exercise disciplined initiative, use mission orders, and accept prudent risk (DA, 2012k).

Mission orders: "Mission orders are directives that emphasize to subordinates the results to be attained, not how they are to achieve them" (DA, 2012k, p. 5).

Personality: "Personality normally deals with individual differences among people in behavior patterns, cognition, and emotion" (Dehghanan, Abdollahi, & Rezaei, 2014, p. 1279). Merriam-Webster defines personality as "the set of emotional qualities and ways of behaving that makes a person different from other people (n.d.).

Prudent risk: The U.S. Army defines prudent risk as "a deliberate exposure to

potential injury or loss when the leader judges the outcome in terms of mission accomplishment as worth the cost" (DA, 2012k, p. 5). Accepting prudent risk is one of the key guiding principles of mission command.

Psychometrics: Psychometric researchers construct and validate measurements (tests, questionnaires) of human skills, knowledge, attitudes, personality traits, beliefs, educational achievement, and abilities (Petrides, 2016).

Self-awareness: "Self-awareness is your ability to accurately perceive your own emotions in the moment and understand your tendencies across situations" (Bradberry & Greaves, 2009, p. 24). "The ability to identify thoughts, emotions, and behaviors, particularly counterproductive patterns; remaining open and curious" (Reivich et.al, 2014, p. 31). "Understanding how our values and beliefs affect how we think and how that differs for others" (University of Foreign Military and Cultural Studies [UFMCS], 2015, p. 6).

Self-development: "Development is a process of change…. Developmental growth is the same as learning" (DA, 2015b, p. 3-5). "Self-development encompasses the planned, goal-oriented learning that reinforces and expands the depth and breadth of an individual's knowledge base, self-awareness, and situational awareness to enhance professional competence and meet personal objectives" (Riley et al., 2014, p. 71).

Social-awareness: "Social awareness is your ability to accurately pick up on emotions in other people and understand what is really going on with them. This often means perceiving what other people are thinking and feeling even if you do not feel the same way" (Bradberry & Greaves, 2012, p. 156).

Strategy: "Strategy explains how an organization, faced with competition, will achieve superior performance" (Magretta, 2012, p. 8).

Trait Emotional Intelligence: "A trait is typically defined as a distinguishing characteristic or quality" (Mayer, Salovey, & Caruso, 2004, p. 198). "Trait EI (or trait emotional self-efficacy) is defined as a constellation of self-perceptions located at the lower levels of personality hierarchies" (Petrides, Pita, & Kokkinaki, 2007, p. 7).

Unified action: "The synchronization, coordination, and/or integration of the activities of government and nongovernmental entities with military operations to achieve unity of effort" (DA, 2012k, p. 14).

Summary

The U.S. Army continues to evolve and transform. Currently, the U.S. Army is persistently working to discover new and inventive ways to achieve the organizational need to develop adaptive leaders who are able to triumph in a complex world. The overarching purpose of the present study is to help the U.S. Army resolve the enduring Army Warfighting Challenge (#10) which inquires: "how to develop agile, adaptive, and innovative leaders who thrive in conditions of uncertainty and chaos and are capable of visualizing, describing, directing, leading, and assessing operations in complex environments and against adaptive enemies" (DA, 2015a, p. 1). In addition to addressing AWFC #10, the outcomes of this study could assist the U.S. Army with the following other persistent organizational challenges: "Develop Situational Understanding" (AWFC #1); "Adapt the Institutional Army" (AWFC #4); "Improve Soldier, Leader, and Team Performance" (AWFC #9); and "Exercise Mission Command" (AWFC #19) (DA, 2015a, p. 1-2).

The seven learning demand questions associated with AWFC #10 prompted the direction of this study by focusing attention on both how to develop adaptive leaders, and how to measure adaptability within each individual leader throughout the organization. This study empirically tests the concept of using a self-report trait emotional intelligence (EI) instrument to measure the self-efficacy of a leader. The present study also attempts to determine the degree of influence (if any) that gender, military specialty, and personality have on trait emotional intelligence scores. Because adaptability is one of the 15 facets measured by the trait EI instrument (TEIQ-SF) used in this research project, this study directly measures the self-efficacy of current organizational members on the leadership characteristics directly related to adaptability.

Within the context of the U.S. Army's Leadership Requirements Model and published leadership doctrine, this study views adaptability as both a leadership attribute (what a leader is) and as a leadership competency (what a leader does). The overarching purpose of this study is to help the U.S. Army enhance a proven leader development program by possibly increasing the capabilities of current and future leader development instruments. The U.S. Army already uses instruments to measure and develop other leadership needs of the organization, and perhaps trait EI science will help the organization increase effectiveness at developing adaptive leaders.

After making significant changes to published doctrine and implementing creative adaptations to both professional education and training concepts, the U.S. Army now needs an instrument or perhaps a battery of instruments that are purposefully designed to measure adaptability development in all leaders regardless of rank or level of leadership. Specifically, the U.S. Army needs instruments that are designed to measure adaptive

leader development in both the cognitive (thinking) and affective (emotional) domains of Bloom's learning taxonomy, i.e., instruments that deliberately assist and enhance each individual's ability to develop others and develop themselves.

Leader development in the U.S. Army is an extremely broad topic. Thus, the defined strategy of this research endeavor is to help the U.S. Army discover possible ways to enhance currently used instruments and tools by possibly incorporating aspects of emotional intelligence science into U.S. Army owned instruments that have proven to work for other organizational needs. This research could help the U.S. Army improve capabilities in instruments that provide self-awareness and social-awareness enabling feedback. Hence, the researcher views emotional intelligence measuring instruments as possible leader developing instruments and feedback tools. The starting point for determining emotional intelligence's possible role in the U.S. Army is to measure the trait emotional intelligence scores of current organizational level leaders. The following central research question summarizes the intent of this study: What are the trait emotional intelligence scores of mid-career commissioned U.S. Army officers?

CHAPTER II: REVIEW OF THE LITERATURE

Introduction

The U.S. Army outlines enduring organizational first-order problems as Army Warfighting Challenges (AWFCs). Currently, the U.S. Army has a total of 20 defined AWFCs; this research project centers on AWFC #10 titled "Develop Agile and Adaptive Leaders" (DA, 2015a). AWFC #10 inquires "how to develop agile, adaptive, and innovative leaders who thrive in conditions of uncertainty and chaos and are capable of visualizing, describing, directing, leading, and assessing operations in complex environments and against adaptive enemies" (DA, 2015a, p. 1). A key aspect of this literature review is to help the U.S. Army address AWFC #10 while discovering and exploring answers to the following questions: What is leadership? How does an organization develop adaptive leaders? How do organizations measure if each individual leader is truly becoming more adaptive and open to change? Is adaptive leadership a thinking (cognitive) or an emotional (affective) psychological phenomenon, or are the human traits related to successful adaptability an applied mixture of both emotions and thinking? What is emotional intelligence? Can emotional intelligence (EI) science help the U.S. Army develop and assess adaptive leadership? Are there any commonalities between the U.S. Army's leadership doctrine and emotional intelligence science? How does EI relate to mission command?

By definition, this literature review is an adventure in epistemology, the study of human knowledge, a science that historically began as a branch of philosophy (Goldman, 1986). An epistemologist investigates the nature of human knowledge and works to distinguish between an opinion and a justified belief (Kvanvig, 2003). Goldman (1986)

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organized the science of epistemology into the divided parts of social and individual

investigation. Individual epistemology needs assistance from the cognitive sciences, with

Goldman arguing that "cognitive science tries to delineate the architecture of the human

mind-brain, and an understanding of this architecture is essential for primary (individual)

epistemology" (p. 1). In contrast, social epistemology requires assistance from the

"various social sciences and humanities, which jointly provide models, facts, and insights

into social systems of science, learning, and culture" (p. 1). This review of literature

works to integrate advancements in the cognitive sciences, humanities, and several of the

social sciences while capturing relevant human knowledge about the topics of leadership,

leadership development instruments, and emotional intelligence. Throughout this

literature review deliberate efforts are made to analyze and understand each topic from

both an individual (intrapersonal) and a social (interpersonal) perspective while looking

for relevant overlaps between different fields of study. "Knowledge is always more

valuable than the value of its subparts" (Kvanvig, 2003, p. 108).

Since the overarching purpose of this study is to discover possible ways to help

the U.S. Army and other culturally similar organizations develop and assess adaptive

leadership, the guiding principle throughout this literature review is to center on the fact

that the U.S. Army's leadership development program is not broken. Thus, the essence

of this review is to discover and analyze knowledge that may enhance the U.S. Army's

proven leadership development program while working to distinguish facts from myths

or fallacies, and to distinguish justified beliefs from just opinions (epistemology). Other

goals of this literature review are to show why the present study needs to be carried out

(justification), to show how this study adds to previous research in the field of leader

development, and to show which theories had the most influence on the present study

(Patton, 2002; Ton, 2012).

Literature Review Design Concept

The design concept for this literature review centers on the following three main topics: Leadership and the U.S. Army, The U.S. Army's Leader Development Instruments, and Emotional Intelligence. Figure 2 illustrates the researcher's mental model while framing and outlining the review of literature strategy. Figure 2 also highlights some of the key concept connections and demonstrates the researcher's end-state goal for reviewing this body of work, which was to gain wisdom that helps the U.S. Army develop adaptive and self-aware leaders for a complex world.
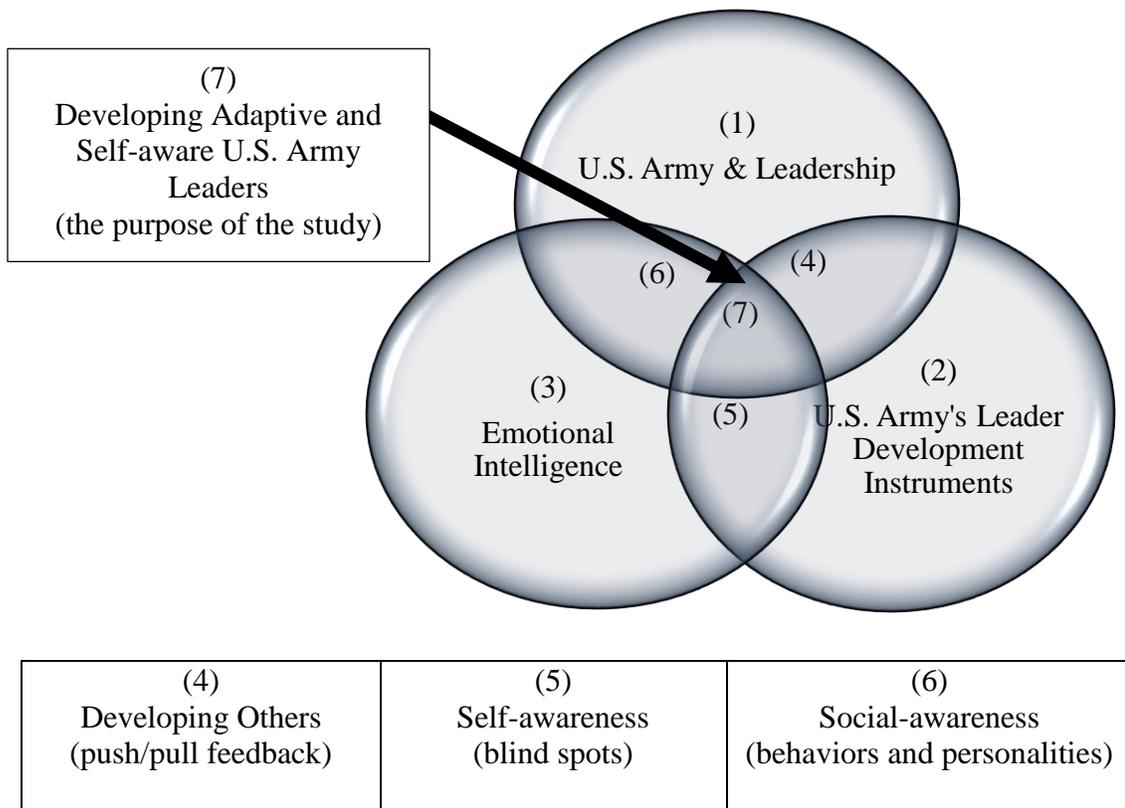
Figure 2. Literature review design concept.

Chapter Overview

The initial section of reviewed literature centers on the nested main topics of Leadership and the U.S. Army. Much like an interdependence connection between two different biological species, the U.S. Army has created a symbiotic relationship with the subject of leadership; and although the two topics are distinct and different, history highlights the close and long-term relationship between leadership and the U.S. Army (Laver & Matthews, 2008; Nelson, 2001). The objectives of the section titled *Leadership and the U.S. Army* are the following: discover some of the biases, fallacies, and other thinking challenges related to leadership while outlining how the human mind works; define the ambiguous word and phenomenon of leadership; connect some of the most mainstream and relevant leadership theories with current U.S. Army doctrine; analyze the U.S. Army's Leadership Requirements Model and make connections with other leadership models; review empirical dissertation research on military trait leadership; outline and define the U.S. Army's decentralized leadership concept of mission command while gaining insights about the role of mutual trust; and conclude with examining the concepts of developing others and self-development. Developing others is the natural bridge from this section's body of knowledge to the next section of reviewed literature labeled *U.S. Army Leader Development Instruments.*

The next section of this literature review focuses on the U.S. Army's leader development program. Specifically, this section emphasizes the topic of leader development instruments. According to Patton (2002), the purpose of research is to confirm or disconfirm, while the goal of evaluation is to improve. This academic endeavor is in some respects both research and evaluation; however, the primary focus is

inherently research. A function of this literature review section is to evaluate some of the leader development instruments currently used by the U.S. Army and seek connections with emotional intelligence models and instruments. The U.S. Army relies on the domains of training, education, and experience to develop leaders throughout the organization. This section provides an overview of the U.S. Army's leadership development strategy. However, the U.S. Army's leader development program, systems, and mechanisms are much broader than the scope of this study. Hence, this section primarily focuses on just the following three leader development instruments currently used by the U.S. Army: the officer evaluation form, the Global Assessment Tool (GAT) 2.0, and a multi-source assessment feedback tool. Currently, the U.S. Army does not have a leader development instrument that measures the affective (emotional) or thinking (cognitive) traits related to adaptability. Regarding the overarching purpose of this study, the problem defined is the reality that the U.S. Army needs instruments and tools that measure adaptability growth from both a cognitive and affective domain perspective.

The bridge from the U.S. Army leader development instrument section to the next section on emotional intelligence is the concept of self-awareness. Self-awareness is the foundational building block for most emotional intelligence models. Increasing self-awareness requires reflection (Reivich et al., 2014). Using the biblical phrase coined by Covey's (1989) *Seven Habits of Highly Successful People*, self-awareness can be gained by *sharpening the saw*. Stone and Heen (2014) highlighted the reality that tools like leadership development instruments are most useful to organizations when leaders, peers, and subordinates master the ability to both push (send feedback) and pull (receive and process feedback). Stone and Heen (2014) also pointed out that all humans have self-

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awareness blind spots, while Bradberry and Greaves (2012) discovered that self-awareness is the most overestimated adaptive leadership skill.

The third and final main topic section of this literature review is a section titled *Emotional Intelligence*. This section works to clearly define emotions, intelligence, and emotional intelligence while outlining some of the challenges related to the emotional intelligence (EI) field of study. This section clearly defines the three major constructs of EI science while outlining the differences in the three operationalized EI constructs of ability, trait, and mixed. In addition, this section outlines many of the most popular and widely used EI measurements and explains the reasoning for selecting the Trait Emotional Intelligence Questionnaire (TEIQ) to achieve the purpose and goals of the present study.

Leadership and the U.S. Army

Traced to Aristotle, the time-honored perceptions encompassing the phenomenon of leadership have consistently been subjugated to numerous ideologies throughout history, habitually manipulated by various cultural norms, routinely theorized by intellectuals, and even persistently organized into systematic trait categories and stylistic labels (Bennis & Nanus, 2007; Helmrich, 2016; Wren, 1995). Regardless of the inherent complexities and ambiguous reality of the phenomenon called leadership, the conventional leadership definitions and mental models tend to focus on the social dynamics related to the hierarchal archetypes of the leader and the follower (Wren, 1995). This incomplete reflection on leadership limits humanity's progress toward leadership enlightenment and limits the collective awareness on other daily human interactions throughout various situations, environments, and contexts (Bennis & Nanus,

2007). Advancing the collective understanding about the evolving and ambiguous topic of leadership helps to enhance other aspects of the human condition while fostering opportunities for growth in various other social science and cognitive science fields (Goldman, 1986; Kvanvig, 2003; Lougheed, 1989).

This section of reviewed literature focuses on the nested topics of Leadership and the U.S. Army. The purpose of this section is to establish the theoretical leadership framework of the present study which is rooted in the philosophy that adaptive leadership requires both thinking (cognitive) and emotional (affective) physiological capabilities (Baltharzard et al., 2010). This section outlines a detailed understanding about the construct of leadership and the U.S. Army's core requirements and expectations of leaders throughout the organization. Prior to analyzing the combined topic of leadership and the U.S. Army, this section begins with a detailed understanding about metacognition (thinking about thinking). The goals of this section are the following: clearly define leadership, outline some of the biases and fallacies related to leadership, discover how the human brain works, connect relevant leadership theory with current and historic U.S. Army leadership doctrine, define in detail the U.S. Army's Leadership Requirements Model while making connections with other leadership models, review previous doctoral-level quantitative research on military leadership, and define adaptive leadership and the U.S. Army's concept of mission command. Holistically, this section takes a metacognition approach to understand the U.S. Army's expectations for current and future leaders.

How the Human Brain Works

"Everyone thinks; it is our nature to do so…but much of our thinking, left to

itself, is biased, distorted, partial, uninformed or downright prejudice" (DA, 2015c, p. A-1). Metacognition is thinking about thinking or cognition about cognition (Jones, 1998; Metcalfe & Shimamura, 1994). "Metacognition is important to military leaders dealing with complex problems because it involves *adapting* to the situation" (DA, 2015b, p. 5-2). Metacognition helps develop better judgment, and metacognition requires both self-awareness and self-regulation of thought (DA, 2015d). According to Schraw (1998), metacognition can take a number of forms, but the two primary components of metacognition are knowledge about cognition and regulation of cognition. Both knowledge about how humans (leaders) think and the regulation of thinking requires a general understanding of how the human brain works. The prefix *meta* means beyond, and the goals of this study require going beyond just *what* experts in the leadership field of study think, and pursue a general understanding of *how* leaders think.

The systematic study of the human mind is an interdisciplinary field often referred to as cognitive science (Stanovich, & West, 2000). Cognitive science draws on psychology, linguistics, computer science, philosophy, neuroscience, anthropology, and other social science fields to illuminate how the human mind works, and why it works the way it does (Kahneman, 2011). Various social scientists have been working for decades to figure out how the human brain works. An increasing number of experts in the interdisciplinary field of cognitive science have theorized that the human brain basically has two systems working at the same time (Kahneman, 2011; Pink, 2009; Stanovich, & West, 2000; Wanjek, 2013). There have been different labels for these two cognitive systems and different scientific ideologies used to explain both the dichotomy and harmony of how the human brain functions.

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System 1 (fast brain) and System 2 (slow brain). Kahneman (2011) borrowed

the labels for the two parts of the brain that were originally proposed by the

"psychologists Stanovich and West in an article published in 2000…. system 1 (fast

thinking brain) and system 2 (slow thinking brain)" (p. 20). "System 1 operates

automatically and quickly, with little or no effort and sense of voluntary control" (p. 19).

System 1 smoothly originates impressions and feelings that are the main sources of the

deliberate choices made by System 2. Hence, System 1 feeds information to System 2

and some of that data are full of emotions and feelings. A limitation of System 1 is that

"it runs automatically and it cannot be turned off" (p. 24). System 1 has biases and

systematic errors that it is prone to make in specified circumstances. The Sandman lives

in System 1 (dreams while sleeping).

"System 2 allocates attention to the effortful mental activities that demand it,

including complex computations…. The operations of System 2 are often associated with

the subjective experience of agency, choice, and concentration" (Kahneman, 2011, p. 20).

System 2 is the mental monitor and is active in deliberate memory search, complex

computations, comparisons, planning, and choice. According to Kahneman (2011),

System 2 has the ability to resist suggestions of System 1 and "slow things down by

imposing logical analysis" (p. 21). Self-criticism is one of the functions of System 2.

However, "System 2 is more of an apologist for the emotions of System 1 than a critic of

those emotions, and an endorser rather than an enforcer" (p. 24). Self-awareness and all

forms of purposeful reflection are System 2 cognitive functions. System 2 is the

conscious and reasoning self that has beliefs; makes choices; and decides what to think

about, what to do, and how to do it (Kahneman, 2011). In regard to the present study and

Bloom's taxonomy of learning domains, Kahneman's system theory applies in the understanding that System 1 (the fast brain) is the affective (emotional) system, whereas, System 2 (the slow and deliberate brain) is the cognitive (thinking) system.

The Left-brain and Right-brain Neuromyth. Pink (2009) helped popularize the concept that humans are either left-brain or right-brain dominant. According to Pink, the human brain is divided into two hemispheres, and each hemisphere has a very unique set of neurological cognitive, affective, and psychomotor functions. The left hemisphere performs the operations of analysis and logic, and tends to manifest in things like standardized test scores or intelligence quotient (IQ) scores (Tucker, Shearer, & Murray, 1977; Wanjek, 2013). Whereas, the distinct set of operations for the right hemisphere are things like design and emotion which assist in the understanding of things like art (Pink, 2009). A key aspect of the left brain/right brain concept is that all humans have both hemispheres, but most humans tend to utilize and rely on the strengths of one hemisphere over the other (Caramazza & Coltheart, 2006). Hence, people generally tend to be either left-brain or right-brain dominant, but the idea that a person could be strictly right-brained or left-brained is a common misperception (Caramazza & Coltheart, 2006; Tucker et al., 1977).

Much like the System 1 and System 2 brain function concept, both of the human brain's hemispheres operate independently and in a cross-wired concert with each other. The brain's right hemisphere controls the muscles on the left side of the human body, and the left hemisphere controls the muscles on the right side of the body (Stanovich & West, 2000; Tucker et al., 1977). Based on the studies of Caramazza and Coltheart (2006), the left brain is dominant in language, carrying out logic, exact mathematical computations,

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and retrieving memories, which is much like Kahneman (2011) System 2 (slow brain). The right hemisphere is mainly in charge of spatial abilities, processing music, and face recognition. Those who are right-brain dominant tend to be naturally gifted in qualities or traits like inventiveness and empathy (Pink, 2009; Tucker et al., 1977; Wanjek, 2013). Wanjek (2013) argues that based on recent discoveries in cognitive science, the Left-brain and Right-brain concept is a neuromyth.

For the purposes of this study, it is important to note that the two aforementioned cognitive theories place the two mental systems at odds with each other (Caramazza & Coltheart, 2006; Kahneman, 2011). This duality theme is common throughout most of the key topics of this literature review; e.g., the dichotomy nested within the phrase emotional intelligence. The word emotional commonly invokes negative or irrational connotations and the mental heuristics associated with the term intelligence typically produces positive or rational conclusions. *Mental heuristics* are cognitive "short cuts that can produce efficient decisions" (Gigerenzer, 1991, p. 101). Basically, mental heuristics are mental models. In a book titled *The Fifth Discipline: The Art and Practice of Learning Organizations*, Senge (1990) pointed out that "the problems with mental models lie not in whether they are right or wrong--- by definition, all models are simplifications" (p 166). The problems with mental models arise when humans become implicit and when these mental models exist below the level of awareness. "Mental models are deeply ingrained assumptions, generalizations, or even pictures and images that influence how we understand the world and how we take action…very often, we are not consciously aware of our mental models or the effects they have on our behavior (Senge, 1990, p. 8). *Affect heuristic* is when "people let their likes and dislikes determine

their beliefs about the world" (Kahneman, 2011, p. 103). Most leaders (humans) think of themselves as rational, but humans are much more prone to irrational behaviors, uninformed decision making, and thinking traps than we realize (Brafman & Brafman, 2008; Kahneman, 2011; Senge, 1990).

Thinking Challenges and Traps

Due to the goals of this study, it is important to understand some of the mental obstacles or thinking challenging that inherently influence decision making, judgement, and basically all aspects of human understanding. Fundamentally, thinking challenges influence all phases of any research project, to include the present research endeavor (Haselton, Nettle, & Andrews, 2005; Mahoney, 1977; Reivich & Shatte, 2002; Tversky & Kahneman, 1974). U.S. Army doctrine officially recognizes a few cognitive biases and logic fallacies, and labels these mental obstacles as *thinking challenges* (DA, 2015c). Cognitive therapists and others in various specialty fields of psychology often refer to mental errors as *thinking traps* (Reivich & Shatte, 2002). Some of the most common thinking traps are the natural cognitive phenomena called *jumping to conclusions* and *mind reading* (Reivich, 2014; Reivich & Shatte, 2002). In regard to this study, an objective view about the topics of leadership, adaptive leader development, leader development instruments, and emotional intelligence (EI) helps to avoid jumping to conclusions about EI's role and purpose in the U.S. Army's current leader development program. Peer-reviewed literature and published U.S. Army doctrine outline numerous types of both conscious and subconscious thinking challenges like biases and fallacies, and other common thinking traps that are relevant to this study (Brafman & Brafman, 2008; DA, 2015d, 2015c; Haselton et al., 2005; Reivich & Shatte, 2002; Tversky &

Kahneman, 1974).

The following are some of the cognitive biases currently identified and defined in U.S. Army Design Methodology, Leadership, and Leader Development doctrine: confirmation bias, status quo bias, sunk cost bias, sample size bias, and anchoring bias (DA, 2012L, 2015c, 2015d). The U.S. Army defines these natural cognitive biases as "an unconscious belief that conditions, governs, or compels human behavior" (DA, 2015c, p. A-1). Cognitive biases tend to be intrinsically connected to information and perceptions already embraced by an individual or a group (Haselton et al., 2005), whereas, a logic fallacy is a flaw in reasoning based on the format of how information is sent or delivered (Tversky & Kahneman, 1974). For simplicity, biases tend to influence the interpretation of information (how information is received), and fallacies are typically more associated with the communication of information (how information is sent) (DA, 2015c). Within the scope of this study, the key aspect pertaining to all forms of thinking challenges and traps is gaining individualized self-awareness and possibly group-level social awareness about problem solving, decision making, and communication tendencies. Hence, in regard to metacognition on the topics of leadership, leadership development instruments, and the science of emotional intelligence, the goal is to identify and move subconscious thinking challenges to the conscious. Awareness alone does not prevent thinking challenges, but awareness does allow the opportunity to mitigate thinking errors and bias tendencies (Brafman & Brafman, 2008). Awareness of thinking challenges allows the option of *adapting* to known or identified mental tendencies (Mahoney, 1977). Regardless of the type of thinking challenge (bias, fallacy, trap, etc.), all thinking obstacles influence human perceptions and understanding (DA, 2015d).

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Throughout the literature on topics such as critical thinking and the human cognitive processes there are numerous other psychological traps not yet outlined and defined within the U.S. Army doctrine (Brafman & Brafman, 2008; Hammond, Keeney, & Howard, 1999; UFMCS, 2015). To avoid, or to at least mitigate cognitive biases while conducting a review of literature on the topics woven into this dissertation, a good start point is to identify and discuss some of the thinking challenges that are common in the leadership field of study based on the reviewed literature. Prior to discussing common thinking challenging in leadership science, the following is a list of thinking challenges and various cognitive biases discovered within published Army doctrine and recent academic literature that can obstruct critical and adaptive thinking:

*Anchoring & Anchoring Bias***:** Anchoring bias is a tendency for humans to use initial estimates or information as a starting point for adjustment (DA, 2015d). Hence, the first bit of information is the anchor much like the price of an item determines the start point for negotiations (Fisher & Shapiro, 2005). "Even though additional information invalidates the initial estimate, humans unconsciously use the initial estimate as a starting point when making subsequent adjustments…. They are anchored to the initial estimate" (DA, 2015c, p. A-2). The effects of random anchors have much to tell us about the relationship between System 1 and System 2 thinking. Kahneman (2011) pointed out that "anchoring effects have always been studied in tasks of judgment and choice that are ultimately completed by System 2…. However, System 2 works on data that is retrieved from memory, which resides in an automatic and involuntary operation of System 1…. System 2 is therefore susceptible to the biasing influence of anchors that make some information easier to retrieve…. Furthermore, System 2 has no control over

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the effect and no knowledge of it" (p. 127).

Confirmation bias: "Confirmation bias is when individuals seek confirmatory information for conclusions they have made prematurely, not realizing that the evidence supports several hypotheses" (DA, 2015c, p. A-1). As a result, individuals fail to search for or discard inconsistent and disconfirming evidence. "Confirmatory bias is the tendency to emphasize and believe experiences which support one's views and to ignore or discredit those which do not" (Mahoney, 1977, p. 37). Based on the book titled *Sway* by the Brafman and Brafman (2008), the effects of this natural human tendency have been repeatedly documented in clinical research. However, the ramifications of confirmation bias respective to the behavior of scientists have yet to be adequately explored. Mahoney (1977) pointed out that although publication is a critical element in determining the contribution and impact of scientific findings, little research attention has been devoted to understanding how confirmation bias determines which manuscripts get published. Mahoney (1977) discovered that manuscript reviewers were strongly biased against articles that reported results contrary to the popular theoretical perspectives of the time period. In field of leadership studies, confirmation bias emphasizes the need for the leaders to establish a culture of collaboration and dialogue throughout the organization (DA, 2015d).

Diagnosis bias: Prior to confirming a concept or an idea (confirmation bias), an individual must first make a diagnosis. Within the literature, diagnosis bias is also called the *framing trap* or the *framing effect* which are the phrases used to explain "the way we frame an issue affects the way we perceive it and affects a solution's potential options" (Gary, 2008, p. 53). "The moment we label a person or a situation, we put on blinders to

all evidence that contradicts our diagnosis" (Brafman & Brafman, 2008, p. 7). The

Brafman brothers (2008) outlined the following dynamics related to diagnosis bias that

are relevant to all aspects of leadership and leader development: "our blindness to all

evidence that contradicts our initial assessment of a person or situation" (p. 17), "our

propensity to label people, ideas, or things based on our initial opinions of them, and our

inability to reconsider those judgments once we've made them" (p. 71), and "the

diagnosis bias causes us to distort or even ignore objective data" (p. 75). Diagnosis bias

and anchoring bias work in partnership to shape an individual's or a group's confirmation

tendencies, and these types of cognitive and social processes may not be completely

avoidable (UFMCS, 2015). However, it is important to first understand that these types

of cognitive influencers are fundamentally universal, and second it is also key to realize

that cognitive biases produce both positive and negative outcomes. Relative to the

present study, what is the initial diagnosis bias or anchoring bias within the U.S. Army on

the idea of adding emotional intelligence science to the organization's leader

development program? Based on the warrior culture of the U.S. Army, what are the

mental heuristics throughout the organization related to the word *emotions*? Answers to

those questions may require an open-ended or opened-response questionnaire format, or

perhaps a qualitative type of study.

  Emotional bias: Emotional bias is the natural human tendency to believe

something that has a positive emotional effect and that gives a pleasant feeling even if

there is evidence to the contrary (Brafman & Brafman, 2008; UFMCS, 2015). An

emotional bias "is a distortion in cognition and decision making due to emotional factors"

(Angie, Connelly, Waples, & Kligyte, 2011, p. 1393). Emotional bias is a propensity "to

be reluctant to accept hard facts that are unpleasant and give mental suffering (Brafman & Brafman, 2008, p. 72). The emotional bias is directly connected to the common logic fallacy called *appeal to emotions* (or to fear) which is the "use of emotionally charged language to distract readers and listeners from relevant reasons and evidence" (UFMCS, 2015, p. 108).

Status que bias: "Many humans find the status quo comfortable and avoid changing it" (UFMCS, 2015, p. 106). The status que bias is usually common in circumstances related to change and has a direct relation with the U.S. Army's goal to developing leaders who are adaptive, agile, and open to change. "A status quo bias may be present when individuals display the inclination to keep their circumstances stable…or under conditions of stress where stability and predictability are a source of comfort" (DA, 2015c, p. A-2).

Sunk cost bias: Sunk cost bias is connected to loss aversion. Just the word *loss* often instantly generates negative emotions and irrational human behaviors (Brafman & Brafman, 2008). Sunk cost bias is when humans (leaders) "increasingly persist in deciding and acting illogically, based upon decisions they made previously, and occurs even though the resent context dictates deciding otherwise" (DA, 2015c, p. A-2). A willingness of leaders to accept *prudent risk* is a key component of the U.S. Army's decentralized command and control concept called mission command. Sunk cost bias and loss aversion are obstacles that all U.S. Army leaders must overcome for mission command to be successfully implemented and maintained (DA, 2012L, 2015c, 2015d).

Within the scope of this study, the literature on the various thinking challenges highlights the reality that biases and fallacies are often emotion laden, and that the

cognitive and affective domains of human learning, communication, and information

processing often work in concert. The lateralization of brain functions is the

anatomically correct way of saying the left/right-brain neuromyth (Stanovich & West,

2000), but when connecting this concept to other aspects of the present study, the

terminology of left-brain could be used to label logical (or thinking) personality types and

right-brain to describe those with stronger tendencies for emotional (or affective)

thinking. This labeling is reflective of the Myers-Briggs Thinking (T) or Feeling (F)

personality type indicator scale (Myers, McCauley, Quenk, & Hammers, 2003). This

study also uses the phrase System 1 when referencing the fast and emotional human

brain, and System 2 for connotations related to the slow and reasoning human brain. The

key take-away from gaining a general understanding of how the human brain works is the

scientific perspective that emotions and reasoning are key cognitive aspects of all human

dynamics, endeavors, and interactions. Hence, emotions and reasoning are fundamental

to all aspects of adaptive leader development and measurements, because all leaders have

both a System 1, a System 2, a left brain, and a right brain.

Myths and Fallacies about Leadership

Many leadership fallacies are structured as false dilemmas. False dilemmas are

logic fallacies of oversimplification, and these types of thinking challenges normally

attempt to frame a topic into a limited enclosure of options such as black or white, when

in reality the topic is grey and much more dynamic (Sample, 2002). The ever-growing

list of leadership theories, leadership definitions, and personalized leadership

philosophies help to highlight the realism that the topic of leadership is often very grey

and difficult to simplify as an either-or fallacy (Argyris, 1972; Day, 2014; Forsyth, 2010).

Burns (1978) described leadership as "one of the most observed and least understood phenomena on earth" (p. 2). Some leadership scholars have expressed dismay at the prevalence of misunderstanding about leadership, declaring that most people "don't have the faintest concept of what leadership is all about" (Bennis, 1975, p. 1). Within the leadership literature, four of the most common leadership false dilemmas or fallacies are often presented as the following questions: Are leaders born or are they made? Is leadership more of an art or a science? Is there a difference between management and leadership? Will technology replace the need for leaders?

The born or made leadership dilemma. Are leaders born or are they made? Throughout the leadership literature, this false dilemma is often researched and discussed usually as an historical case study. Per the legendary football coach Vince Lombardi, "leaders are not born, they are made…and they are made just like anything else, through hard work" (Jennings, 1960, p. 33). Perhaps the answer to this false dilemma is best answered and debunked with lessons from some of Western history's most notable leaders. The Greek philosopher Aristotle believed that leadership is a natural talent: "Men are marked out from the moment of birth to rule or be ruled" (Forsyth, 2010, p. 247). Aristotle believed that some people are born leaders with a unique set of qualities and traits required for the role of leader. Aristotle also believed that followers are born, and his understanding on the dynamics of leadership centered on the nature side of the born or made leadership dilemma. Alexander the Great was lucky enough to have Aristotle as a teacher during his formative years. Yet, even Alexander the Great took time off from conquering the known world to continue his education on the phenomenon of leadership throughout different periods of his life (Kets De Vries & Engellau, 2003).

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Alexander was born into nobility and at the right place and time (a born leader), and he was also shaped and trained to be a leader (a made leader). Covey (1989) solved this fundamental nature or nurture leadership false dilemma by explaining that being a leader is a choice. Hence, Covey completely dismantled the born or made thinking challenge that is common place in leadership literature (Bennis & Nanus, 2007; Wren, 1995). Leaders are both biologically born (nature) and made (nurture), but more importantly leaders choose to lead, because leadership is a choice.

The art or science leadership dilemma. Is leadership more of an art or science? Art can be defined "as the modification of things by human skills to achieve form, function, and meaning" (Palus, 2005, p. 20). Whereas, according to the Science Council, the definition of science "is the pursuit and application of knowledge and understanding of the natural and social world following a systematic methodology based on evidence" (O'Hanlon, 2009). The art or science leadership debate is a classic thinking trap that tries to frame leadership as either a human skill or the application of human knowledge. This leadership conundrum has been resolved within the U.S. Army's mission command doctrine, and by the U.S. Army's declaration that within a mission command concept, leadership is both an art and a science (DA, 2012k).

Most military organizations are very commander centric, and the U.S. Army's approach to mission command capitalizes on that fact (see definition of mission command in Chapter I on page 27). The U.S. Army's mission command philosophy uses the *Art of Command* and the *Science of Control*. The Art of Command is "the creative and skillful exercise of authority through timely decision making and leadership" (DA, 2012k, p. 5). The Science of Control "is the regulation of forces and warfighting

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functions to accomplish the mission in accordance with the commander's intent" (DA, 2012k, p. 7). In the application of mission command, leadership is fundamentally both art and science, but as discovered later in a proceeding section titled the *U.S. Army's Evolving Definition of Leadership* (on page 62), the U.S. Army's understanding of leadership has historically transitioned from the notion of *art* to the concept of *process* (DA, 2012L).

The US Air Force's (USAF) definition for the word leadership is "the art and science of influencing and directing people to accomplish the assigned mission" (USAF, 2006, p. vi). By using both art and science, the US Air Force does not reflect the U.S. Army's concept of *process* to define leadership, but the two military organizations do have the same overarching purpose for leadership which is to accomplish the mission. According to US Air Force doctrine, leadership is an art because it requires imagination and creative skill, and leadership is also a science because it is an academic subject requiring careful study, observation, and experimentation (USAF, 2006). Burns (2003) pointed out that much of what we know about leadership is rooted in social sciences like psychology, political science, and sociology that attempt "to use the scientific method to study why people behave as they do" (p. 2). Many leadership scholars tend to look for cause and effect in leadership the same way scientists analyze chemical reactions (Burns, 2003; Day, 2014; Lougheed, 1989; Nahavandi, 2003). Since no two leaders approach a challenge exactly alike, and that often there are several right answers to a leadership problem, the concept that leadership is also an art reflects how a leader acts is a matter of style and personal judgment (Hersey, Blanchard, & Johnson, 1996; Lougheed, 1998).

In regard to the present study and this literature review, additional attention will

be placed on the exact meaning of each word within the U.S. Army's current definition of the word *leadership* and within other popular leader and leadership definitions, because each word within a definition contains several important concepts. There are other viewpoints and definitions for words like *process*, *art* and *science*, just as there are numerous definitions and understandings for the words *leadership* and *management*.

The leadership or management dilemma. Is there a difference between the concepts of leadership and management? Inherently, effective leaders in the U.S. Army should also be good managers (Argyris, 1972; DA, 2012L). Some of the most enduring and well-known authors on the topic of management, like historic management gurus Chris Argyris, Peter Drucker and Michael Porter, commonly use the words leadership and management interchangeably (Argyris, 1972; Drucker, 1990; Magretta, 2012). Other more contemporary authors in the management field of study also tend to blur the lines between leader and manager by continuing the tradition of using the two constructs interchangeably (Forsyth, 2010; Mathis & Jackson, 2012; Robbins, 2013). Fundamentally, leadership and management are very similar constructs. Both "involve influence…working with people…and effective goal accomplishment" (Northouse, 2013, p. 12). Yet, for the purposes of a study centered on adaptive leader development and not adaptive manager development, it is important to delineate between the two confusing and often interwoven constructs of management and leadership.

Throughout the literature on the topic of leadership, various authors have attempted to clarify the exact differences between leadership and management. One perspective from a leadership point of view is that "management is about coping with complexity…. Leadership, by contrast, is about coping with change" (Wren, 1995, p.

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114). Warren Bennis (1989) created the following list of differences between leader and manager in his book *On Becoming a Leader*: the manager administers, the leader innovates; the manager is a copy, the leader is an original; the manager maintains, the leader develops; the manager focuses on systems and structure, the leader focuses on people; the manager relies on control, the leader inspires trust; the manager has a short-range view, the leader has a long-range perspective; the manager does things right, the leader does the right things; the manager imitates, the leader originates; the manager accepts the status quo, the leader challenges it; the manager has his or her eye always on the bottom line, the leader's eye is on the horizon; the manager asks how and when, the leader asks what and why; the manager is the classic good soldier, the leader is his or her own person.

Bennis' (1989) construct of the difference between management and leadership helps to spotlight a common negative perspective about management that seems to be a modern societal norm, a norm that is deeply embedded in roots of the hated foreman of the industrial-era factory where the word *management* symbolized the opposition to labor or worker. Relative to the term management, Day (2014) pointed out that just the term leadership is "seductive, has a strong rhetorical appeal, and is therefore heavily overused" (p. 40). In a comprehensive review of leadership literature, Day noticed that "instead of supervision, management, administration, or bureaucracy, you find the term leadership…. Instead of initiating structure or personnel orientation, you find transformational, visionary, strategic, authentic leadership…. Instead of peer influence and teamwork, you find shared leadership…. Instead of motivating or organizing yourself, you find self-leadership" (p. 41).

Ironically, it was the social scientist in management, Peter Drucker, who first identified the emergence of the modern *knowledge worker* and the modern need to transition away from management and into leadership. In the first chapter of his book *Management Challenges of the 21st Century*, Drucker (1999) worked to explain six deeply flawed assumptions within the practice of contemporary management. It is Drucker's third assumption that has significance to the present study on adaptive leadership development, which was the flawed idea that "there is, or there must be, one right way to manage people" (p. 17). Drucker's revelation was that "one does not manage people…the task is to lead people…and the goal is to make productive the specific strengths and knowledge of each individual" (p. 22).

The American computer scientist and US Navy Rear Admiral, Grace Murray Hopper, helped distinguish an enduring and easy to remember difference between leadership and management with her phrase "you manage things; you lead people" (Cantrell, 2014, p. 53). Therefore, management basically pertains to resources, while leadership pertains to people. Rear Admiral Hopper was one of the initial programmers of the first computers and invented the first computer programming language. In addition, she is credited with popularizing the term *bug* in reference to computer software failure (Cantrell, 2014). Hence, Rear Admiral Hopper's life experiences provided a unique perspective on the difference between management and leadership. However, with the advent of computer software language and other forms of modern technology, a new and more futuristic dilemma related to the topic of leadership emerged.

The technology or human dimension dilemma. Will technologies like artificial intelligence, robots, and other non-human machines replace the human soldier as the

leader on future battlefields and make future wars a computer programmer issue instead of a leadership issue? The U.S. Army has spent a great deal of time, money, and other resources researching ways technology could be implemented on today's battlefield to improve Soldier performance and increase individual and team capabilities (DA, 2006b; DA, 2014g). For years, the U.S. Army's "Human Dimension" researchers and scientists looked for ways to "optimize the Army's most agile resource, its people" by adding various types of technology to a Soldier or group of Soldiers (DA, 2014g, p. 6). In 2006, the U.S. Army published a concept called *The Soldier System* (DA, 2006b). "The Soldier System included the Soldier and those items and equipment the Soldier wears, carries, and consumes" (DA, 2006b, p. 4). The U.S. Army's intent was to discover ways to equip the American Soldier with capabilities that would allow the "outperformance of any opponent on the battle field" (p. 8) and ideally replace the Soldier on the battle field completely. However, after nearly a decade of research and investment in "The Soldier System" concept, the U.S. Army discovered that technology would not necessarily ensure overmatch on current and future battle fields (DA, 2012n, 2012m, 2014c, 2014h). In recent years, the U.S. Army's "Human Dimension" professions have reported that "few technological solutions exist in the near-term to provide leaders with a significantly enhanced physical or cognitive edge on the battlefield" (DA, 2014g, p. 7). In fact, "as strategic uncertainty grows, the environment becomes more amorphous, the threats more ambiguous, and the cognitive and physical demands on the Soldier grow…. In this environment, the Army's ability to rely on existing materiel solutions diminishes" (p. 8). The U.S. Army has learned that technology can both aid and obstruct the individual Soldier and leadership within the organization on the battle field and in other settings.

There have been advances in recent years in the fields of artificial intelligence (AI), robotics, and various other aspects of modern technology (DA 2012n, 2014; Gross, 2014). Yet, the various types of modern technology researchers working on the issue of AI face many limitations. Perhaps the biggest limitation is the reality that computers are not self-aware and will do only what a human has programed them to do. "AI scientists are not able to solve the problem of common sense, of endowing a computer with the knowledge that every 5-year-old has" (Gross, 2014, p. 23). What does a 5-year-old have that a computer with AI will never have? The most obvious answers to this conundrum are emotions and an intuitive human brain. Hence, a logical argument is that most humans are not robots because humans have emotions, and computers may never have an intuitive human brain. Regarding the purposes of the present study, it is key to point out that computers and any advancements in artificial intelligence and other technologies will probably never have human emotions.

Currently, the false dilemma related to technology or leadership in the U.S. Army has shifted primarily to the human side of this ideological leadership debate. According to one of the key inventors of computer coding, Rear Admiral Grace Hopper, "no computer is ever going to ask a new, reasonable question…. It takes trained people to do that" (Cantrell, 2014, p. 55). In an interview with *Rolling Stone* magazine back in 1994, the American information technology entrepreneur and inventor Steve Jobs alluded to the enduring solution to the technology or human dimension leadership quandary with the following statement: "Technology is nothing….What's important is that you have a faith in people, that they're basically good and smart, and if you give them tools, they'll do wonderful things with them….It's not the tools that you have faith in — tools are just

tools….They work, or they don't work. It's people you have faith in or not" (Goodell, 1994).

A computer will do only what it is told to do by a human (Gross, 2014). American pop culture movies like the *Terminator, The Matrix, Her, Wall-E*, and *Star Wars* are entertaining science fiction, but the reality is that there is no such thing as artificial intelligence (Wu, Kosinski, & Stillwell, 2015). Currently, artificial intelligence does not exist, even though some experts in the field of artificial intelligence predict that "intelligent machines will increasingly replace knowledge workers in the near future" (Gross, 2014, p. 23). Although artificial intelligence does not exist (yet), a recent psychometrics study claimed that computers can accurately predict, judge, and classify a person's personality better than humans (Wu et al., 2015). By using social media and other digital information, the researchers determined that "the computer personality judgments" establish higher external validity "than human participants on a personality questionnaire" (p. 1039). Even without artificial intelligence and emotions, computers might understand human behavior better than humans, but computers and other forms of technology are not ready to perform the duties and responsibilities as leaders in organizations such as the U.S. Army.

The various myths and constructed ideological dilemmas related to leadership help generate enlightening discussion and philosophical debate about the topic of leadership, but such limited mental models often confuse the collective understanding of the inherently challenging topic of leadership. The leadership field of study and the various social sciences that are directly and indirectly connected to better understanding the phenomenon of leadership should first collectively agree on a definition for

leadership. Yet, as this next section of reviewed literature indicates, there are several

ways to conceptualize both leader and leadership.

Leadership Definitions

The definition of leadership and the study of leadership is much like life. "Life is

just like a mirror: perception is colored by the reality you find inside yourself" (Kets De

Vries & Engellau, 2003, p. xix). There are "over 850 academic definitions" for the word

leadership (Bennis & Nanus, 2007, p. 4). Actually, "there are almost as many different

definitions of leadership as there are people who have tried to define it" (Northouse,

2013, p. 2). Wren (1995) recognized 130 definitions for the ambiguous word leadership.

Academic leadership literature outlines a multitude of leadership traits, styles, attributes,

and competencies required of effective, productive, and successful managers and leaders

(Bennis, 2007; Cangimi, Kowalski, Miller, & Hollopeter, 2005; Helmrich, 2016;

Northouse, 2013; Robbins, 2013; Wren, 1995). Pertaining to the present study, the

confusion about the definition of leadership is simplified because the U.S. Army clearly

defines the phenomenon of leadership in published doctrine (DA, 2012L, 2015b).

Wren (1995) argued that most of the definitions of leadership have commonalities

and connections with the concepts of influence and power. The concept of power and the

six bases of power from either a positional or personal perspective are other dynamics

that many people fail to fully comprehend (Forsyth, 2010). Yet, U.S. Army doctrine

simplifies this issue. The Army's Leadership Requirements Model (ALRM) (figure 5)

clearly outlines and defines the leadership attributes and competencies that the

organization wants and needs, and ALRM does not list "power" as either an attribute or a

competency. Plus, Army Leadership Doctrine provides an organizational definition for

the word leadership, and the word "power" is not an aspect of the U.S. Army's current definition of leadership. Analyzing the U.S. Army's historic definitions for leadership reveals that the organization has never viewed leadership in the context of power, but the U.S. Army's definition of leadership is nested in with many academic concepts of the word in relation to viewing leadership as "influence" (DA, 2012L). Yet, chronological research on the U.S. Army's doctrinal definition of the word leadership highlights how America and America's Army has evolved and adapted as America's collective understanding of leadership has changed, and as America's social and cultural expectations related to leadership have changed.

The evolving U.S. Army definition for leadership. "We feel the need to find explanations for everything, regardless of whether the explanations are accurate" (Jones, 1998, p. 34). The Army's official definition of leadership has significantly evolved and transformed from the 1950s to the present. Each philosophical and ideological change in the Army's official definition for the word leadership is reflective of societal and cultural changes in American history and changes within the United States Army as an evolving organization. In 1951, the Army's doctrinal (official) definition of leadership was "the *art of influencing* human behavior and the ability to handle *men*" (DA, 1951, p. 1). By the late 1950s, the Army's leadership definition added the notion of directing and added the organization's key leadership purpose by emphasizing that "leadership is the art of influencing and *directing* men in such a way as to obtain their willing obedience, confidence, respect, and loyal cooperation in order to *accomplish the mission*" (DA, 1958, p. 7). This masculine image of the meaning of leadership embraces the great man theory of leadership by conveying the notion that history is shaped by great men who

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have the capacity to lead the masses (Jennings, 1960). This male centric (patriarchal) and directive concept of leadership lasted 15 years and took the U.S. Army through the nation's last conscription (draft) period during the Vietnam War.

In 1973, the same year that the nation initiated the All-Volunteer Military Force concept, the U.S. Army's leadership definition evolved from an art to a process. The first 18 years of the nation's All Volunteer Army understood leadership as "the *process* of influencing and directing men in such a manner as to accomplish the mission" (DA, 1973, p. 1-3). In the early 1990s, the Army's official leadership definition became less patriarchal and recognized the enduring reality that the organization also had female members. Thus, the word *men* was changed to *others* within the Army's official perception about the phenomena of leadership. In addition, the Army's 1990 definition provided some guidance on how to ensure mission success by delineating the following: "leadership is the process of influencing *others* to accomplish the mission *by providing purpose, direction, and motivation*" (DA, 1990, p. 1).

The organization's formal definition of leadership evolved again in 1999 under the guidance of General Eric Shinseki (DA, 1999). A decade after the end of the Cold War, the U.S. Army officially changed the label of the institution's leadership doctrine from Military Leadership to Army Leadership, signifying a reality that the Army's understanding and application of leadership was unique compared to other organizations outside the US military, and possibly even unique to other branches of service within the US armed forces. In 1999, the Army also temporarily removed the idea that leadership was a process. Yet, one enduring change to the Army's leadership definition was the additional purpose of leadership to go beyond just mission accomplishment with the

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added task to improve the organization. For the purpose of this study, the most significant 1999 change to the Army's leadership definition was the replacement of the external word *other* with the universal word *people.* This change is reflective of the ideology that leadership is both interpersonal and intrapersonal, and that leadership was innately a human endeavor (Day, 2014). The following is the Army's 1999 definition: "Leadership is influencing *people* by providing purpose, direction, and motivation while operating to accomplish the mission and *improving the organization***"** (DA, 1999, p. 1-4). The explicit expectation outlined by adding the phrase *improving the organization* to the U.S. Army's evolved 1999 leadership definition is the concept that leaders improve the organization by enhancing their intrapersonal skills and abilities. Thus, Army leaders not only need to understand and influence others, but they must also understand and lead themselves (DA, 2015b).

  U.S. Army's current definition for leadership. The current official U.S. Army definition for the phenomenon of leadership is "the *process* of influencing people by providing purpose, direction, and motivation to accomplish the mission and improve the organization" (DA, 2012L, p. 1-1). Hence, the word *process* was added back into the organization's understanding of leadership, and the phrase *while operating* that had been added in 1999 version of U.S. Army leadership doctrine was removed (DA, 1999, 2012L). The phrase *while operating* suggests that leadership is only required during certain conditions, or that leadership is only applicable *while operating*. The word *process* implies a more permanent and constant reality for leadership. The Merriam-Webster dictionary defines the word *process* as "continuous action" (n.d.). Therefore, by defining leadership as a process instead of as an art or science, the expectation for leaders

within the U.S. Army is that leadership is a continuous action, 24 hours a day, seven days a week. To *accomplish the mission* is another key aspect of the U.S. Army's current leadership definition. In the US military and in the civilian profit and nonprofit sectors, "the mission is why the team exists…accomplishing the mission is the leader's most important duty" (Hersey et al., 1996, p. 548). Accomplishing the team's assigned mission is the universal purpose for leadership (Burns, 1978). Other key words within the U.S. Army's current leadership definition that need to be analyzed are influencing, purpose, direction, and motivation.

   Influencing. "Leadership is influence" (Maxwell, 1993, p. 1). Northouse (2016) defined leadership "as a process whereby an individual influences a group of individuals to achieve a common goal" (p. 6). Northouse (2013) pointed out that "despite the multitude of ways in which leadership has been conceptualized…the components of a process, involves influence, occurs in groups, and involves common goals" are universal foundations for operationalizing the phenomenon of leadership (p. 5). "Leadership involves influence…. It is concerned with how the leader affects followers…. Influence is the sine qua non of leadership…Without influence, leadership does not exist" (Northouse, 2013, p. 5). *Sine qua non* means an essential condition or thing that is absolutely necessary (Merriam-Webster, n.d.).

   "Emotions are usually contagious" (Fisher & Shapiro, 2005, p. 13). "Leaders who spread bad moods are simply bad for business" (Goleman et al., 2013, p. 14). Consequently, in regard to the U.S. Army's philosophy that leadership is a *process of influencing people*, emotions and emotional literacy (emotional intelligence) are key aspects of leadership. "Influencing is getting people…to do what is required….

Influencing entails more than simply passing along orders" (DA, 2012L, p. 1-2).

Leadership is about influencing humans, and all humans have both positive and negative

emotions that continually draw on the "three ever present emotional intelligence

competencies of influence, achievement, and initiative" (Goleman et al., 2013, p 79).

Leaders can knowingly and unknowingly have a positive or negative influence on the

team and a leader's influence always has the possibility of undermining the team's

mission success (Cangemi, 2009; Helmrich, 2016). Therefore, a leader's emotional

intelligence levels could be indicators of a leader's ability to achieve mission success and

might matter more than a leader's IQ levels (Goleman, 1995).

      Purpose and Direction. As Northouse (2016) stated, leadership "occurs in

groups, and involves common goals" (p. 5). Thus, purpose and direction is how a leader

shapes the common goal for the individual and the common goals of the group. "Purpose

gives subordinates the reason to achieve a desired outcome" (DA, 2012L, p. 1-2). An

accountant works with numbers, but a leader works with people, and a leader may appeal

to emotions in hopes that teammates change how they feel toward something (Nahavandi,

2003). "Providing clear direction involves communicating what to do to accomplish a

mission…prioritizing tasks, assigning responsibility for completion, and ensuring

subordinates understand the standard…. Providing clear direction allows followers to

adapt to changing circumstances through disciplined initiative within the commander's

intent" (DA, 2012L, p. 1-2). For members of the U.S. Army, the enduring purpose of the

organization is unified land operations in a very broad range of military operations (DA,

2011a). Yet, the primary purpose for the U.S. Army is always to win America's wars

(DA, 2012a). For the U.S. Army, regardless of the subject, "useful theories relate to

winning" are not merely things that are "intellectually pleasing," they are things that work (DA, 2014a, p. 3-1).

      Motivation. "Virtually every emotion you feel motivates you to take action" (Fisher & Shapiro, 2005, p. 11). Understanding human motivation requires an understanding about human needs and human emotions (Cangimi et al., 2005). "Leaders have an ethical responsibility to attend to the needs and concerns of followers" (Northouse, 2013, p. 6). Abraham Maslow (1943) outlined a theory regarding the hierarchy of human needs. Maslow's construct is commonly referred to as "Maslow's Hierarchy of Needs" and it provides a model for examining the necessities and motivations of humans. The four lowest layers of Maslow's hierarchy pyramid are those human requirements necessary to sustain life, and are referred to as deficiency-needs or "D-needs" (p. 376). The most basic needs, which form the foundation of Maslow's pyramid, are physiological needs, such as food, water, and sleep. The next need-priorities, in order of precedence, are safety, the feeling of love and belonging, and self-esteem. Maslow argued that these four D-needs were conditions required for sustaining human life and could always be affected by the environment (p. 378). Once D-needs are adequately met, individuals will attempt to fulfill more advanced, self-defined growth needs. According to Maslow, all humans have an instinctual need to achieve one's full potential (p. 379). After an individual has fulfilled both his D-needs and growth needs, then they will have the opportunity to achieve self-actualization. Self-actualization is a condition that is contingent upon individual freedom and defined by enlightened self-awareness and the ability to achieve full potential. As one of the founders of humanistic psychology, Maslow felt and believed that "a musician must make music, an artist must

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paint, a poet must write, if he is to be ultimately at peace with himself" (p. 382).

According to Maslow (1943) all humans have needs related to belonging and being accepted, needs related to self-importance, needs related to feeling significant, and needs pertaining to self-actualization (Cangemi, 2009). Maslow's hierarchical concept of human needs and cognitive priority "has been one of the most cognitively contagious ideas in the behavioral sciences" and even though some contemporary behaviorist have proposed updating Maslow's pyramid to reflect modern "theoretical developments," most "argue that the basic foundational structure" of Maslow's pyramid is worth preserving (Kenrick, Griskevicius, Neuberg, & Schaller, 2010, p. 292). One of the most enduring aspects of Maslow's theory is the concept that "cognitive priority" is based on a hierarchy (p. 294). For leaders, the key take away from Maslow's human needs theory is that all humans have a need to feel that they belong and a need to feel significant. Hence, both of Maslow's higher-level needs are human emotions or feelings (Cangemi, 2009).

Throughout the literature on the topic of human motivation, there are other needs-based theories about human behavior different than Maslow's ideology. Alderfer's existence, relatedness, and growth (ERG) theory, and McClelland's *Need for Achievement Theory* are other examples of how human motivation can be explained and understood (Jex & Britt, 2008). Instead of focusing on needs to define human motivation, another approach is to analyze human behavior "in terms of what we give and what we receive" (Jex & Britt, 2008, p. 240). These types of social exchange theories can be explained by using Covey's (1989) emotional bank account (EBA) concept. The EBA is basically a metaphor for the amount of trust that exists in a relationship. The more deposits that are made, then the more trust in a relationship.

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Inversely, the more withdrawals, then the less trust in a relationship. Other social

exchange theories of human motivation like Equity Theory, Expectancy Theory, and

Goal-Setting Theory center on perceptions of fairness, intrinsic and extrinsic motivation,

and other dynamics related to human interaction (Jex & Britt, 2008). For the purpose of

this study, the important point to realize is that trust and fairness are concepts that relate

to both the System 1 and System 2 of an individual's mind. Thus, motivation is both a

cognitive (thinking) and an affective (emotional) issue that requires leaders to have a

certain level of IQ and emotional intelligence.

Effecting human behavior. Purpose, influence, direction, and motivation are all

techniques that leaders can use to get humans to do something that they would not have

done on their own. However, it is prudent to point out there are other ways to affect

human behavior. The U.S. Army is an organization focused on leadership influence.

Fundamentally influence is "affecting people's behavior in a way whereby they desire to

do the work or assignments at hand" (DA, 2012L, p. 3-6). Coercion, on the other hand, is

forcing people to engage in desired activities because they have been made aware of the

negative consequences awaiting them if they do not cooperate (Day, 2014).

Manipulation is using another's *emotions* to get them to do something they really do not

want to do (Fisher & Shapiro, 2005). Trickery is a nearly universal term that

encompasses both manipulation and coercion, but all three concepts are ways of

deceiving humans into engaging in a desired behavior. History provides a multitude of

examples that demonstrate how leaders in different settings and situations have relied on

coercion, manipulation, or trickery to effectively provide purpose, direction, and

motivation to large groups of individuals (Bunker, Hall, & Kram, 2010). The goal for

current and future leaders in the U.S. Army is to use influence to get people committed to the team and to the team's assigned mission. In the military, a leader's influence is potentially required to get other humans to make the ultimate sacrifice (DA, 2012L, 2015b).

Leadership Theory and Army Doctrine

General Abrams declared that "people aren't in the Army, they are the Army" (DA, 1951, p. 9). U.S. Army, US Joint Forces, and coalition doctrine provides a common lexicon for US military leaders that links theory, history, experimentation, and practice (DD, 2011, 2013). Military doctrine establishes a common frame of reference to solve military problems, doctrine promotes mutual understanding and enhances effectiveness, and doctrine serves as a guide to action but not a set of fixed rules (DA, 2012a, 2014a). Like most aspects of the US military, doctrine evolves and changes (DA, 2012a). Doctrine tells military leaders what to think, but not how to think. U.S. Army doctrine is grounded in a specific view of war that distinguishes warfare from all other forms of human endeavors (DA, 2014a). In the context of the U.S. Army, the leadership dynamics of influence, purpose, direction, and motivation ultimately pertain to leading Soldiers on the battlefield and asking them to make choices and decisions that transcend human nature (Cangemi et al., 2005). The following is the "U.S. Army's vision of war: war is inherently chaotic, war is a human endeavor, war is fundamentally a human clash of wills and *emotions*, and war takes place among populations" (DA, 2014a, p. 3-1).

This section of reviewed literature includes some of the more popular academic leadership theories. Specifically, the leadership theories that seemingly had the most influence on current U.S. Army leadership doctrine. U.S. Army leadership doctrine

provides detailed explanations for each key aspect of the organization's current leadership definition by outlining expectations for all leaders to influence, provide purpose, direction, and motivation, while accomplishing the mission and improving the organization (DA, 2012L, 2013, 2015b). Because the application of doctrine is a key role of U.S. Army leaders (DA, 2014a), this section also explains why the U.S. Army is working toward the strategic goal of developing adaptive and agile leaders who are open to change. Hence, this section's objective is to better understand the dynamics of Army Warfighter Challenge #10 "Develop Agile and Adaptive Leaders" for a complex world (DA, 2015a, p. 1). Plus, this section explains the leadership traits (attributes and competencies) that are important to the U.S. Army, and why those specific leadership traits are important to the organization on current and future battlefields.

Throughout the leadership field of study, there is a long list of leadership theories that have historically been argued as important in different leadership settings and environments (Northouse, 2016). For example, the ingredients of trustworthiness and caring are traits that are required of all effective and productive leaders regardless of context (Cangemi, 2009). Yet, those two leadership traits are not on all leadership models to include the U.S. Army's current leadership traits model. Yet, most leadership theorists would agree that both caring and trustworthiness are very important leadership ingredients. The point being that it is not the purpose of this research project to determine if leadership ideologies are right or wrong. Instead, the purpose is to stay focused on the leadership needs of the U.S. Army so that the organization can maintain and improve the capabilities required to win the nation's wars.

Leadership Attributes and Competencies. The U.S. Army's "leadership

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doctrine acknowledges that societal change, evolving security threats, and technological advances require adaptability" (DA, 2012L, p. 1-2). The purpose of this study is to help the U.S. Army develop adaptive leaders by determining how to best measure the traits related to adaptability. The most recent version of the U.S. Army's leadership doctrine does not list adaptable as a required leader attribute (what a leader is) nor as a leadership competency (what a leader does). Figure 3 depicts the U.S. Army's current list of required attributes and competencies. These leadership traits make up the U.S. Army's Leadership Requirements Model (ALRM). The reason for introducing the U.S. Army's trait based model is to highlight a debate in the leadership field of study related to viewing leadership either as a *process* or as a *trait* (Kotter, 1990).
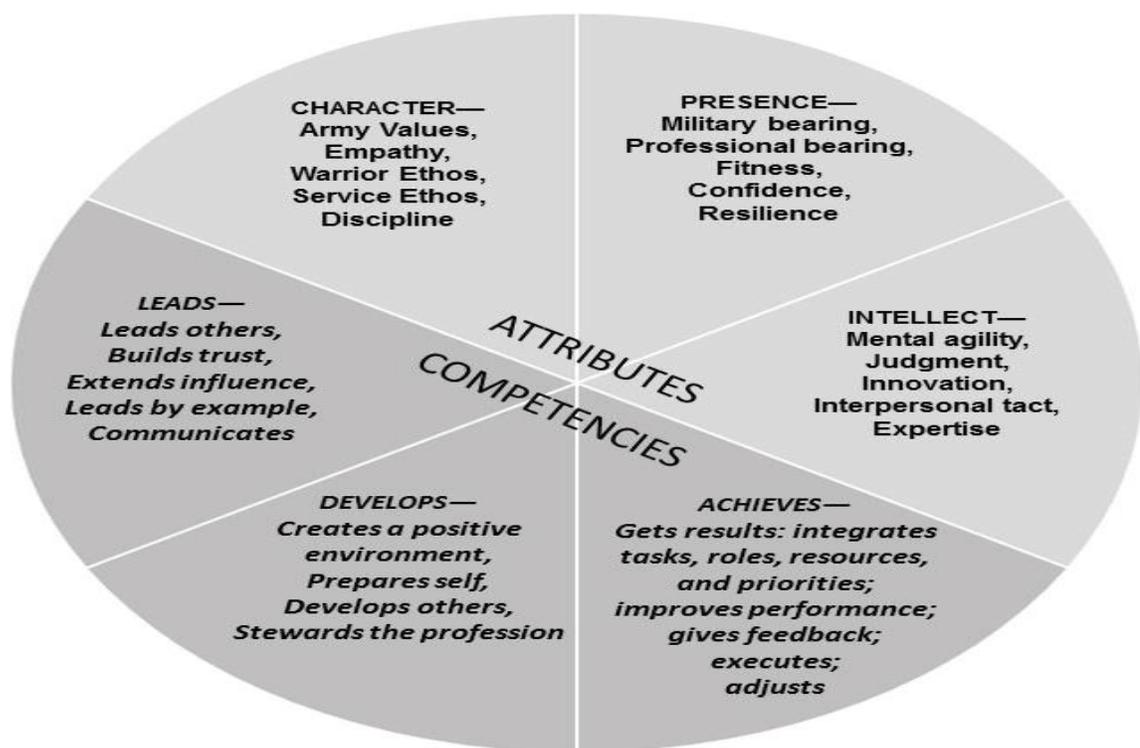
Figure 3. U.S. Army Leadership Attributes and Competencies. Adapted from *FM 6-22:* "Leader Development" (p. 1-4), by Department of the Army (DA), 2015, Washington, DC: Author. Retrieved from http://www.armystudyguide.com/ content/publications/field_ manuals/fm-622-army-leadership-co.shtml.

Within the social science literature, Trait Leadership Theory began in the 1930's with an emerging view of leadership as influence rather than domination (Northouse, 2013). The U.S. Army's current leader and leadership philosophy is a mix of both trait theory and process perspectives. According to U.S. Army leadership doctrine, traits are desired (or required) qualities of a leader, and by definition, the organization views leadership as a process (DA, 2012L). The U.S. Army's required leader traits are the attributes that are defined within the overarching labels of Character, Presence, and Intellect; and the organization's required competency traits are defined within the labels of Leads, Develops, and Achieves.

The U.S. Army as a profession and trust. "Trust is the lubrication that makes it possible for organizations to work…. Trust is the glue that maintains organizational integrity…. Like leadership, trust is hard to describe, let alone define" (Bennis & Nanus, 2007, p. 41). The U.S. Army is a military profession "built upon an ethos of trust" (DA, 2012a, p. 2-1). According to ADP 1, the U.S. Army defines trust as the "assured reliance on the character, ability, strength, or truth of someone or something" (DA, 2012a, p. 2-2). Another way to understand trust and to categorize the dynamics of trust is to use the labels of "character" trust and "competency" trust (Covey, 1989). Do you trust or distrust an individual's character (what a leader "is") or is mutual trust influenced by competency (what the individual "does")? There is a difference between asking a fellow team member to carry a football (competency trust) and asking that same person to carry your wallet (character trust). Hence, there are different elements or flavors of trust, and the lifelong journey of truly understanding the dynamics of trust needs to stay centered on the daily reflection of who, what, when, where, and why leaders trust or distrust others

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(Cangemi et al., 2005). Trust is one of the key human variables that require both

intrapersonal (you) and interpersonal (how you relate with others) reflection (Cangimi et

al., 2005Covey, 1989).

Since 1973, the U.S. Army has been an all-volunteer force, and the organization's

continued ability to attract and retain talented Americans throughout the broad scope of

specialties within the Army profession directly relates to the following four paradigms of

trust that are outlined in ADP 1: trust between Soldiers; trust between Soldiers and

leaders; trust among Soldiers, their families, and the Army; and ultimately trust between

the Army and the American People (p. 2-3). "Without trust, there can be but few

voluntary followers" (Cangemi et al., 2005, p. v). The U.S. Army often refers to

recruiters, Drill Sergeants, and Initial Entry Training leadership assignments as "positions

of trust," but the reality is that every U.S. Army member either Department of the Army

(DA) civilian or uniformed Soldier is in a position of trust regardless of rank, assigned

position, component, or current serve status. The U.S. Army's four paradigms of trust

are missing an important fifth paradigm called *trust in yourself*. The mission command

key ingredient of being able to accept "prudent risk" is directly connected to the

paradigm of trusting yourself. Goleman (1998) and Covey (1989) argued that trusting

yourself requires a certain level of emotional literacy.

Unified Land Operations Doctrine. The research on organizational change

indicates that 70-80% of all organizational change initiatives fail to reach their strategic

objectives (Lyons & Offner, 2009). The fact that people have different realities and

different perspectives makes most types of organizational change challenging (Covey,

1989; Klein, 1999; Kotter, 2012; Senge, 1995; Sinek, 2012). During the Cold War, the

U.S. Army developed an operating concept called Air Land Battle. Air Land Battle was designed to fight a well-known enemy (Soviet Union), in well-defined parts of the world (primarily in Western Europe), and with well-defined partners (NATO). Thus, Air Land Battle was built to deal with the known and was about "fighting outnumbered and win" (DA, 1986, p. 3). The equipment that the U.S. Army uses today known as the Big Five (Apache Helicopter, Black Hawk Helicopter, M1 Abrams Tank, Bradley Fighting Vehicle, and the Patriot Missile System) was developed to solve the numbers problems related to helping to defend Western Europe outnumbered at least five to one (DA, 1986).

Since the end of the Cold War, the U.S. Army has substantially changed the organization's operating concept. In 2011, Unified Land Operations replaced the U.S. Army's previous Air Land Battle doctrine. Unified Land Operations defines how the U.S. Army "seizes, retains, and exploits the initiative to gain and maintain a position of relative advantage" (DA, 2011a, p. 1). There are a number of change initiatives nested within the U.S. Army's new operational doctrine, but the addition of the word (or phrase) *exploit* the initiative is key to the purpose of this study. Any leader can be told how to seize and retain the initiative. However, the ability to *exploit* the initiative in order to maintain a position of relative advantage requires adaptive leadership.

Junior leaders in the U.S. Army are now being asked to demonstrate adaptability, innovativeness, and leadership proficiency while performing missions and assignments beyond the traditional branch-specific skills and levels of responsibility. Defense Secretary Robert Gates recognized this reality in 2009 in his commencement address to the graduating cadets of the US Military Academy at West Point. Secretary Gates said, "in Iraq and Afghanistan, we rely on junior and mid-level combat leaders to make

judgments (tactical, strategic, cultural, ethical) of the kind that much more senior commanders would have made a generation ago" (Gates, 2009, p. 2). In 2013, the U.S. Army published a new leader development strategy that stated the Army is "out of balance in building a bench of leaders not only through operational experience but also through professional military education and assignment in broadening experiences" (DA, 2013, p. 3). As a result, the Army's current leader development strategy and program "prepares adaptive and creative leaders capable of operating within the complexity of the operational environment and the entire range of military operations" (p. 10).

The strategic goal of developing adaptive leaders is in many ways a paradigm shift for the U.S. Army, and this organizational change may not be successful or sustainable. Specifically, the U.S. Army may not successful in the task of developing adaptive leaders if the organization does not figure out how to measure adaptability within each leader throughout the organization. To help facilitate the concept of adaptive leaders being able to *exploit the initiative* and maintain a relative advantage on current and future battlefields, the U.S. Army also implemented a new command and control concept called mission command (MC). MC allows leaders to exercise disciplined initiative within the commander's intent (DA, 2012k).

Mission command and mutual trust. The U.S. Army has a hierarchical and bureaucratic organizational structure that is characterized by a centralized concept of authority (command authority); a formalized system of procedures and practices (regulation, policies, doctrine, etc.); and a specialization of functions (occupational specialties, officer branches, warfighting functions, etc.). Table 1 connects the six principles of mission command with other current U.S. Army leadership doctrine.

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Table 1

Principles of Mission Command Linkage to Army Leadership Requirements

Principles of Mission Command	Army Leadership Requirements (ADRP 6-22)
Build cohesive teams through mutual trust	Develops others—builds effective teams. Builds trust—sets example; sustains a climate of trust. Demonstrates the Army Values and decisions consistent with the Army Ethic. Leads others—balances subordinate needs with mission
Create shared understanding	Communicates—creates shared understanding. Demonstrates interpersonal tact—interaction with others. Leads others—provides purpose, motivation, and inspiration. Extends influence beyond the chain of command—uses understanding in diplomacy, negotiation, consensus. Builds trust—uses appropriate methods of influence to energize others. Creates positive environment—supports learning. Gets results—designates, clarifies and de-conflicts roles.
Provide a clear commander's intent	Leads others—provides purpose. Communicates—employs engaging communication techniques. Gets results—prioritizes tasks.
Exercise disciplined initiative	Leads others—influence others to take initiative. Demonstrates self-discipline—maintains professional bearing and conduct. Demonstrates mental agility—anticipates uncertainty.
Use mission orders	Leads others—provides purpose without excessive direction. Develops others—expands knowledge. Gets results—executes plans to accomplish the mission.
Accept prudent risk	Leads others—assesses and manages risk. Gets results—identifies, allocates, and manages resources. Stewardship—makes good decisions about resources.

Note. Adapted from *FM 6-22:* "Leader Development," by Department of the Army (DA), 2015, Washington, DC: Author, p. 1-5. Retrieved from http://www.armystudyguide.com/con tent/publications/field_ manuals/fm-622-army-leadership-co.shtml.

The U.S. Army has historically been a mechanistic (or bureaucratic) structured organization that may never change to a more organic (or less formalized) structured organization (Drucker, 1999). In 2010, while directly engaged in two of America's longest land combat operations, the United States Army officially began the transformation from a centralized command and control model to a decentralized operational concept called mission command (DA, 2012k). Mission Command is built on the following six principles: build cohesive teams through mutual trust, create shared understanding, provide a clear commander's intent, exercise disciplined initiative, use mission orders, and accept prudent risk (DA, 2010a; DA, 2012k). This section works to connect mission command with other key U.S. Army leadership practices and concepts.

Prudent risk. Risk is an inherent reality of leaders regardless of context, and leaders must be able to assess, weigh, and mitigate identified risks (Sinek, 2012). "For no apparent logical reason, we overreact to perceived losses" (Brafman & Brafman, 2008, p. 19). "The more meaningful a potential loss is, the more loss averse we become…. In other words, the more there is on the line, the easier it is to get swept into an irrational decision" (p. 22). A key aspect of the U.S. Army's mission command concept is for leaders to accept prudent risk (DA, 2012k).

Mutual trust. "Trust is the highest form of human motivation" (Covey, 1989, p. 178). How do organizations such as the U.S. Army increase each team member's understanding of trust, increase their capacity for trust, and (most importantly) increase their ability to be facilitators of "mutual trust" instead of impediments of a required ingredient of mission command—trust? "Without trust, without becoming trustworthy, leaders in organizations will have a difficult time developing one of the most essential

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characteristics virtually required for success –*influence"* (Cangemi et al., 2005, p. v).

Trustworthiness has always been an important leadership attribute within the U.S. Army, and the organization's increased need of "mutual trust" to facilitate decentralized mission command puts an added premium on trustworthiness in all team members. One of the best ways to improve any organization is a better understanding on both the individual and collective levels of the interpersonal and intrapersonal dynamics of trust (Cangemi et al., 2005).

It is possible that the concepts of mutual trust and emotional intelligence have a symbiotic relationship. Increasing the emotional intelligence levels of organizational team members directly advances the abilities and traits required for establishing and maintaining trust from both an intrapersonal (you) and an interpersonal (others) perspective. Int**ra**personal is relating to the internal aspects of a person's self-awareness and self-regulation, whereas int**er**personal has more to do with relationships and communication with others (Covey, 1989; Gardner, 1985; Goleman, 1995). The continued success of the U.S. Army's efforts in leader development and the long-term success in the implementation of decentralized *mission command* both fundamentally hinge on the organization's propensity to develop emotionally intelligent warriors.

U.S. Army Leadership Requirements Model (ALRM)

"We tend to classify people by their traits" (Robbins, 2013, p. 6). Leadership literature outlines several trait models that are currently being utilized, validated, and improved by various individuals and organizations. Many of the most popular leadership trait models have been commercialized and require being purchased by the consumer (Bennis & Nanus, 2007; Day, 2014). In regard to the present study, the utilization of

expensive leadership development and assessment products could impose feasibility of the study issues for financial reasons. In addition, in relation to the U.S. Army, the implementation of external leadership development products could generate an unsustainable expense. Luckily for the scope and purpose of this study, the U.S. Army already has an established "what" in relation to desired leadership traits that are required throughout the organization, and this list is called the Army's Leadership Requirements Model (ALRM). The ALRM clearly outlines what traits are "required" of all U.S. Army leaders (DA, 2012L). The leadership traits defined in the ALRM are organized into the aforementioned categories of attributes (what a leader is) and competencies (what a leader does) (DA, 2012L, 2015b). This section defines in detail the leadership traits important to the U.S. Army and compares the Army's Leadership Requirements Model with other leadership models.

The organizational intent as defined by U.S. Army Leadership doctrine is that the attributes and competencies listed within the ALRM are not optional, and the goal is for every leader to learn and hone their skills in each *required* trait (DA, 2015b). The skill of "builds trust" is identified as a key leader trait within the competency label of *Leads*, but the concept of *trustworthy* is not mentioned as either an attribute or competency. In addition, the word *care* is not listed on the ALRM either. According to recently updated U.S. Army leadership doctrine, the components on the Army's Leadership Model are interrelated (DA, 2015b). The Noncommissioned Officer performance evaluation form is organized by the six sections outlined in the ALRM (DA, 2014i). Figure 4 provides the outline for the 13 leader attributes and the 10 leadership competencies that were last updated and revised within U.S. Army leadership doctrine in 2012.

The Army Leadership Requirements Model

ATTRIBUTES

CHARACTER	PRESENCE	INTELLECT
*Army Values *Empathy *Warrior Ethos/Service Ethos *Discipline	*Military and professional bearing *Fitness *Confidence *Resilience	*Mental Agility *Sound judgment *Innovation *Interpersonal tact *Expertise

LEADS	DEVELOPS	ACHIEVES
*Leads others *Builds trust *Extends influence beyond the chain of command *Leads by example *Communicates	*Creates a positive environment/ Fosters esprit de corps *Prepares self *Develops others *Stewards the profession	*Gets results

COMPETENCIES

Figure 4. The U.S. Army's Leadership Requirements Model. Adapted from ADRP 6-22: "Army Leadership," by Department of the Army (DA), 2012, Washington, DC: Author. p. 1-5. Retrieved from http://armypubs.army.mil/doctrine/DR_pubs/dr_a/pdf/adp6_22.pdf.

The four Character attributes. The U.S. Army is a Values-based organization that realizes that each member of the all- volunteer force is "shaped by their background, beliefs, education, and experience" (DA, 2012L, p. 3-5). Values-based organizations have a list of items (principles or standards) which help define what the organization stands for, what is viewed as right from wrong within the organization, and qualities considered essential for all members of the organization (Schein, 1995; Sinek, 2009). The U.S. Army defines the leadership Character attributes as values, empathy, ethos, and discipline. Because of the purpose of the present study, it is important to note that the leadership trait of *empathy* is also a common trait on numerous emotional intelligence (EI) models (Bar-On, 1997; Goleman, 1998; Goleman et al., 2013; Nelson & Low, 2011). Goleman (1998) listed empathy as a key EI trait within the domain of social awareness

along with the traits of *service* and *organizational awareness*. Bar-On (1997) listed the

scale (trait) of empathy within the interpersonal realm (domain). Within Nelson and

Low's (2011) EI model, empathy is an important trait within the Leadership domain.

Details about various EI models are outlined and defined in later sections of this literature

review. At this point, however, it is self-evident that empathy is both a core leadership

trait and fundamental EI trait. Table 2 provides details about the four traits that embody

the U.S. Army's leadership attributes of *Character*.

Table 2

Summary of the Attributes Associated with Character

Factors internal and central to a leader that constitute an individual's core.	
Army Values	• Values are principles, standards, or qualities considered essential for successful leaders. • Values are fundamental to help people discern right from wrong in any situation. • The Army has seven values to develop in all Army individuals: loyalty, duty, respect, selfless service, honor, integrity, and personal courage.
Empathy	• The propensity to experience something from another person's point of view. • The ability to identify with and enter into another person's feelings and emotions. • The desire to care for and take care of Soldiers and others.
Warrior Ethos/ Service Ethos	• The internal shared attitudes and beliefs that embody the spirit of the Army profession for Soldiers and Army Civilians alike.
Discipline	• Control of one's own behavior according to Army Values; mindset to obey and enforce good orderly practices in administrative, organizational, training, and operational duties.

Note. Adapted from ADRP 6-22: "Army Leadership," by Department of the Army (DA), 2012, Washington, DC: Author. p. 3-5. Retrieved from http://armypubs.army.mil/doctrine/ DR_pubs/dr_a/pdf/adp6_22.pdf.

Both character and leadership can be defined by culture or by the attitudes, customs, and values that a group of people share (Nisbett, 2003). In America, for example, the society and the mainstream culture are built on democratic values, and Americans study and understand leadership through the lens of those values. Hence, an American's mental heuristics (or mental shortcuts) on topics such as character and leadership will be influenced differently than a member from another culture, society, or even from a different time period in American history (Day, 2014). Someone from 17th century England, by comparison, living under a king who claims a divine right to rule, would approach leadership with different assumptions because of their culture and historical reality (Nisbett, 2003). As previously discussed, character along with competency are two of the main categories of trust (Covey, 1989). For the scope of this study, the paramount question is how to best develop the leadership competencies (traits) of Character and to determine how each trait relates to emotional literacy (or emotional intelligence). Specifically, the concepts of empathy, values understanding, warrior ethos, and service ethos. As previously mentioned, empathy and service are also Goleman's (1995) emotional intelligence (EI) competencies. Goleman's (1995) EI model also has the traits of *emotional self-awareness* in the self-awareness domain, which may have something to do with the U.S. Army's attribute of discipline, the personalization of Army values, empathy, and an individualized understanding of service.

Because of the organization's purpose to fight and win the nation's wars, the leadership trait of *warrior ethos* is crucial to the U.S. Army. "Warrior ethos requires unrelenting and consistent determination to do what is right across the range of military operations" (DA, 2012L, p. 3-4). The U.S. Army realizes that warrior ethos is

"perishable" and that the organization must "continually affirm, develop, and sustain it" (p. 3-4). "The key to the warrior ethos is not only physical, tactical, and technical training but a mindset developed through purposeful mental preparation…. Building key mental and *emotional attributes* such as confidence, composure, mental agility, and resilience are central behaviors of the warrior ethos" (p. 3-4). Based on the U.S. Army's definition, developing and maintaining warrior ethos requires emotional intelligence.

Bloom et al. (1956) taxonomy of educational objectives organized measurable learning into the three domains of cognitive, affective, and psychomotor. According to this taxonomy, concepts like values, meaning, and intuition are aspects best measured in the affective (emotional) domain. Thus, when measuring the leadership competencies nested within the label of Character, an emotional intelligence instrument might provide developmental feedback for each leader as an individual and for the leaders responsible for developing that individual. An emotional intelligence instrument might improve a leader's ability to seize, retain, and exploit the initiative withleader development.

The four Presence attributes. It is hard to have a leadership presence if the leader is not physically present, but it is the perceptions about a leader's presence that are paramount. The second attribute label on the ALRM is Presence, which is primarily focused on how an individual is perceived by others based on "outward appearance, demeanor, actions, and words" (DA, 2012L, p. 4-2). According to U.S. Army's leadership doctrine, Presence consists of the following four attributes: military and professional bearing, fitness, confidence, and resilience. The U.S. Army requires all leaders within the organization to effectively influence teams and outcomes during situations, conditions, and environments of extreme stress (Cone, 2013; DA, 2006b,

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2010b). Thus, the organizational requirement for all leaders is to maintain bearing,

fitness, confidence, and resilience. This section works to explain what those attributes

mean to the U.S. Army, why each attribute is important to the organization, and how

emotional intelligence could help the U.S. Army develop those attributes in leaders while

helping leaders hone those attributes in others.

The academic literature on positive thinking science defines resiliency as the

ability to persevere and adapt when things go awry (Reivich & Shatte, 2002). The

leadership attribute of resiliency is also referred to as an individual's ability to *bounce*

back (DA, 2012L). As outlined in Table 3, Presence is more than just being physically

present, and leadership doctrine recognizes that "the impression a leader makes on others

contributes to his success in leading them" (DA, 2012L, p. 4-1).

Table 3

Summary of the Attributes Associated with Presence

How others perceive a leader based on the leader's outward appearance, demeanor, actions, and words.	
Military and professional bearing	• Possessing a commanding presence. • Projecting a professional image of authority.
Fitness	• Having sound health, strength, and endurance that support one's emotional 4 3 h n b health and conceptual abilities under prolonged stress.
Confidence	• Projecting self-confidence and certainty in the unit's ability to succeed in its missions. • Demonstrating composure and outward calm through control over one's emotions.
Resilience	• Showing a tendency to recover quickly from setbacks, shock, injuries, adversity, and stress while maintaining a mission and organizational focus.

Note. Adapted from ADRP 6-22: "Army Leadership," by Department of the Army (DA),
2012, Washington, DC: Author. p. 4-2. Retrieved from
http://armypubs.army.mil/doctrine/ DR_pubs/dr_a/pdf/adp6_22.pdf.

Key emotional intelligence connections to the U.S. Army's Presence attributes relate to both the interpersonal and intrapersonal aspects of leadership. Presence is about the perceptions that leaders have about themselves and about the perceptions of others. Presence is based on a number of variables, but self-efficacy is fundamental to the four attributes of bearing, fitness, confidence, and resilience. Trait emotional intelligence instruments are self-efficacy measurements (Petrides, 2010). The U.S. Army explains leadership confidence as "demonstrating composure and outward calm through control over one's emotions" (DA, 2012L, p. 4-2). Increasing a leader's ability to correctly identify and label emotions in themselves and in others may increase an individual's ability to establish a perception of confidence. Increasing emotional intelligence levels of leaders in the U.S. Army may increase capabilities in all four of the organization's Presence leadership attributes. For example, with the Presence leadership attribute of *confidence*, leaders throughout the U.S. Army are expected to demonstrate composure by controlling emotions. An enhanced understanding of emotions from both an interpersonal and intrapersonal perspective (increased emotional literacy) may improve leadership effectiveness.

Since a great deal of the U.S. Army's Presence attributes deal with perceptions, an individual's mental heuristics (mental models and mental shortcuts) inherently influence perceptions about leadership bearing, fitness, confidence, and resilience. "Mental models are deeply ingrained assumptions, generalizations, or even pictures or images that influence how we understand the world and how we take action…very often, we are not consciously aware of our mental models or the effects they have on our behavior" (Senge, 1990, p. 8).

The five Intellect attributes. Nearly one-half (49.4%) of Active Duty enlisted personnel are 25 years of age or younger, with the next largest age group being 26-30 years (22.5%) (DMDC, 2016). Thus, nearly 73% of the enlisted Soldiers in the Active Duty component of the U.S. Army are under the age of 30. Few enlisted members of the Active Duty U.S. Army (6.5 %) have a bachelor's degree or higher, while most (92.5%) have a high school diploma or some college experience below the graduate school level (DMDC, 2016). Yet, regardless of chronological age, level of experience working within the organization, or civilian education level, the U.S. Army requires that all leaders in the organization embody the five attributes within the Intellect domain. The U.S. Army frames a leader's *Intellect* as *mental agility, sound judgment, innovation, interpersonal tact, and expertise*. Mental agility and the "ability to break habitual thought patterns and anticipating or adapting to uncertain or changing situations" (DA, 2012L, p. 5-5) are certainly connected to adaptive leadership ability. Although not (yet) formally recognized in U.S. Army leadership doctrine, the attribute of mental agility inherently has an emotional component (Jones, 1998). This reality is specifically true when analyzing mental agility from a System 1 (fast emotional brain) and System 2 (slow logical brain) viewpoint. Mental heuristics or *mental shortcuts* and the concept of *challenging experiences* are discussed in detail in other sections of this literature review. However, it is important to note the reality that the U.S. Army's Intellect leader attributes are inherently connected to a leader's previous life experiences. Specifically, the Intellect attributes are subject to the meanings constructed and labeled by life experiences (Brafman & Brafman, 2008). Table 4 provides the U.S. Army's current definition for Intellect and outlines the five leadership attributes within the *Intellect* domain.

Table 4

Summary of the Attributes Associated with Intellect

The mental resources or tendencies that shape a leader's conceptual abilities and effectiveness.	
Mental agility	• Flexibility of mind; the ability to break habitual thought patterns. • Anticipating or adapting to uncertain or changing situations; to think through outcomes when current decisions or actions are not producing desired effects. • The ability to apply multiple perspectives and approaches.
Sound judgment	• The capacity to assess situations shrewdly and draw sound conclusions. • The tendency to form sound opinions, make sensible decisions and reliable guesses. • The ability to assess strengths and weaknesses of subordinates, peers, and enemy to create appropriate solutions and action.
Innovation	• The ability to introduce new ideas based on opportunity or challenging circumstances. • Creativity in producing ideas that are both novel and appropriate.
Interpersonal tact	• The capacity to understand interactions with others. • Being aware of how others see you and sensing how to interact with them effectively. • Conscious of character, reactions and motives of self and others and how they affect interactions. • Recognizing diversity and displaying self-control, balance, and stability.
Expertise	• Possessing facts, beliefs, logical assumptions and understanding in relevant areas.

Note. Adapted from ADRP 6-22: "Army Leadership," by Department of the Army (DA), 2012, Washington, DC: Author. p. 5-5. Retrieved from http://armypubs.army.mil/doctrine/ DR_pubs/dr_a/pdf/adp6_22.pdf.

Trait leadership theory began as a scientific search for the definitive traits that make leaders effective (Rost, 1991). Trait leadership researchers studied successful leaders and interviewed top executives, politicians, and generals in hopes of identifying traits common to all successful leaders. Instead of finding a short list of universal

leadership traits, trait leadership researchers discovered the exact opposite (Nahavandi, 2003). Trait leadership theory explains leadership in terms of the personality and character of the leader (Hersey et al., 1996), and that each leader is unique in their personal qualities and in their approach to leading (Nahavandi, 2003). The U.S. Army's *Intellect* attributes of mental agility, sound judgment, innovation, interpersonal tact, and expertise are reflective of trait leadership theory discoveries, because each leadership attribute manifests itself differently based on the individual. The major weakness in trait leadership theory is that very few people agree on exactly which traits make a good leader (Hersey et al., 1996; Nahavandi, 2003; Rost, 1991). The 13 leadership attributes that nest into the U.S. Army's Character, Presence, and Intellect construct are the organization's defined requirements for leaders, and being adaptable is not on the list of (what a leader is) traits. Yet, each of the U.S. Army's required leadership attributes (Values, Empathy, Ethos, Discipline, Bearing, Fitness, Confidence, Resilience, Mental Agility, Sound Judgment, Innovation, Interpersonal Tact, and Expertise) can be enhanced by increasing emotional literacy.

U.S. Army leadership competencies. The U.S. Army uses a list of 10 competencies to provide a clear and consistent way of conveying expectations for leaders throughout the organization. These 10 competencies (or things that leaders do) are nested into the three overarching labels of Leads, Develops, and Achieves. Per U.S. Army doctrine, leader competencies can be developed and all leaders must "continuously refine and extend their ability to perform these competencies proficiently and learn to apply them to increasingly complex situations" (DA, 2012L, p. 1-6).

The five Leads competencies. Academic leadership literature and U.S. Army

leadership doctrine outline the following four dynamics required for an individual to receive the title of leader: an individual self-identifies as a leader, an individual is perceived by others as a leader, an individual actually leads other people, and an individual is collectively endorsed by the organization (or a group) as a leader (Covey, 1989; Day, 2014; DA, 2012L; Nahavandi, 2003) **"The capacity to generate and sustain trust is the central ingredient in leadership"** (Bennis & Nanus, 2007, p. xiv). Again, attributes are what a leader is, and competencies are what a leader does. The U.S. Army's *Leads* competencies highlight an organizational expectation for leaders to *lead others* by example, which requires *building trust* and establishing effective communication. The U.S. Army's Mission Command and Leadership doctrine requires "that leaders receive training, education, and experience to become inspirational leaders who are able to engender utmost trust and confidence with and among subordinates and fellow leaders" (DA, 2012p, p. 1-3). The five competencies that nest within the *Leads* category are: *leads others, builds trust, extends influence beyond the chain of command, leads by example, and communicates* (DA, 2012L). The U.S. Army's Leads competency domain connects to both the personal and social competencies within Goleman's (2013) emotional intelligence model (see Figure 1 on page 17), emphasizing that everything a leader does (all 10 U.S. Army leader competencies) relate to the process of influencing and motivating other humans, and all humans have emotions.

While conducting research in the United States, the needs-based motivation guru, Maslow (1943) discovered that Americans have been raised in a culture that emphasizes individualism over group affiliation. In fact, "research by social scientists indicates that the culture of the United States is the most individualistic in the world" (Althen, Doran,

& Szmania, 1988). "Members of different cultures differ in their metaphysics or fundamental beliefs about the nature of the world" (Nisbett, 2003, p. xvii), and many nonwestern societies do not understand America's individualistic or independent nature. Thus, some aspects of the U.S. Army's *Leads* competencies are more applicable when leading Americans than they would be if this leadership doctrine was being applied to a formation of Chinese or North Korean Soldiers.

Regardless of differing cultural, political, economic, or social frameworks, a leader's ability to communicate well usually generates positive outcomes, because good communicators are perceived to have orderly minds, which often inspires confidence (Lucas, 1998). People who speak well seem to know what they are talking about (DA, 2012L). Hence, much like the *Presence* attributes, the outcomes related to the five *Leads* competencies are often influenced by the perceptions of the leader by those being lead, and perceptions are reality. The authors of the current U.S. Army leadership definition realized that the competency of *communication* was inherently a key ingredient of leadership when choosing the language *process of influencing, providing direction, and motivation* to explain the phenomenon of leadership. Effective leadership requires a high level of both verbal and nonverbal communication skills. "The left hemisphere (left brain) handles *what* is said, the right hemisphere focuses on *how* it's said—the nonverbal, often emotional cues delivered through gaze, facial expression, and intonation" (Pink, 2005, p. 21). Hence, like all other forms of human interaction, the competency of communication consistently has an emotional element. That is why effective and efficient communicators vary their message depending on the situation, use images that appeal to peoples' emotions, and reach their target audience (Lucas, 1998).

The four Develops competencies. The four competencies that U.S. Army

leadership doctrine lists under the Develops domain are *creates a positive*

environment/fosters esprit de corps, prepares self, develops others, and stewards the

profession (DA, 2012L, 2012p, 2015b). The concept that leaders directly influence the

environment of an organization is common throughout generations of academic

leadership theory (Gupton & Slick, 1996; Holm, 1982; Kets De Vries, 2003). The U.S.

Army builds on this leadership concept with the competency labeled *creates a positive*

environment/fosters esprit de corps, and within the organization's definition of leadership

via "the process of influencing people" (DA, 2012L, p. 1-1). The U.S. Army

interconnects the four competencies within the Develops domain to outline the

expectation for all leaders to create and maintain a positive working environment, pride

in organizational membership, and serve as stewards (or keepers) of the profession. The

four Develops competencies require all leaders throughout the U.S. Army to permanently

"look for new learning opportunities, ask questions, seek training opportunities, conduct

self-assessments, and request performance critiques" (DA, 2012p, p. 1-6), hence, the

importance of the leadership philosophy that all leaders must be lifelong learners and

actively seek feedback about their leadership performance and leadership potential (DA,

2012L). Leaders within the U.S. Army are also responsible for the task of *developing*

others, which is a multifaceted task that requires seeking opportunities to provide

feedback to subordinates, peers, and supervisors about their leadership performance and

potential. Regardless of either sending or receiving feedback, most feedback inherently

has both a logical (cognitive) and emotional (affective) component (Stone & Heen,

2015). Hence, like all the U.S. Army's leadership attributes and competencies, sustained

success in the U.S. Army's Develops leadership domain requires leaders to assess both cognitive and emotional intelligence skills in self and others. An EI instrument that provides individualized feedback may be applicable to the Develops leadership domain.

One of the most common institutionalized assessments in the U.S. Army is an event called the Command Climate Survey. The Command Climate Survey usually occurs within the first few months of a change of command (Company level and higher) and reveals the leadership morale and Soldier morale within a unit (DA, 2012L). Climate is generally a short-term experience, depending upon a network of personalities within the organization that changes as people come and go. "Culture is a longer lasting and more complex set of shared expectations than climate" (DA, 2012p, p. 7-1). The U.S. Army's leadership and mission command doctrine requires all leaders to be lifelong students of the Army profession (DA, 2012k) and "adaptive leaders skilled in the art and science of influence" (DA, 2012p, p. 1-4). One of the fundamental concepts of group dynamics is that every member of a group influences both the climate and culture experienced by that group (Forsyth, 2010). The reality that emotions are contagious (Bradberry & Greaves, 2009; Ekman, 1992a; Goleman, 2005) helps to highlight the impact that the emotional intelligence levels of every member of a group directly impact both the culture and climate of the group.

As previously shown, the U.S. Army's 13 leadership attributes and 10 competencies are interrelated, but they can also be measured independently (DA, 2015b). Starting in 2005, the Center for Army Leadership (CAL) began conducting annual surveys to assess and track trends in Army leader attitudes about leader development, quality of leadership, and the contribution of leadership to mission accomplishment

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(Riley et al., 2013). Of all the leadership variables measured by the Annual Survey of

Army Leadership (CASAL), the leader competency of *develops others* has consistently

been the organization's weakest area (Riley et al., 2014). "In fact, develops others has

been rated the lowest competency since 2006" (Riley et al, 2014, p. 1). Goleman's

Model of Emotional Intelligence outlines *developing others* as a competency in the

Relationship Management domain (Goleman et al., 2013). Hence, increasing the

emotional intelligence levels of leaders within the U.S. Army may help the organization

improve on the defined leadership weakness of develops others. Enhancing and honing

the emotional intelligence levels of leaders throughout the U.S. Army might be a key

component that helps leaders improve on all the organization's leadership attributes and

competencies.

      The one Achieves competency. "Leadership builds effective organizations….

Effectiveness directly relates to the core leader competency of getting results…. From the

(U.S. Army's) definition of leadership, achieving focuses on accomplishing the mission"

(DA, 2012L, p. 8-1). The purpose of leadership is nested within the mission and goals of

the organization (Burns, 1978; Covey, 1989). The U.S. Army exists to fight and win the

Nation's wars, and the overarching purpose of leadership within the U.S. Army must

always center on the sustained defense of the country (DA, 2012n). The one leadership

competency within the Achieves category is *Gets Results*. Per the U.S. Army, getting

results requires leaders to provide guidance, adapt to change, and manage resources (DA,

2012L). "There's likely a place in paradise for people who tried hard, but what really

matters is succeeding…. If that requires you to change, that's your mission" (McChrystal,

Collins, & Butler, 2015).

"One of the Army's greatest competitive advantages resides in its ability to learn faster and adapt more quickly than its adversaries…the Army cannot risk failure through complacency, lack of imagination, or resistance to change" (DA, 2012n). A key dynamic of the *Gets Results* competency is a leader's ability to maintain an openness to change. As previously shown in this literature review, thinking challenges and various cognitive biases influence a leader's ability to adapt, ability to change, and ability to effectively influence outcomes (Haselton et al., 2005; Mahoney, 1977; Reivich & Shatte, 2002; Tversky & Kahneman, 1974). Human perceptions and understanding are always shaped by mental heuristics, and a fundamental aspect of a leader's ability to get results is understanding the barriers to change within an organization (Senge, 1990). In relation to Bloom's taxonomy of learning domains, adaptability, mental agility, and openness to change are both cognitive and affective (Bloom et al., 1956). Since there is an emotional aspect to most thoughts and most decision making (Baltharzard et al., 2010; Jones, 1998), the U.S. Army's competency of *Gets Results* could be enhanced by improving the emotional intelligence levels of leaders throughout the organization.

The U.S. Army's Leadership Requirements Model (ALRM) is rooted in trait leadership theory. Some critics of trait theory argue that a major disadvantage of the theory is that it suggests that a leader can command all situations if they possess the right balance of traits (Wills, 1994). Another possible negative related to trait theory is that it reinforces the notion that only certain kinds of people can lead (Nahavandi, 2003). According to Hersey et al. (1996), additional possible weakness of trait leadership theory is that no one agrees which traits make a good leader. ALRM is an example of how trait theory may be relevant when applied to the specific purpose of an organization. The U.S.

Army requires leaders to possess the leadership attributes defined within the domain

labels of Character, Presence, and Intellect, and the leadership competencies outlined

within the Leads, Develops, and Achieves. Based on the purpose of the U.S. Army,

ALRM when properly taught and developed meets the leadership needs of the

organization (DA, 2012L).

Other leadership models. The U.S. Army's Leadership Requirements Model

(ALRM) consisting of 13 Attributes and 10 Competencies shares commonalities with

other leadership models. Bradberry and Greaves (2012) identified 22 leadership skills

critical to performance, and delineate these leadership variables into 10 *core* leadership

traits (Table 5) and 12 *adaptive* leadership traits (Table 6). The following (Table 5)

outlines a number of leadership traits that directly nest within the leader attributes and

leadership competencies outlined within ALRM.

Table 5

Core Leadership Skills

STRATEGY	ACTION	RESULTS
- Vision - Acumen - Planning - Courage to Lead	- Decision Making - Communication - Mobilizing Others	- Risk Taking - Results Focus - Agility

Note. Adapted from "Leadership 2.0," by T. Bradberry, & J. Greaves, 2012. San Diego,
CA: TalentSmart, p. 3.

In addition to the core leadership skills of strategy, action, and results, Bradberry

and Greaves (2012) argued that adaptive leadership requires emotional intelligence,

organizational justice, character, and development. Unlike the U.S. Army's LRM, this

leadership model mirrors Goleman's (1995) emotional intelligence (EI) model by

defining the four EI domains of self-awareness, self-management, social-awareness, and

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relationship management (see Figure 1 on page 17). Yet, like the U.S. Army's LRM, the

Bradberry and Greaves (2012) model highlights the importance of leaders to developing

others, have integrity, be a lifelong learner, establish credibility, a concept of fairness,

and to value diversity. Table 6 illustrates the adaptive leadership skills as defined by

Bradberry and Greaves (2012).

Table 6

Adaptive Leadership Skills

EMOTIONAL INTELLIGENCE	ORGANIZATIONAL JUSTICE	CHARACTER	DEVELOPMENT
- Self-Awareness - Self-Management - Social Awareness - Relationship Management	- Decision Fairness - Information Sharing - Outcome Concern	- Integrity - Credibility - Values Differences	- Lifelong Learning - Developing Others

Note. Adapted from "Leadership 2.0," by T. Bradberry, & J. Greaves, 2012. San Diego, CA: TalentSmart, p. 12.

Military Leadership Studies

Chansler (2005) conducted a study centered on the purpose of analyzing

leadership traits at both the individual and group levels while trying to determine if

specific traits impacted leader effectiveness, primarily how individual and group traits are

associated with leadership. Chansler's research focused on the following question: "Can

the existence of certain personality traits predict that an individual will not only be

perceived as an emergent leader, but will also be an effective leader?" (p. 3). Chansler's

study also examined the "relationship among individual and group leadership traits with

group effectiveness" (p. 4). This study had a total of six different hypotheses that

focused on the traits of *potency, assertiveness, and sociability*. The first three hypotheses

stated that individuals with higher levels of each of the three traits were "more likely to

be perceived as emergent leaders than individuals with lower levels" (p. 46) of each

leadership trait. The other three hypotheses connected the same three individual

leadership traits to groups by stating that groups composed of members with high levels

of each of the three traits would be perceived as more effective.

Chansler's (2005) correlational study limited the population specifically to mid-

career military officers with at least 10 years of experience. Yet, he still had a relatively

large sample size. All of the participants ($N = 521$) were military commissioned officers

of the rank of Major attending the U.S. Air Force Professional Military Education college

from August 2002 through June 2003 (p. 47). Most of the participants in this study were

members of the United States Air Force. However, other American military branches

like the Army ($n = 41$), the Navy ($n = 32$), and the Marine Corps ($n = 8$) agreed to

participate in this study at an Air Force installation in the southeast (p. 50). The

researcher's control variables were GPA, age, gender, and race (p. 84). For the purpose

of this study, Chansler defined "outstanding team member" and "emergent leader" (p. 84)

as the dependent variables. After conducting factor analysis on the data generated by the

pilot of the researcher's survey, the researcher decided to label the category that indicated

correlations to effective leadership as "outstanding team member."

Chansler's (2005) research results section presented the descriptive statistics,

results of the researcher's statistical analyses, and implications for the hypotheses tested

for this study. The study detected a few significant relationships among the dependent,

independent, and control variables. "There was a significant correlation between the two

dependent variables, emergent leadership and outstanding team member" (p. 96). Within

the parameters of this study, there were also strong correlations between some of the

independent and control variables. For example, this study indicated a strong negative

correlation between gender and potency. In regard to the study's outcomes specific to

Chansler's six hypotheses, "of all the hypothesized relationships, only the relationship

between assertiveness and emergent leadership proved to be significant" (p. 112). Thus,

Chansler's study did not produce results or statistical outcomes that clearly indicated that

effective leadership at either the individual or group level is directly connected to any of

the three traits of potency, assertiveness, and sociability. However, this study did

highlight the idea that assertive individuals can be perceived as leaders. The real research

question proposed within the margins of Chansler's study related to "why" traits like

potency, assertiveness, and sociability are important to effective leaders. Limitations

outlined by the researcher related to the complex nature of leadership traits, techniques

utilized for data collection, and some key methodological issues related to measuring

variables simultaneously (p. 130). The fact that this study extensively relied on "self-

report measures for the leader traits of potency, assertiveness, and sociability" (p. 131)

highlights a possible key limitation to any future research conducted on leadership trait

influence on leadership effectiveness. Hence, the fundamental question related to

continuing the field of research related to personality traits or specific leader behaviors

centers on mitigating participant social desirability effects.

A comparable study that centered on the purpose of gaining knowledge on the

topics related to leadership traits, emergent leaders, and leadership effectiveness was

conducted by Baker (2011). The rationale for this study centered on the Army Reserve

Officer Training Corps (ROTC) and the reality that ROTC Cadets are assigned to

leadership positions and asked to lead and help develop their peers in a productive

manner. Hence, this study focused on leadership traits by using the context of the

Army's traditional 16 leadership dimensions. The universal purpose of this study was to

identify pedagogic techniques that will assist leader development in all situational

contexts, and not just military related students participating in a structured

commissioning program. Thus, Baker's research worked toward the goal of helping all

students attending higher education institutions improve their preparations in dealing with

"professional leadership challenges" (p. 21). The following were Baker's hypotheses:

"No specific leadership competencies exist that enhance peer leadership, and no specific

leadership skills exist that enhance peer leadership" (p. 8).

While conducting a correlational study, Baker (2011) utilized quantitative

methodologies "to determine better specific peer leadership competencies and skills" (p.

22). Baker's research methods clearly outlined key operational terminology which was

nested into various social science theories that helped the researcher construct the

framework and reasoning of the statistical analysis. For example, the researcher

spotlighted the six stages of the Leadership Identity Development (LID) model, and used

this model as a tool that helps establish the "essential influences that foster the

development of a leadership identity" (p. 67). Using factor analyses, Baker organized the

Army's 16 leadership attributes and competencies (dimensions) into the four categories

of (p. 14). Most of Baker's dependent and independent variables were rooted in the LID

model and the Army's 16 leadership dimensions. Most of the statistical data were not

generated by the researcher, because Baker gained access to existing data that had been

collected by the Army's Cadet Command from 1999 through 2009 (p. 78). "The ROTC

data consisted of 47,555 cadet leadership evaluations of 16 leadership dimensions" (p.

79). Baker converted the initial nominal data of Excellence (E), Satisfactory (S), and Needs Improvement (N) to ordinal data of 1, 2, and 3 (p. 80). In addition, Baker developed a "peer influence survey" (p. 83) using a five-point Likert scale that allowed similar data collection from college students not participating in an ROTC program. This study utilized ANOVA and multiple regression analysis to address the primary control variables of the study of gender, race, and maturity level. "The 16 leader dimensions comprised the independent variables while the overall ROTC leadership assessment acted as the dependent variable" (Baker, 2011, p. 79).

The results of Baker's (2011) quantitative study provided verification that presence is a key leadership trait. Hence, Baker's results indicate that within peer leadership dynamics it is important to be emotionally, physically, and mentally present. One discovery resulting from the multiple regression analysis related to peer leadership competencies based on gender, race, and maturity level. The ROTC's evaluation system generally performed at a constant regardless of gender. However, there was a significant difference in the historical ROTC data related to the evaluation outcomes related to race throughout Baker's data (p. 108). In addition, there was not a significant statistical difference related to maturity level based on this research model. "The lack of significance indicates that maturation does not have a significant effect on peer leadership competencies" (p. 108). The overall results of Baker's study indicate that it is possible to isolate a few behaviors that directly influence leadership perceptions.

The primary limitation to Baker's (2011) study related to the fact that the utilization of the ROTC data was unprecedented, which did not provide a means to compare methodology, help validate results, nor hint to possible researcher induced

biases. This limitation may be a reality for all exploratory studies. Another limitation to

Baker's study was the large percentage of data that were primarily male due to the

limited number of female Cadets who participated in Army ROTC during the 11 years of

the data used in the study. A low female sample may be a reality for most studies that

use elements of the U.S. Army as the target population.   The final identified limitation of

Baker's study that is helpful relative to future studies on similar topics was the overall

structure of the Army's ROTC evaluation process which generated the data set. The

Army ROTC evaluation process was procedurally standardized, but countless individuals

actually conducted the evaluations on Cadets; and the evaluator perceptions related to the

leadership dynamics of trait, situational, style, personality, and behavior cannot be

standardized. Hence, one Cadet could receive a negative (N) evaluation based on one

evaluator's perceptions while another Cadet could receive an excellence (E) evaluation

by a different evaluator while actually performing at the same level. Hence, the lesson

learned is that leadership, leadership evaluation, and most forms of leadership feedback

are inherently a mixture of objective and subjective perceptions.

One the biggest gains for reading, analyzing, and comparing Baker's (2011) and

Chansler's (2005) research is the discovery that previous leadership studies in the context

of intellectual ability and personality traits have not directly focused on the affective (or

emotional) aspects and realities of leadership. The traits noted in Chansler's study of

potency, assertiveness, and sociability could be just as important to effective leaders as

Baker's leadership traits of assist, reflect, participate, and presence depending on the

context and situation. Yet, how do personality differences, emotional self-awareness, and

emotional social-awareness inform an individual's ability to understand and personalize

the traits focused on in these two studies and the leadership traits outlined in other studies and models? Of equal importance is how the emotional and personality variables influence the perceptions of self, and the perceptions that others have about an individual. Inherently, Chansler's (2005) and Baker's (2011) studies are solid examples of high-level leadership research products. Both well planned and executed research projects center on aspects of leadership traits and attributes that are not universal, and both studies highlight the reality that most leadership studies are going to be influenced by perceptions. Hence, leadership data are either influenced by the perceptions of the individual via self-reporting, the perceptions of others about the individual, or a combination of both self-reported perceptions and those of others about the individual leader. To some degree, human emotions influence all forms and types of human perceptions (Jones, 1998).

Baker's (2011) and Chansler's (2005) studies indicate that there is a need for more research specific to how to provide better leader development opportunities and leader developing instruments for current and future leaders. Stemming from a review of these two researchers, the next step in this field of military leadership study is to determine why defined leadership traits are important for either real or perceived effective leaders. Consequently, the "why" is just as important as the "what" on topics related to leadership.

Adaptive Leadership

What are the leadership traits required for adaptive leadership, and why are those traits important to the U.S. Army? Some Emotional Intelligence (EI) models outline adaptability as a key component to the EI domain of self-management (Goleman, 2000; Goleman et al., 2013). The U.S. Army's "leadership and operational doctrine

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acknowledges that societal change, evolving security threats, and technological advances require adaptability" (DA, 2012L, p. 1-2). Despite clearly defining adaptive leadership as an organizational priority and as a strategic need (DA, 2013), the U.S. Army Leadership Requirements Model does not mention the trait of adaptable as either a leadership competency or as a leadership attribute. However, the U.S. Army's most recent leader development doctrine maintains that "the Army's leader development processes produce and sustain agile, adaptive, and innovative leaders who act with boldness and initiative in dynamic, complex situations" (DA, 2015b, p. 1-1).

One of the U.S. Army's key initiatives for developing adaptive leaders is the Army Asymmetric Warfare Adaptive Leader Program (AWALP), which is a 10-day course taught by the Asymmetric Warfare Group (AWG) that works within the U.S. Army Training and Doctrine Command (TRADOC) (DA, 2015b). AWALP is designed to enhance adaptability in leaders and promote innovative solutions while training for unified land operations (Straus et al., 2014). Like most other training elements throughout TRADOC, AWALP uses a methodology called outcomes based training, which is very different than the U.S. Army's traditional task/conditions/standards training concept (DA, 2015b; Straus et.al., 2014). Outcomes-based training aligns with the U.S. Army's shift from a doctrine of command and control to mission command, and Outcomes-based training stresses the need for leaders who value a bottom-up over a top-down approach (DA, 2015b). Fundamentally, Outcomes-based training is centered on telling Soldiers and leaders *what* they need to achieve, instead of telling them *how* to achieve an assigned task or mission (DA, 2015d).

AWALP is based on a taxonomy of adaptive performance that identifies

adaptable performance dimensions such as solving problems creatively, dealing with changing or ambiguous situations, and interpersonal adaptability (Straus et. al., 2014). The SWALP's adaptive performance taxonomy is based on the following original eight dimensions from Pulakos, Arad, Donovan, and Plamondon, 2000: physical adaptability, learning tasks, handling crises and emergency situations, thinking creatively, handling stress, dealing with changing or ambiguous situations, interpersonal adaptability, and cultural adaptability. In 2014, the RAND Corporation conducted a systematic evaluation of the AWALP that addressed individual, team, and leadership aspects of adaptability while addressing significant challenges to measuring adaptability (Straus et al., 2014). Using a pretest-posttest survey design that measured student self-efficacy and interests for all eight dimensions of adaptability, the RAND study on AWALP's ability to develop adaptive leaders during just a 10-day course indicated positive outcomes. "The results of the evaluation provide evidence of AWALP's success across a range of measures, including reactions to the course, changes in learning attitudes and cognitive learning, and recognition of the need for adaptability in situations encountered on the job" (Straus et al., 2014, p. xxi).

There is an increasing amount of research and literature on the topic of adaptive leader development (Bennis, 1989; Heifetz et al., 2009; Mueller-Hanson, 2007; Senge, 1990). Mueller-Hanson (2007) conducted a study on adaptive leadership development using a sample from the U.S. Army and determined that there were three dimensions of adaptability: mental adaptability, interpersonal adaptability, and physical adaptability. In addition, Mueller-Hanson identified two universal principles for developing adaptable leaders: the importance of experience, and the importance of "an iterative process of

practice and feedback" (p. 9). Mueller-Hanson's (2007) study determined that to get the most from experiences, whether from training or otherwise, leaders had to experience adaptability. Yet, other experts in the field of adaptive leader development argue that experiences alone do not make individuals adaptive (Heifetz et al., 2009). Mueller-Hanson's study presented a list of human characteristics that may serve as predictors to adaptive leadership: intelligence, trainability, judgment, influence ability, physical fitness, and motivation. For the current study, the biggest point from the Mueller-Hanson analysis was the idea that "developing self-awareness through feedback from multiple sources" (p. 29) would help facilitate adaptive leadership development. An important lesson learned from other studies that focused on adaptive leadership development is the reality that pretest-posttest (self-efficacy or self-report) survey strategies may be the most effective way to measure adaptability growth in leaders (Heifetz et al., 2009; Pulakos et al., 2000; Straus et al., 2014). Many trait Emotional Intelligence measuring instruments are self-report surveys (Afzal, Atta, & Shujja, 2013; Andrei & Petrides, 2013; Andrei, Siegling, Aloe, Baldaro, & Petrides, 2016; Bar-On, 2006; Mavroveli, Petrides, Reiffe, & Bakker, 2007; Mikolajczak, Petrides, Luminet, & Coumans, 2009; Morris, 2013; Mowbray, Holter, Teague, & Bybee, 2003; Nelis, Quodibach, Mikolajczak, & Hansenne, 2009; Perez, Petrides, & Furnham, 2005)

Developing Others and Self (Feedback)

"The average person suffers from three delusions: that he is a good driver, that he has a good sense of humor, and that he is a good listener…. Most people, however, including many leaders, are terrible listeners; they actually think talking is more important than listening" (Sample, 2002, p. 21). Central to the U.S. Army's leader

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development strategy is the concept that leaders at all levels "understand their responsibility for continually developing other leaders" (DA, 2013, p. 7). How do you improve the U.S. Army's collective ability to develop others and to develop self while improving the adaptability of leaders? Instead of looking at the issue of developing others as a leader (push) issue or sender of the message, perhaps a better approach is to look at human communication in the other direction and analyze leader development as primarily a (pull) issue. Stone and Heen (2014) argud that in regard to developmental feedback and communication, pull beats push:

> Training leaders how to give feedback—how to "push" more effectively—can be helpful....But if the receiver isn't willing or able to absorb the feedback, then there's only so far persistence or even skillful delivery can go….It doesn't matter how much authority or power a feedback giver has; the receivers are in control of what they do and don't let in, how they make sense of what they're hearing, and whether they choose to change….Pushing harder rarely opens the door to genuine learning....The focus should not be on teaching feedback givers to give....The focus should be on feedback receivers, helping us all to become more skillful learners….Creating "pull" is about mastering the skills required to drive our own learning….Pull highlights a truth often ignored: that the key variable in your growth is not your teacher or your supervisor….It's you. (p. 5)

"Unless you are constantly learning and broadening your horizons, you won't be equipped to make your best decisions" (Crow, 2010, p. 53). Most people realize that feedback is an essential aspect of learning, professional development, and personal growth (Packard & Jones, 2015). Yet, Stone and Heen (2014) pointed out that it is

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common for people to dread feedback, often avoid feedback, and even dismiss feedback. One of the best ways for a leader to broaden their horizons is to learn how to receive feedback, and of equal importance, learn how to internally process feedback. "It's the receivers, after all, who interpret what they're hearing and decide whether and how to change" (p. 6). Each year, the business world invests billions of dollars and hours teaching leaders, managers, and supervisors how to give (push) feedback more effectively (Day, 2014). The U.S. Army also focuses on the push aspect of feedback in the contexts of leaders developing others through counseling, coaching, mentoring, and evaluating (DA, 2015b). However, as Stone and Heen suggested, perhaps both the U.S. Army and the business world have it backward, and the smarter investment is to teach individuals how to receive (pull) feedback. A review of the literature on "feedback-seeking behavior" suggests that those who actively seek all forms of feedback often generate positive outcomes for both the individual and the organization, (Crommelink & Anseel, 2013; Stone & Heen, 2014). Feedback-seeking behavior can result in higher job satisfaction, lower turnover, greater creativity on the job, and faster *adaptation* in a new organization or role (Crommelink & Anseel, 2013).

The U.S. Army's goal to develop adaptive leaders can directly be enhanced by changing the organizational mindset about feedback. It is possible that the U.S. Army could improve most aspects of leader development if the organization focused more time and resources on teaching everyone how to effectively receive feedback, thus teaching each individual how to become a better learner. Furthermore, the U.S. Army could teach individuals how to recognize *truth, relationship and identity* triggers that block learning (Stone & Heen, 2014, p. 16). Being able to recognize the triggers that prevent you from

receiving a message requires a high degree of self-awareness. The triggers that block

receiving and learning are often emotion laden (Brafman & Brafman, 2008; Jones, 1998).

Hence, being able to effectively receive either a positive or negative message via

feedback is directly an emotional intelligence issue, specifically when the feedback given

is off-base, poorly delivered, or from an individual the receiver of the feedback does not

trust or like (Stone & Heen, 2014).

The U.S. Army prides itself on developing leaders, but according to an annual

survey conducted by the Center for Army Leadership, the organization has plenty of

room for improvement. Specifically, the U.S. Army can improve on the competency of

Develops Others which has been the lowest rated leader competency in the Annual

Survey of Army Leadership (CASAL) since 2006 (Riley et al., 2013). Of all the

leadership variables measured annually by the CASAL, the leader competency of

Develops Others has consistently been the organization's most significant weak area

(Riley et al., 2014). In fact, 45% of the respondents on the 2012 survey did not believe

their superiors showed genuine concern when it came to developing leadership skills of

followers (Riley et al., 2014, p. 9).

U.S. Army and Leadership Section Summary

The U.S. Army's evolving definition of leadership is currently "the process of

influencing people by providing purpose, direction, and motivation to accomplish the

mission and improve the organization" (DA, 2012L, p. 1). A key philosophical

difference between management and leadership is the reality that things (time, resources,

etc.) are managed, whereas people are lead. What is the leader influencing? Effective

leadership requires first a general understanding about how the human mind works

(System 1/System 2, Left Brain/Right Brain); contrary to mainstream social norms and beliefs (like broken hearts and gut feels), scientific studies have proven that emotions reside inside the human brain. Furthermore, emotions constantly feed the logical (cognitive) aspects of the human consciousness. Hence, a primary purpose of leadership is to influence human emotions, and most manifestations of human motivation are actually emotions (Goleman et al., 2013). Effective leadership requires a positive influence on both the cognitive and affective psychological processes of those being lead; it helps leaders discover some of the biases, logic fallacies, and other thinking challenges related to both being a leader (influencing, communicating, understanding, and motivating humans) and a leader's ability to clearly understand the ambiguous phenomenon of leadership within the context of a specific organization (DA, 2012L, 2015b; Goleman, 1995). Adaptive leadership requires both thinking (cognitive) and emotional (affective) physiological capabilities (Baltharzard et al., 2010), and the Army's goal to develop adaptive leaders for a complex world requires a leadership development program that addresses the exact leadership needs of the U.S. Army currently and the predicted leadership needs of the future (DA, 2012L; Schein, 1995; Sinek, 2009). The U.S. Army Leadership Requirements Model (ALRM) outlines the attributes (what a leader *is* or *traits*) and competencies (what a leader *does* or *abilities*) required for success based on the defined purpose and leadership goals of the U.S. Army (DA, 2012L, 2015b). The lists of traits and abilities within ALRM may or may not be applicable within the contest of another organization, but ALRM and the U.S. Army's current definition of leadership provide examples of how different leadership theories influence an evolving organization's understanding on the topics of leader, leadership, and leader development.

U.S. Army Leader Development Instruments

"In recent years there has been a growing realization that organizational and national prosperity is linked to continuous development of leaders with organizations" (King & Nesbit, 2015, p. 134). Leader development programs should meet the specific needs of the organization that the individual leader belongs to (Packard & Jones, 2015), but many commercialized leader development programs are designed as one-size-fits-all strategies that do not always match the specific needs of the organization nor the growth needs of each individual leader (Day, 2014). "Despite the strategic importance of leadership development, few organizations adequately evaluate the effectiveness of programs or their impact on performance" (King & Nesbit, 2015, p. 135). "Development is a process of change…Developmental growth is the same as learning, and learning is gained knowledge or skill" (DA, 2015b, p. 3-5).

The U.S. Army develops its own tactical, operational, and strategic level leaders. Unlike many large organizations in the civil sectors, the U.S. Army does not routinely recruit, select, and assign mid-grade and senior-level leaders from outside its ranks (DA, 2013, 2014c, 2014e, 2014h, 2015b; DD, 2013). In the U.S. Army, "development of a senior (strategic level) uniformed leader begins two decades prior to the organization's employment of that individual" (DA, 2013, p. 6). The former Army Chief of Staff, General Edward C. Meyer, compared the U.S. Army's leader development methodology to nature's process of making a diamond. The following is General Meyer's leader development analogy:

> Just as the diamond requires three properties for its formation—carbon, heat, and pressure—successful leaders require the interaction of three properties—

character, knowledge, and application. Like carbon to the diamond, character is

the basic quality of the leader. But as carbon alone does not create a diamond,

neither can character alone create a leader. The diamond needs heat. Man needs

knowledge, study, and preparation. The third property, pressure—acting in

conjunction with carbon and heat—forms the diamond. Similarly, one's

character, attended by knowledge, blooms through application to produce a

leader. (DA, 1999, p. 1-2)

This section of reviewed literature centers on the purpose of better understanding

the U.S. Army's current leader development strategy, leader development programs and

practices, and leader development instruments, with primary focus being placed on

currently used instruments that provide self-awareness feedback to individual leaders

throughout the organization. After gaining understanding on how the U.S. Army defines

leadership and clarifying the organization's expectations for leaders within the first major

section of this literature review titled Leadership and the U.S. Army, this second major

section works to gain knowledge about how organizations like the U.S. Army develop

leaders. Specifically, the instruments that organizations like the U.S. Army use to

provide developmental feedback to the individual leader.

 "The best predictor of future performance is past performance" (Robbins, 2013,

p. 7), and the best predictor of an individual's or an organization's future behavior is past

behavior. The U.S. Army has a proven history of developing effective leaders (DA,

2012a; DeGregorio, 2005). Yet, based on annual surveys of leaders throughout the U.S.

Army, *Develops Others* has been rated the lowest ALRM competency since 2006 (Riley

et al., 2014). It is imprudent for a successful organization to completely discard a proven

strategy (Kotter, 2012; Margetta, 2012; Nelis, Kotsou, Quoidbach, Hansenne, Wetens, Dupuis, & Mikolajczak, 2011). Plus, it may be just as foolhardy to add complication to a leader development program that is already very dynamic, detailed, and successfully implemented (Heifetz et. al., 2009). Thus, when analyzing the U.S. Army's leader development strategy, program, and instruments, the researcher's purpose is to look for ways to improve the current program instead of looking to start an entirely new one. When searching for possible best fits or capability increasing roles of trait emotional intelligence within organizations such as the U.S. Army, the best solutions may be nested into what the organization already does well. Perhaps there are elements of emotional intelligence science already nested into some of the U.S. Army's leader development practices and instruments.

Difference Between Leader Development and Leadership Development

Within most leadership literature, there is not a clear distinction between leader development and leadership development (Bennis, 1989; Bradberry & Greaves, 2012; King & Nesbit, 2015; Packard & Jones, 2015). Published U.S. Army leadership development doctrine does not clearly point out the exact differences between leader and leadership development, but the distinction is more than just a play on words (DA, 2013L, 2015b). Day (2000) helped to clarify the difference in the following:

The proposed distinction between leader development and leadership development is more than mere semantics. At the core of the difference is an orientation toward developing human capital (leader development) as compared with social capital (leadership development). Orientation toward human capital emphasizes the development of individual capabilities such as those related to

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self-awareness, self-regulation, and self-motivation that serve as the foundation of

intrapersonal competence. Orientation toward social capital emphasizes the

development of reciprocal obligations and commitments built on a foundation of

mutual trust and respect; it rests on a foundation of interpersonal competence, but

ultimately, it requires enactment. Leadership is developed through the enactment

of leadership. (p. 605)

The U.S. Army's leader development strategy and program works toward the goal

of increasing both human capital (leader development) and social capital (leadership

development). As pointed out by Day (2000), both *leader* development and *leadership*

development requires "the enactment of leadership" (p. 605), which is basically gaining

experience serving as a leader. The most recent U.S. Army doctrine on leadership

development defines the critical conditions required for leader development as "working

in real settings, and solving real problems with actual team members" (DA, 2015b, p. 3-

1). Within the context of the U.S. Army's current definition of leadership "the process of

influencing people," leader and leadership development requires experience in real-world

situations and working with people (DA, 2012L). Another way of defining both leader

development and leadership development is to use some of the Emotional Intelligence

Models. Goleman's (2000) Emotional Intelligence (EI) personal competence domains of

self-awareness and self-management are fundamentally human capital domains, and the

leadership development domains (or social capital domains) are the EI social competence

domains of social awareness and relationship management (Goleman et al., 2013). In

addition to some EI models, there are other models that help clarify the distinct difference

between leader and leadership development. Table 7 compares various social science

models and helps to illustrate a common theme related to developing both human capital

(leader development) and social capital (leadership development).

Table 7

Difference Between Leader Development and Leadership Development

LEADER DEVELOPMENT	LEADERSHIP DEVELOPMENT
Human Capital Developing the individual capabilities of self-awareness, self-regulation, and self-motivation (Day, 2000)	**Social Capital** Developing shared obligations built on a foundation of mutual trust and respect (Day, 2000)
Army Leadership Requirements Model Developing the ALRM Attributes (what a leader is) of Character, Presence, and Intellect (DA, 2012L)	**Army Leadership Requirements Model** Developing the ALRM Competencies (what a leader does) of Leads, Develops, Achieves (DA, 2012L)
Multiple Intelligence Model Intrapersonal skills of self-awareness, self-reflection, and self-regulation (Gardner, 1985)	**Multiple Intelligence Model** Interpersonal skills of relationships & communication with others (Gardner, 1985)

Covey's 7 Habits Model
 Habit 1: Be Proactive
     Principles of Personal Vision
 Habit 2: Begin with the End in Mind
     Principles of Personal Leadership
 Habit 3: Put First Things First
     Principles of Personal Management
 Habit 7: Sharpen the Saw
     Principles of Balanced Self-Renewal (Covey, 1989)
	Covey's 7 Habits Model
	 Habit 4: Think Win/Win
	     Principles of Interpersonal Leadership
	 Habit 5: Seek First to Understand, Then to Be Understood
	     Principles of Empathetic Cmmunication
	 Habit 6: Synergize
	     Principles of Creative Cooperation (Covey, 1989)

Goleman's Emotional Intelligence Model Emotional Intelligence Personal Competencies of Self-awareness and Self-management (Goleman, 2000)	**Goleman's Emotional Intelligence Model** Emotional Intelligence Social Competencies of Social Awareness and Relationship Management (Goleman, 2000)

Note. The purpose of this model is to capture the difference between leader development and leadership development concepts, models, and strategies.

The primary purpose of Table 7 is to illustrate a key finding within this literature review that connects Day's (2000) leader and leadership model with the U.S. Army's current leadership model (DA, 2012L), Gardner's (1985) theory of multiple intelligence model, Covey's (2004) seven habits of highly successful people model, and Goleman's (2000) emotional intelligence model. Hence, these models help illustrate the differences between developing the individual leaders and developing leadership capacity or social capacity (Covey, 1989; Day, 2000; Gardner, 1985). These models also help to highlight that leader (or human capital) development is more centered on behavioral social sciences such as psychology that tend to focus on individual humans, whereas leadership (social capital) development is best influenced by behavioral social sciences like sociology and group dynamics.

U.S. Army's Leader Development Strategy (Ends)

"Strategy explains how an organization, faced with competition, will achieve superior performance" (Magretta, 2012, p. 8). The need to develop adaptive leaders is outlined in key U.S. Army policy documents, including the U.S. Army Learning Concept for 2015 (DA, 2011c), and in the U.S. Army Training and Doctrine Command (TRADOC) Strategic plan for 2013-2020 (DA, 2013). Adaptive leadership is an underlying principle in the U.S. Army's shift from a command and control leadership model to the mission command concept (DA, 2010a, 2012k, 2014c). The 2013 Army Leader Development Strategy (ALDS) defines the U.S. Army's leader development process as the organization's primary quality shaping tool. The 2013 ALDS is the Army's strategic road map for the development of the next generation of Army leaders (DA, 2013). A key aspect of the Army's current leadership definition is the

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responsibility for leaders *to improve the organization* (DA, 2012L), and this concept is at the heart of the organization's leader development strategy and program. This study is primarily focused on the U.S. Army but may be applicable to other organizations in the non-profit, for-profit, and governmental sectors that have a defined requirement to develop adaptive leaders.

A review of literature reveals there is not a widely accepted definition of adaptability (Heifetz et al., 2009; Mueller, Hanson, 2007; Yukl & Mahsud, 2010). The Institute of Defense Analysis (IDA) defines adaptability as "the degree to which adjustments are possible in practices, processes, or structures to projected or actual changes in climate…. Adaptation can be spontaneous or planned and be carried out in response to or in anticipation of changes in conditions" (Tillson, 2005, p. 5). Yukl and Mahsud (2010) contended "that adaptive leadership involves changing individual behaviors in the appropriate ways as the situation changes" (p. 81). Adaptability and adaptableness are the noun versions of the adjective *adaptable*, and Merriam-Webster defines adaptable as "able to change or be changed in order to fit or work better in some situation or for some purpose" (n.d.).

The Army develops adaptive leaders through training, education, and experiences within a mission command climate (DA, 2012L, 2013, 2015b). The U.S. Army's Leader Development Strategy (ALDS) is defined as "a continuous, progressive process by which the synthesis of an individual's training, education, and experiences contribute to individual growth over the course of a career" (DA, 2013, p. 3). As Figure 5 depicts, leader development in the U.S. Army is a mutually shared responsibility across the three domains of the operational force (the organization as a whole and individual units), the

institutional Army (education and training institutions), and the individual or self-development (civilian, soldier) domain. The diagram within Figure 5 illustrates how the three components of the U.S. Army's leader development strategy occur within each of the three domains and in areas where the three primary domains overlap. Encompassing the model is a spear called *peer and developmental relationships* that provides context and enhances professional and individual growth. Within these relationships resides the leadership competency of *develops others* (DA, 2012L). According to the U.S. Army's Leader Development Strategy, these relationships are key aspects to each leader's overall development; and each relationship between the operating force, institutional force, and individual leader require sharing, counseling, reflection, coaching, mentoring, and assessment (DA, 2013).

The ALDS is based on the Ends (what or purpose), Ways (how or methods), and Means (resources or tools) concept of strategic thinking (DA, 2013). The initial Ends (or desired end-state) that was discussed in the white papers that influenced the ALDS dealt with leaders understanding and practicing the mission command (MC) philosophy and the need for a mission command system that enables commanders, staffs, and units to effectively execute the MC war-fighting function (DA, 2010a, 2012k). The most recent ALDS end-state is "prepared leaders who can exercise mission command to prevail in unified land operations" (DA, 2013, p. 10). The following (Figure 5*)* provides a visual depiction of the U.S. Army's current leadership development strategy while illustrating the interconnected relationships between the three domains of operational, institutional, and self-development while explaining how training, education, and experience relate to each domain.
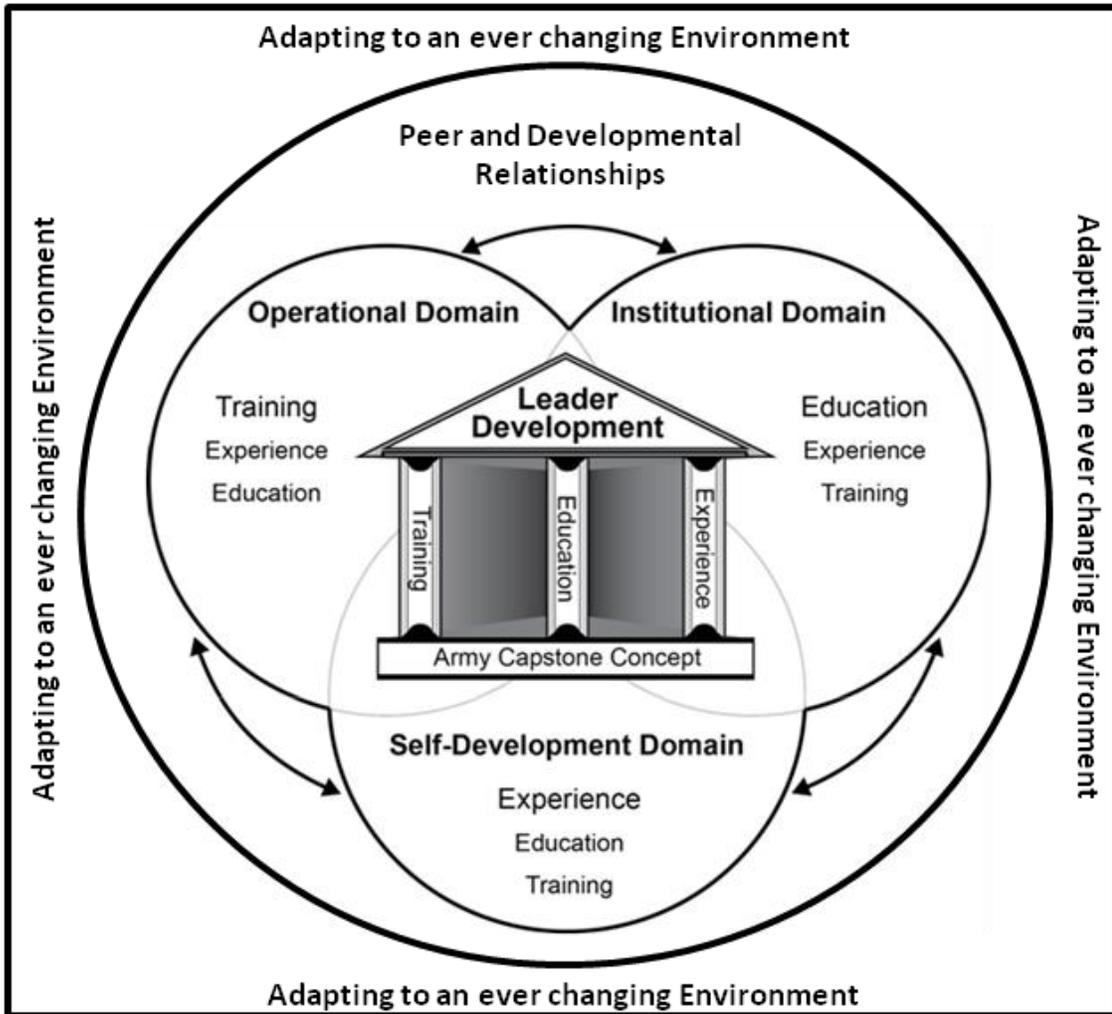
Figure 5. The U.S. Army leader development strategy. Adapted from "Army Leader Development Strategy," by Department of the Army (DA), 2013, Washington, DC: Author. p. 8. Retrieved from http://usacac.army.mil/sites/default/files/documents/cal/ALDS5 June%202013Record.pdf.

The US Department of Defense uses the acronym DOTMLPF to define the various resource options used for implementing plans like the ALDS. DOTMLPF stands for: Doctrine, Organizations, Training, Material, Leadership & Education, Personnel, and Facilities (DD, 2013). The ALDS works to incorporate many of the DOTMLPF resources (means), but it is the *Ways* (methods for implementing these resources) that can be challenging to envision and clearly understand. The start-point for comprehending the

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ALDS *Ways* (methods for leader development) are the topics of education, training, and experience. The operational domain primarily focuses on training. The institutional domain concentrates on education. Whereas, the self-development domain centers on experience (DA, 2013). However, Figure 5 helps to illustrate the reality that training, education, and experience always works in concert, and each method is an equally important pillar to the Army's Leader Development Strategy.

Regardless of component (Active, National Guard, Reserves), the U.S. Army is basically divided into the two forces called the operating force (Operational Domain) and the institutional force (Institutional Domain) (DA, 2012a). A common way to differentiate between operating and institutional force is to use the phrase deployable unites (operating) and non-deployable units (institutional). The operational force consists of various armies, corps, divisions, brigades, and battalions that conduct *operations* around the world (DA, 2012h, 2012j, 2014e, 2014f). The institutional force directly supports the operational force, and the institutional organizations provide the infrastructure required to raise, train, equip, deploy, and ensure the readiness of all Army forces. Some of the units and organizations that fall within the institutional force category are Cadet Command (ROTC), military schools like Command and General Staff College (CGSC), Training and Doctrine Command (TRADOC), Human Resource Command (HRC), United States Army War College (USAWC), and the National Training Center (NTC). Relative to other types of organizations that may be organized by manufacturing force, sales force, advertising force, etc., the structure of the U.S. Army is both similar and different. Yet, the overarching concept is the same. Organizations should structure themselves based on how to best achieve the vision, mission, and goals

of the specific organization (Druker, 1990; Magretta, 2012; Robbins, 2013).

Some examples of the leader development *Ways* (methods) in the U.S. Army's operating force are things like commander and warfighter forums, deployments and combat missions, exercises, evaluations, home station training, and sustainment training (DA, 2013). Within the institutional force, some of the leader development *Ways* include assignment practices, command selection boards, professional military education, modernization forums, and senior leader decision forums (DA, 2013, 2015b). Leader development *training* happens in both the operating force and institutional force. Whereas, leader development *education* primarily happens in the institutional force via military education opportunities. *Experience* happens regardless of assignment. The training and education domains of leader development can be standardized to a degree based on military job specialty and with educational curriculum that is focused on U.S. Army and joint doctrine (DA, 2015b). However, experience is a leader development domain that is normally not standardized and requires a personalized approach, with outcomes that are normally personality dependent (DA, 2015b).

Self Development. "Development is a process of change…. Developmental growth is the same as learning" (DA, 2015b, p. 3-5). Individual leaders being responsible for their continuous learning and growth is a key component of the U.S. Army's leader development strategy (DA, 2011b, 2011c, 2012L, 2012m, 2014f, 2015b). Regardless of the type of organization, self-development initiatives are a key component of nearly all leadership development strategies, and self-development inherently requires a personalized and specialized approach to achieve the needs of the organization and the consistently evolving developmental needs of the individual leader (Covey, 1989; Day,

2000; Maxwell, 1993).

The tasks that U.S. Army leaders must do are very similar to the responsibilities of leaders in other organizations, including operate in other countries and work within other cultures; train, lead, and care for members of the organization; exercise sound judgment and critical thinking to help accomplish missions; develop effective plans; and manage and maintain equipment and other resources (DA, 2015b; Day, 2000). U.S. Army leadership development doctrine highlights the reality that no set formula exists to help leaders choose a personalized developmental strategy (DA, 2014c; 2014i; 2015b). However, Army doctrine does provide the following list of considerations that could help leaders establish self-development goals and self-development milestones to measure progress toward those goals: personal strengths, personal developmental needs, family roles and responsibilities, current and future roles, Army needs, and personal interests (DA, 2015b).

In *Developing the Leader Within You*, Maxwell (1993) compiled a list of leadership development skills based on the following 10 principles of leadership: influence, priorities, integrity, creating positive change, problem solving, attitude, people, vision, self-discipline, and staff development. In addition, Maxwell outlined some distinctions between leaders and managers by arguing that leaders create positive change, motivate people, and establish vision, while managers focus primarily on what is required to keep the organization functioning. A key aspect of any leadership enhancing self-development strategy is the need for both self- management and self-leadership skills. To enable successful self-development, the individual must keep themselves functioning (self-management). Plus, the individual must lead themselves by having a vision, the

ability to keep themselves motivated, and the self-awareness to grow (change) in a positive direction (Maxwell, 1993).

Aristotle is accredited with the phrase "we are what we repeatedly do…. Excellence, then, is not an act, but a habit" (Covey, 1989, p. 46). In *The 7 Habits of Highly Effective People*, Covey (1989) outlined the following seven principles of self-development: personal vision, personal leadership, personal management, interpersonal leadership, empathetic communication, creative cooperation, balanced self-renewal. The commonalities between Maxwell's (1993) leadership self-development principles and those of Covey are self-evident. However, one key distinction is the fact that Covey connected each principle to human habit. Covey defined a habit "as the intersection of knowledge, skill, and desire…. Knowledge is the theoretical paradigm, the what to do and the why…. Skill is the how to do…. And desire is the motivation, the want to do" (p. 47). More than 40% of what humans do are habits (Duhigg, 2014). To grow and learn (develop) as a leader, a leader's personalized self-development plan must change at least some habits. Covey argued that to either change an old habit or create a new habit, an individual must possess all three ingredients of a habit (knowledge, skill, and desire). Hence, a leader's individualized self-development plan or an organization's self-development initiative requires a high level of self-awareness (personal knowledge), an ability to seek and receive feedback (personal skill), and the motivation to consistently want to improve (desire). Of equal importance, leadership self-development requires an instrument or a battery of instruments that provide self-awareness enhancing feedback. The U.S. Army's Self Development Domain requires feedback instruments that are used for an extended period of time to allow for pre-test/post-test assessment of individualized

growth and learning. Self-awareness is the fundamental building block of most Emotional Intelligence models and instruments (Bar-On, 1997; Bradberry & Greaves, 2013; Goleman, 1998; Mayer et al., 2004).

"Leadership is influence" (Maxwell 1993, p. 1). "Leaders lacking in self-awareness will have difficulty influencing others or attaining goals related to leader growth and development" (DA, 2012L, p. 3-6). According to U.S. Army leadership doctrine, "effective leadership begins with developing and maintaining a leader identity…. Identity refers to one's self-concept…. Leader identity refers to an individual's awareness of self as a leader" (p. 3-6). Thus, each self-development goal begins and ends with the emotional intelligence (EI) domain of self-awareness. In addition, a leader's identity is inherently rooted in the EI domain of self-awareness (Goleman, 1998; Petrides, 2010).

Tenets of Army leader development. "The Army depends upon itself to develop adaptable leaders able to achieve mission accomplishment in dynamic, unstable, and complex environments…. A robust, holistic leader development program is essential…the best development occurs when it is individualized" (DA, 2015b, p. 1-1). The U.S. Army has five tenets of leader development that are key to the organization's ability to develop adaptive leaders for a complex world. The U.S. Army's first leader development tenet is a strong commitment by the Army, superiors, and individuals to leader development (DA, 2015b). "Leadership can explain upward of 40 percent of the variance in organizational performance" (Day, 2000, p. 3). The U.S. Army's first tenet demonstrates an awareness of the importance of leadership to the organization's success in the defense of America's sovereignty. A common challenge in organizations that

produce leaders and leadership ability is finding "enough leaders who value leadership development enough to develop it" (Bunker et al., 2010, p. 155).

The second U.S. Army leader development tenet is a clear purpose for what, when, and how to develop leaders (human capital) and leadership (social capital) (DA, 2015b; Day, 2000). The U.S. Army's second tenet has proven to be challenging for nearly all organizations that strive to develop leaders (Day, 2000; Bunker et al., 2010). The Army's Warfigher Challenge #10 "Develop Agile and Adaptive Leaders" is an example of how the U.S. Army has defined a clear purpose of *what* the organization needs to develop, but the elusive *how* still needs to be discovered and established (DA, 2015a). Leadership development literature also points out that the *when* can also be perplexing because leader and leadership "development does not happen at the scale and pace required to keep pace with the ever-changing and challenging context in which organizations operate" (Bunker et al., 2010, p. 155).

The third U.S. Army tenet of leadership development is supportive relationships and a culture of learning. Leaders and managers throughout different organizations work to foster and maintain cultures of learning with various degrees of success (Crow, 2010; Druker, 1990; Kotter, 2012; Magretta, 2012; Riley et al., 2014). The fact that the U.S. Army has a sustained weakness at the leadership competency of *developing others* hints to the reality that the organization has room for improvement in a leadership development tenet that centers on supportive relationships and a culture of learning (Riley et al., 2014). "Leader development is a mindset incorporated into all organizational requirements and mission accomplishment… leaders must balance leader development against organizational requirements and mission performance" (DA, 2015b, p. 1-2). Many

organizations have a difficult time balancing the opportunity costs related to investing in leader development with the other needs of the organization (Day, 2000). Specifically, organizations similar to the U.S. Army are challenged with balancing the management and leadership needs of each team today, instead of developing the needs of the future (Bunker et al., 2010). Hence, the importance for organizations like the U.S. Army to realize that a culture of learning has to be nested into everything that the organization does daily (DA, 2015b).

The fourth principle (or tenet) is the utilization of three mutually supportive domains (institutional, operational, and self-development) that enable education, training, and experience. "The performance of duties is always an opportunity for learning while doing… any experience that shapes and improves performance enhances development" (DA, 2015b, p. 1-2). Most organizations realize understand that leader development requires training, education, and experience (Day, 2000). However, few organizations determine exactly how to maximize a return of investment on leader training programs, leader education initiatives, and leadership experience (Bunker et al., 2010; Druker, 1990).

The fifth tenet centers on the primary purpose of the present study, which is providing, accepting, and acting upon candid assessment and feedback (DA, 2015b). Feedback is necessary to guide and gauge development. "Formal and informal feedback based on observation and assessment provide information to confirm or increase self-awareness about developmental progress" (DA, 2015b, p. 1-2). Hence, this second major section of reviewed literature being titled U.S. Army Leader (human capital) Development Instruments, and not Leadership (social capital) Development Instruments.

This focused the present study on instruments that provide self-awareness enhancing feedback and not just social awareness feedback. However, just as human capital and social capital (leader and leadership) go hand in hand, so does self-awareness and social awareness because the two are mutually supportive (Cherniss & Goleman, 2001; Gardner, 1985; Goleman, 1995). Of equal importance, the Emotional Intelligence domains of self and social awareness can be improved with education, training, and experience (Abrahams, 2007; Baughman, Schwartz, Schermer, Veselka, Petrides, & Vernon, 2011; Bradberry & Greaves, 2009; Bunker et al., 2010; Cherniss & Goleman, 2001; Petrides & Furnham, 2003; Petrides, Sangareau, Furnham, & Frederickson, 2006).

Education, Training, and Experience. The Army defines both leader development and leadership development as "a process that aligns training, education, and experience to prepare leaders who exercise mission command to prevail in unified land operations" (DA, 2013, p. 6). As *Figure 5* (on page 116) depicts, the U.S. Army's Capstone Concept serves as the foundation for the organization's leader development philosophy and program. The Capstone Concept is an individualized mix of training, education, and experience. "The Army depends upon itself to develop adaptable leaders able to achieve mission accomplishment in dynamic, unstable, and complex environments…. A robust, holistic leader development program is essential…the best development occurs when it is individualized" (DA, 2015b, p. 1-1). The *Army Learning Concept for 2015* outlines the U.S. Army's initiative to improve adult education throughout the organization by delivering "an adaptive blend of learner-centric training and education which combines with experience to enable development" (DA, 2011b, p. 7). The U.S. Army's learning concept is heavily influenced by Bloom's taxonomy of

learning, as reflected in the following narrative of how the U.S. Army outlines the

differences and similarities of education and training:

> In its broadest sense, education conveys general bodies of knowledge and
>
> develops habits of the mind, applicable to a broad spectrum of endeavors.
>
> Education is largely defined through cognitive learning (defined as content
>
> knowledge and development of intellectual skills) and affective learning (defined
>
> as the manner in which people deal with things emotionally: values, motivations,
>
> attitudes, enthusiasms, feelings, appreciation), and fosters breadth of view, diverse
>
> perspectives, jointness, critical analysis, abstract reasoning, comfort with
>
> ambiguity and uncertainty, innovative thinking, and ethical
>
> reasoning, particularly with respect to complex, non-linear problems. This
>
> contrasts with training, which focuses largely through psychomotor and cognitive
>
> learning on the instruction of personnel to enhance their capacity to perform
>
> specific functions and tasks. Training and education are not mutually exclusive.
>
> (DA, 2011b, p. 10)

The purpose of this section of reviewed literature is to determine if Emotional

Intelligence should be (or is being) fostered in leaders throughout the U.S. Army with the

instruments currently used to provide self-awareness enhancing feedback. Hence, based

on the U.S. Army's definitions for education and training, it seems prudent to not focus

on After Action Reviews (AARs) and other instruments (tools or methods) that provide

feedback related to training, because affective learning is more an aspect of adult

education and experience.

Education: The U.S. Army has been directly involved with adult education since

the winter of 1777-1778, when chaplains of the Continental Army created literacy classes for Soldiers at Valley Forge (Wild, 1938). In fact, the U.S. Army has been a sustained key player in America's adult education arena. In November 1942, to assist veterans who joined the WWII war effort prior to completing high school, the US military asked the American Council of Education (ACE) to develop a battery of tests to measure high school-level academic skills. These tests evolved into what is known today as the General Education Development (GED) testing program (Zacharakis & Polson, 2012). Since WWII, the GED has allowed American veterans and American civilians the academic credentials required for certain civilian jobs and required for entrance into college. The first version of the GI Bill was created in 1944, which is another US military program that directly helps US veterans and their family members attain higher levels of civilian education and certain types of technical vocational training (Zacharakis & Polson, 2012).

In June of 2015, the U.S. Army published an updated leadership field manual (FM) titled *Leader Development* that addresses how to develop adaptive leadership (social capital) and adaptive leaders (human capital) while connecting adaptability with the concepts of self-awareness and comfort with ambiguity (DA, 2015b; Day, 2000). Also during 2015, the U.S. Army's Combined Arms Center began an initiative called Army University. Army University is an institutional force effort to bring the 86 different military education schools throughout the Army under the same leadership structure and to get all professional military education schools working and focusing on developing adaptive leaders (Hames, 2015). Army University conducts symposiums with civilian sector colleges and universities, and these workshops seek ways of improving "in

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the human dimension elements of the Army's new doctrine about critical thinking, adaptability, and innovation" (Walleman, 2015, p. A-4).

In addition to enhancing an ensuring partnership with academia, the U.S. Army is working to take a career-long, learner-centric approach to the various types of professional military education (DA, 2011b). Yet, one of the challenges to this approach is trying to align with the different roles of officers, warrant officers, non-commissioned officers (NCOs), and civilians (DA, 2011b). "Most US military training and education as practiced since World War II was largely instructor-centric, task oriented, and evaluated through performance measurement based on tasks, conditions, and standards" (Zacharakis & Polson, 2012, p. 20). Fundamentally, all of today's military personnel are problem solvers (DD, 2013). "One of the new realities of 21st-centruy warfare is that everyone must think, preparation should offer military personnel of all ranks opportunity to practice thinking" (Zacharakis & Polson, 2012, p. 21). The US Amy's professional military education and training can no longer eliminate problems by providing solutions.

Training: The U.S. Army implemented new organizational and institutional focused doctrine, new concepts in professional military education, and training changes that directly address the defined organizational need to develop adaptive leaders (DA, 2011b, 2012n). Over the past decade, the U.S. Army transitioned from a task, conditions, standards training and education concept to an "outcomes-based" model designed to foster and enable adaptability and flexibility (DA, 2011c, 2012m). After making significant education, training, published doctrine, and institutional force structure changes, perhaps the U.S. Army is currently successful at the goal of developing agile and adaptive leaders, and the organization only needs a means or an instrument that

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measures the various traits and qualities related to both leader and leadership

adaptability?

Experience: "The human mind instinctively views the world in terms of patterns,

which it recognizes based on memories of past experiences" (Jones, 1998, p. 17). When

discussing *Challenging Experiences*, we often equate that to challenging training events;

"ones that have curveballs thrown in to test our agility or mental resolve, but experiences

can come in many forms…. Anything that stretches one's capacity can be considered a

challenging experience" (DA, 2015, p. 1-3). The key point is that regardless of any

attempts to standardize leadership experiences, each individual leader will achieve a

different developmental outcome, because each individual leader will perceive the

experience differently.

Psychologists who are experts in understanding how people construct meaning in

their experiences, explain that people use diagnostic labels to organize and simplify

(Brafman & Brafman, 2008; Jones, 1998). These labels and any system of classification

work by ignoring a lot of other things. "We pay a price for these mental shortcuts, and

the baggage that comes with labeling is the notion of the blinders…and the diagnosis bias

causes us to distort or even ignore objective data" (Brafman, & Brafman, 2008, p. 75).

The U.S. Army currently uses leader evaluation and counseling instruments, a web-based

360-degree review instrument, a multi-source assessment feedback (MSAF) instrument,

and an annually required training instrument called the Global Assessment Tool (GAT)

2.0. Do those instruments accurately measure growth on the various traits that are either

consciously or subconsciously related to both the thinking (cognitive) and the emotional

(affective) mental processes related to adaptability?

Leader Development Instruments (Ways and Means)

This section of reviewed literature works to address the following question: Do the self-awareness enhancing instruments currently used by the U.S. Army accurately measure leader (human capital) growth on the various traits that are related to both the thinking (cognitive) and the emotional (affective) mental processes related to adaptability? Leader and leadership development are often interconnected, but this study primarily focuses on instruments that provide feedback to the individual and also work to develop human capital (the leader). This section also looks at current practices used by the U.S. Army to provide feedback to the individual leader, and how many of those feedback practices (ways) and instruments (means) relate to the use of technology.

"Smart technology can make us stupid" (Klein, 2003, p. 261). As the U.S. Army adapts to new information technologies, and works to leverage various forms of technology to develop both human and social capital, what are the trade-offs? Klein (2003) warned that information technology can cause three types of damage to organizations similar to the U.S. Army who are working to balance "the human and computer combination" (p. 261). New technology can "disable the expertise of people who are already skilled….it can slow the rate of learning so that it takes much longer for people to build up their intuitions and expertise….and it can teach dysfunctional skills that will actively interfere with the people's ability to achieve expertise in the future" (p. 261). Regarding the concepts of developing others and developing self, the U.S. Army has a comprehensive automation system called the Electronic Evaluation System (EES) that allows Soldiers to be rated on leadership performance and leadership potential without ever physically seeing either their rater or senior rater. In some scenarios and

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situations in the U.S. Army, geographic separation makes face-to-face counseling and evaluation unfeasible (DA, 2012n, 2013). This reality is specifically true in the U.S. Army Reserves where units are spread throughout the entire continental United States, where it is common for a platoon or company size unit to have higher headquarters that are completely on the other side of the country or other side of the world (DA, 1986, 2011a, 2011b, 2012m). Thus, it is often required in the U.S. Army for leaders to be evaluated, counseled, coached, and mentored by other leaders without meeting face to face (DA, 2012m). In some *developing others* practices in the U.S. Army, technology is leveraged to enable communication between leaders, subordinates, and peers with various degrees of success (Riley et al., 2013). Klein's (2003) warning about technology, highlights the reality that systems like EES often have unforeseen positive and negative consequences. When applying Pink's (2005) illustration of how the human brain works, the left hemisphere handles what is said, and the right hemisphere focuses on how it is said. What nonverbal cognitive and affective cues are lost when technology is used to provide feedback to leaders? Most human communication is nonverbal (Fisher & Shapiro, 2005). Because of mental heuristics, perceptions, biases, and various other mental shortcuts and habits, communication between humans regardless of context (face-to-face, written, phone, etc.) always has a nonverbal dynamic (Brafman & Brafman, 2008; DA, 2015d; Gigerenzer, 1991; Mahoney, 1977; Tversky & Kahneman, 1974).

The U.S. Army's evaluation process focuses on performance and potential (DA, 2013). Because the scope of this literature review is centered on human capital (leader development), and not specifically performance development, it is not prudent to conduct a detailed analysis of all the U.S. Army's evaluation instruments. Instead of focusing on

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the various different performance and potential evaluations that are based on different grades and categories, the focus of this section is on instruments that provide direct feedback to individual leaders that enhances self-awareness. The two instruments currently used by the U.S. Army that provide the opportunity for leaders to enhance self-awareness are the Global Assessment Tool (GAT 2.0) and the Multi-Source Assessment and Feedback (MSAF) (DA, 2014i).

Global Assessment Tool (GAT 2.0). The Global Assessment Tool (GAT 2.0) is one aspect of a much larger developmental program within the U.S. Army currently called Comprehensive Soldier and Family Fitness (CSF2). Initially, the training, education, assessment, and self-development program was called Comprehensive Soldier Fitness (CSF). In 2008, CSF was implemented during a period of increasing rates of suicide and post-traumatic stress incidents throughout the U.S. Army (Reed & Love, 2009). The CSF program was established by senior Army leaders to increase resilience and enhance performance in Soldiers, Family members, and Department of the Army (DA) Civilians (Reivich et al., 2014). As the program evolved, family was added to the end of the CSF name to help signify the fact that the purpose of the program was to "give Soldiers and their families better ways to cope" (Marsh, 2009, p. 1). The modern version of the Comprehensive Soldier and Family Fitness (CSF2) program is still designed to meet the initially intended purpose of the program, "to improve performance in combat and head off the mental health problems, including depression, post-traumatic stress disorder and suicide, that plague about one fifth of troops returning from Afghanistan and Iraq" (Marsh, 2009, p. 1).

Suicide has been an enduring problem for serving members of the US military

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and for America's Veterans. According to a study conducted by the US Department of Veterans Affairs (VA), an average of 20 Veterans die by suicide each day (VA, 2016). In 2014, "Veterans accounted for 18% of all deaths by suicide among US adults and constituted 8.5 percent of the US adult population ages 18 and up" (VA, 2016, p. 4). After adjusting for differences in age and gender, risk for suicide was 21% higher among Veterans when compared with US civilian adults (VA, 2016). "The goal of the CSF2 strategy is to help prevent potential problems due to stress by shifting the focus from intervention to prevention, from illness to wellness" (Lester, Harms, Herian, Krasikova, & Beal, 2011, p. 1). Per General George Casey, Jr., the Chief of Staff of the Army, when the initial CSF program was implemented, CSF2 was "designed to bring mental fitness up to the same level that we (the U.S. Army) give to physical fitness" (Reed & Love, 2009, p. 1). Is mental fitness connected to Emotional Intelligence? There is an emotional dimension to almost every thought we have and every decision we make" (Jones, 1998, p. 13).

The overarching goals of the CSF2 program are to help Soldiers and family members increase their holistic fitness strength and develop psychological resilience (Reed & Love, 2009). The CSF2 program focuses on the following five dimensions of human strength: emotional, social, spiritual, family, and physical (Reed & Love, 2009; Reivich et al, 2014). Today's CSF2 program also has a component called Ready and Resilient, and a website called ARMYFIT, which helps explain why the program is most commonly referred to as the Army's Resiliency Training by most members of the U.S. Army and by some of the academics who conduct studies on the effectiveness of the U.S. Army's CSF2 program (Harms, Herian, Krasikova, Vanhove, & Lester, 2011).

Even though *Resilience* is one of the four leadership attributes (what a leader is) within the *Presence* category of the Army's Leadership Requirements Model (ALRM), CSF2 is not officially part of the U.S. Army's leadership development program within the context of the organization's current leadership development strategy and leadership doctrine (DA, 2012L, 2013, 2015b). The U.S. Army currently has three different definitions for the word resilience that helps to highlight a lack of synergy between the CSF2 program and the U.S. Army's leadership development strategy. The CSF2 program's definition for resilience is "the ability to grow and thrive in the face of challenges and bounce back from adversity" (Reivich et al., 2014, p. 5). The Army's Ready and Resilient published definition of resilience is "the ability to withstand, recover, and grow in the face of stressors and changing demands" that is slightly different than the Army's Leadership doctrinal definition of "showing a tendency to recover quickly from setbacks, shock, injuries, adversity, and stress while maintaining a mission and organizational focus" (DA, 2012L, p. 4-2). The key point is that the CSF2 program is not directly nested within the Army's Leadership Development program or strategy, and most key stakeholders throughout U.S. Army have not yet realized that the two programs directly support each other. The definitions for resilience might be slightly different, but the U.S. Army's need for resilient team members remains universal regardless of the intent or purpose of the different programs throughout the organization. The U.S. Army requires all leaders to be resilient (DA, 2012L), hence, the key word of requirements in the ALRM, and the reminder that resiliency is not an optional developmental trait for all leaders throughout the organization. Since 2008, the evolving CSF2 program has helped the U.S. Army enhance resiliency for all members of the

organization both uniformed Soldiers and civilians regardless of rank, title, or leadership role (Harms et al., 2013; Reed & Love, 2009; Reivich et al., 2014).

Comprehensive Soldier and Family Fitness (CSF2) also resonates with another ALRM *Presence* attribute, *Fitness,* which is defined as "having sound health, strength, and endurance that support one's emotion health and conceptual abilities under prolonged stress" (DA, 2012L, p. 4-2). For the purposes of the present study, the key aspect of the U.S. Army's Leadership *Fitness* definition is *emotion health and conceptual abilities*, because it helps to highlight the interwoven connections that Emotional Intelligence has with the U.S. Army's leadership doctrine, the U.S. Army's Human Dimension Concept, and the U.S. Army's ARMYFIT program (DA, 2012L, 2014c; Goleman, 1995; Reivich et al, 2014). *Fitness* and *emotional health* requires emotional literacy (being able to read and understand emotions within yourself and others), and *conceptual abilities* (intangible abilities) could be defined as any of the items outlined in Goleman's EI models (see Figure 1 on page 17) (Goleman, 1995; Goleman et al., 2013). All four of the leadership attributes that fall within the *Presence* category of the ALRM, *Bearing, Confidence, Fitness,* and *Resilience,* are based on "how others perceive a leader based on the leader's outward appearance, demeanor, actions and words" (DA, 2012L, p. 4-2). Few things shape perceptions about a leader more than a leader's ability to manage their emotions while leading (influencing others) through stressful situations (DA, 2012L; Goleman et al., 2013; Maxwell, 1993).

The U.S. Army's ARMYFIT web-site, Ready and Resilient initiative, Global Assessment Tool (GAT), Master Resiliency Trainer (MRT) train the trainer program, and mandated unit and post-level Resiliency training fall within the umbrella program called

CSF2 (DA, 2014i; Harms et al., 2013; Lester et al., 2011). The goals of the

multidimensional CSF2 program align with the following three "mutually reinforcing and

overlapping" central ideas (desired outcomes) of the U.S. Army's Human Dimension

Concept: optimizing job performance, optimizing holistic health and fitness, and

maximizing Army professionals (DA, 2014c, p. 9). Specifically, CSF2 directly supports

the U.S. Army's Human Dimension desired outcome of *optimizing holistic health and*

fitness. "The Army cannot achieve improved social and interpersonal capabilities (within

the optimized job performance outcome) and improved mental and emotional health

(within the optimized holistic health and fitness outcome) without ensuring the

inculcation of Army values and improved ethical decision making" (DA, 2014c, p. 10).

Instilling organizational values and improving decision making requires enhancing self-

awareness and self-management talents both of which are foundational competencies

within the Positive Thinking and the Emotional Intelligence fields of study (Goleman,

2011; Reivich & Shatte, 2002; Reivich et al., 2014).

The CSF2 program "draws on the work of Aaron Beck, founder of cognitive

behavioral therapy, and Martin Seligman, a founder of positive psychology" (Marsh,

2009, p. 1). Many aspects of the CSF2 program are adaptations from the Positive

Thinking science and research conducted by the Penn Resiliency Project at the University

of Pennsylvania's Positive Psychology Center (Reivich & Shatte, 2002; Reivich et al.,

2014). Building on decades of research helped Penn's Resiliency Project identify that

"the number one roadblock to resilience was not genetics, not childhood experiences, nor

a lack of opportunity or wealth" (Reivich & Shatte, 2002, p. 11). Instead, the number one

roadblock to resilience was cognitive style, which the Penn University scientists refer to

as "thinking style" (Reivich & Shatte, 2002). Thinking style is fundamentally the same

as Senge's (1990) mental models, Mahoney's (1977) mental tendencies, the U.S. Army's

thinking challenges (DA, 2015c), and Gingerenzer's (1991) mental heuristics. The

Positive Thinking field of study is based on the following four pillars: life change is

possible, thinking is the key to boosting resilience, accurate thinking is the key, and

refocus on human strengths (Reivich & Shatte, 2002). The four pillars are modern

extensions of Aaron Beck's cognitive behavior therapy who, and it is important to point

out that Beck "established his Center for Cognitive Therapy at the University of

Pennsylvania" (Reivich & Shatte, 2002, p. 53).

In 2008, the U.S. Army paid $117 million for the emotional resiliency training

program (known today as CSF2) that was modeled on the research and application

techniques of the University of Pennsylvania's Positive Thinking program (Carey, 2009),

a program proven to reduce "mental distress in some children and teenagers" (Carey,

2009, p. 3). The U.S. Army contracted with academia to help develop, implement, and

assess a resiliency enhancing program that had been used previously for middle school

kids (Carey, 2009). The initial 105-question Global Assessment Tool (GAT) was the

primary instrument (means) to determine if the U.S. Army's desired ends of increasing

resiliency throughout the ranks were being achieved (Carey, 2009). As of 2018, a total of

four reports were generated on the U.S. Army's resiliency project, and each report used

data generated from the initial version of the GAT (Harms et al., 2013). The second

report titled *Positive Performance Outcomes in Officers* focused on the GAT measured

dimensions of emotional and social fitness, and compares the GAT scores of senior Army

officers who were selected for promotion relative to peers who were not promoted

(Lester et al., 2011). A key discovery from the second report was that "Brigadier

Generals display higher levels of Emotional Fitness than Colonels not promoted" (Lester

et al., 2011, p. 11). Hence, based on whatever subjective and objective criteria were used

for Brigadier General promotion boards, the second report identified that emotional

fitness may be a key reason for leadership success at the highest levels of the U.S. Army

rank structure. Other key takeaways among the Emotional Fitness subscales related to

those senior ranking U.S. Army officers who were selected for promotion and had

significantly better coping skills, less catastrophic thinking, fewer negative emotions,

more positive emotions, and being more optimistic (p. 11). Based on the outcomes of the

four reports, there is "now sound scientific evidence that the Comprehensive Soldier

Fitness (CSF) program improves the resilience and psychological health of Soldiers"

(Lester et al., 2011, p. 1). The self-reported outcomes on the GAT over an extended

period indicate that Soldiers exposed to resiliency training normally have an increased

ability to "bounce back" from adversity (Harms et al., 2013).

        A key enabler of the U.S. Army's CSF2 program is the Master Resiliency Trainer

(MRT) course. The MRT course provides 10 days of Resiliency education to Soldiers,

family members, and Department of the Army (DA) civilians (DA, 2014i). MRT is a

train the trainer course that is designed to enhance thinking and focuses on the five

dimensions of strength: emotional, social, spiritual, family, and physical (Reivich et al.,

2014). Graduates of the MRT course earn a skill identifier and the credentials required to

serve as resiliency trainers for both unit and installation level training (DA, 2014i). The

six MRT competencies that contribute to resilience are self-awareness, self-regulation,

optimism, mental agility, strengths of character, and connection (Reivich et al., 2014).

Relative to Goleman's Emotional Intelligence Model (Figure 1), the MRT competencies of self-awareness and self-regulation (self-management) are a direct match with Goleman's personal competencies. Plus, Goleman's EI model has optimism as a trait within the domain of self-management. The *mental agility* MRT competency could be directly supporting the U.S. Army's initiatives related to developing adaptive leaders for a complex world, and the GAT could be assessing the organization's progress in that arena because the initial and current version of the GAT has three items that assess adaptability (Lester et al., 2011, p. 3). Also measured within the Emotional Fitness subscale of the initial version of the GAT were the following: bad coping, good coping, catastrophizing, character, depression, optimism, and positive/negative affect (Lester et al., 2011, p. 3). The MRT *strengths of character* competency is supported by the Authentic Happiness research-based online survey which is based on work conducted by Peterson and Seligman (Reivich et al., 2014). The Authentic Happiness instrument is also called the Values in Action (VIA) Survey of Character Strengths, and is similar to Rath's (2007) *Strength Finder 2.0* in that both self-report (self-efficacy) instruments work to provide self and social awareness about character strengths (or talents). The MRT competency of *connection* is fundamentally another way of labeling the Goleman EI domains of Social Awareness and Relationship Management within Social Competence (Goleman, 2010; Reivich et al., 2014). Graduates of the MRT course learn how to facilitate training on 14 different skills that support the six MRT competencies. The 14 different skills (or tools) are named the following: goal setting, hunt the good stuff, energy management, avoiding thinking traps, detecting icebergs (core beliefs), problem solving, put it in perspective (stop catastrophic thinking), mental games, real-time

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resilience, identifying character strengths, character strengths challenges, assertive

communication, effective praise, and activating thoughts connected to the consequences

your thoughts generate (ATC Model) (Reivich et al., 2014). The two MRT skills that are

designed to foster self-awareness are the ATC Model and detecting icebergs (Reivich et

al., 2014). The ATC Model is based on "what an enormous body of research now

confirms… cognitions cause emotions, and emotions matter in determining who remains

resilient and who succumbs" (Reivich & Shatte, 2002, p. 52). The ATC Model,

"originally developed by Albert Ellis, highlights the link between Thoughts and

Emotions/Reactions…. You use the ATC model to identify the Activating Event

(trigger), your Heat-of-the-Moment Thoughts (what we say to ourselves immediately

following the trigger), and the Consequences (emotions and reactions) your Thoughts

generate" (Reivich et al., 2014, p. 121). The ATC Model is similar to Schraw's (1998)

metacognition component of regulation of cognition. Marcus Aurelius described

emotional regulation approximately 2,100 years ago when he stated, "if you are

distressed by anything external (or internal), the pain is not due to the thing itself, but to

your estimate of it…and this you have the power to revoke at any moment" (Aubele,

Wenck, & Reynolds, 2011, p. 9). The ATC Model has the potential to help individuals

gain control of their emotions (emotional regulation), if the individual is capable of

accurately labeling their emotions (emotional literacy) while they are experiencing them

(Reivich et al., 2014; Reivich & Shatte, 2002). According to some studies, only 36% of

people have the ability to accurately identify their emotions as they happen (Bradberry &

Greaves, 2009). Relative to some other cognitive science schools of thought, the ATC

Model partially contradicts aspects of the two systems theories (Kahneman, 2011; Pink,

2009; Stanovich & West, 2000). Specifically, the ATC Model is contrary to the

cognitive science understanding that emotions reside and are generated in the more

primitive part of the human brain (System 1), and System 1 continuously feeds the more

logical and recently evolved parts of the brain known as System 2 (Kahneman, 2011).

Hence, the ATC Model is a tool or skill that could prevent an individual from being

emotionally hijacked only if the individual is able to correctly label an emotion in real

time and able to have their System 2 (logical part of their brain) quickly influence System

1. Within the purpose of the present study, the important point is the reality that the ATC

Model and many of the other 13 skills taught within the MRT program could be

enhanced with improved emotional literacy (i.e. Emotional Intelligence). Since the Trait

Emotional Intelligence Questionnaire (TEIQ) measures well-being, self-control,

emotionality, and sociability, the TEIQ might be the ideal feedback tool for the U.S.

Army's CSF2 program (Siegling, Saklofske, & Petrides, 2015; Petrides, 2009).

Another key component of the CSF2 program is the on-line survey called the

Global Assessment Tool (GAT) (Lester et al., 2011). The GAT is required annually for

all members of the U.S. Army (DA, 2014i). Specific to the overarching purpose of the

present study, which is to help the U.S. Army discover, develop, and enhance means

(instruments) that help produce adaptive leaders for a complex world, the discovery that

the GAT has three questions that measure adaptability is paramount. Those three

questions are based on a five-point Likert scale ranging from "not like me at all" to "very

much like me" and the three items are "based on a measure of flexibility developed in

2001 by Park and Peterson" (Lester et al., 2011, p. 3). The three adaptability questions

on the GAT are the following that are each based on the prompt, "How well do these

statements describe you": I am good at changing myself to adjust to changes in my life; It is difficult for me to adjust to changes (which seems to be a reverse scored question); and I can usually fit myself into any situation (Lester et al., 2011). The fact that only aggregate dimensions scores are reported to the individuals who take the GAT prevents participants from gaining self-awareness enhancing feedback on adaptability growth. Hence, GAT survey participants only get results feedback on the entire dimension of Emotional Fitness and not on the following sub-scales that make up the Emotional Fitness index: adaptability, bad coping, good coping, catastrophizing, character, depression, optimism, and positive/negative affect (also known as PANAS) (Lester et al., 2011). Prior to 2016, the GAT was changed to the GAT 2.0, and some questions were added which related to physical health, and other questions were removed. The initial version of the GAT only measured the four dimensions of emotional, family, social, and spiritual fitness (Harms et al., 2013; Lester, et al., 2001). Based on information provided on the CSF2's ARMYFIT website, the GAT 2.0 questions that were added focus on sleep, nutrition, physical activity, and lifestyle, whereas the questions that were removed came from Emotional and Social Resilience areas of the GAT. Yet, the fact that the GAT and the GAT 2.0 have Emotional Fitness items that directly relate to many of the items measured on various Emotional Intelligence measurements indicates that perhaps the U.S. Army has already implemented EI into the organization's leader development strategy without realizing it.

The monthly unit-level training events, annual GAT survey requirement, and Master Resiliency Trainer education of the CSF2 program are good examples of how the U.S. Army implements training, education, and self-development to achieve a desired

developmental outcome (DA, 2014i). The MRT train the trainer program is key because

it is one of the U.S. Army's primary *ways* (practices) for achieving desired organizational

ends (increased resilience and psychological health) by using the GAT 2.0 as the primary

means (instrument) to measure effectiveness of the various practices and progress toward

the desired program goals. Unlike many aspects of the Army's leader development

program which tend to target Soldiers just while attending professional military

education, all Soldiers are directly exposed to CSF2 program via required monthly unit-

level training lead by the MRTs who always focus on a standardized curriculum based on

the six core competencies and 14 skills. The annual GAT assessment allows for

individuals to gage their development from the MRT lead training (DA, 2014i), but

perhaps other instruments could also be used to provide more comprehensive feedback?

"While not much can be done to improve your IQ, a lot can be done to improve your

resilience, a key component of Emotional Intelligence" (Reivich & Shatte, 2002, p. 18).

Petrides' (2009) Trait Emotional Intelligence (EI) Questionnaire (TEIQ) measures

numerous facets (traits) that could support both the U.S. Army's CSF2 program and U.S.

Army's Leader Development strategy. Some of the TEIQ measured facets include the

following: emotion perception (self and others), emotion expression, emotion

management in others, emotion regulation, relationships, self-esteem, social awareness,

stress management, trait empathy, trait happiness, and trait optimism (Cooper & Petrides,

2010; Petrides, 2009; Petrides & Furnham, 2006). Hence, many of the same overlapping

human characteristics (traits) emphasized or required in the U.S. Army's CSF2 and

Leadership Development programs, are purposefully measured in the TEIQ (Gokeen,

Furnham, Mavroveli, & Petrides, 2014; Sevdalis, Petrides, & Harvey, 2007; Siegling,

Nielson, & Petrides, 2014). Aspects of the TEIQ could provide self-awareness enhancing feedback to individuals on both their development in the six MRT competencies and in other leadership required traits. A strong argument could be made that the U.S. Army is already doing a degree of adaptive leadership development and assessment via the GAT 2.0 and aspects of the MRT program.

Multi-Source Assessment and Feedback (MSAF). Formal performance ratings are a product of the industrial revolution when psychologists began to look for better ways to hire, train, and measure job performance (Bracken, Timmreck, & Church, 2001). The relatively new concept of multi-source assessment falls within the broader category of formal performance ratings, a category that has been evolving within industrialized and post-industrial societies since very early in the 20th century (Bracken, Timmreck, & Church, 2001; Paterson, 1922). Prior to World War I, an American pioneer in the applied psychology field named Walter Dill Scott developed a popular method of rating industrial worker abilities called the man-to-man comparison scale (Paterson, 1922). According to Paterson (1922), Scott modified his industrial worker scale for rating efficiency of Army officers while serving as director of the Committee on Classification of Personnel in the United States Army, and that new rating scale helped the U.S. Army transition from a promotion concept based on the seniority system to promotions based on merit.

Kornhauser (1923) suggested that performance ratings could be based on two principal sources of information or the two criterion of production records and ratings, and that production records were more objective. However, in some scenarios, production records are not always available and do not always measure what needs to be assessed (Kornhauser, 1923; Paterson, 1922). Hence, in the U.S. Army, the production

records (or mission accomplishments) of a particular team or unit may be a criterion for rating of overall leadership effectiveness within a team, but not necessarily the ideal principal source of information for developmental feedback to each individual leader of a team. Kornhauser also discovered that ratings were basically just personal opinions that had numerous shortcomings. Some applied psychologists during the early 20th century argued that the term *rating scale* was a poor description for any performance rating because of implied qualities of accuracy that no *opinion record* would be able to generate (Bracken et al., 2001).

During World War II, the U.S. Army's officer evaluation system produced extremely inflated performance ratings which made it difficult to disguise who should be promoted (Bracken et al., 2001). To help the U.S. Army resolve this problem, Sisson (1948) devised the *forced choice* method of gathering supervisory ratings. Forced choice is a way of designing survey questionnaires based on a prescribed menu of options, and is basically the opposite of an open-response format (Patton, 2002; Slavin, 2007). The forced choice supervisor ratings produced rating scores that were normally distributed, and the U.S. Army adopted the method for promoting numerous senior ranking officers for the rapidly mobilizing World War II force (Sisson, 1948).

After World War II, the US military continued to examine a variety of rating sources and assessment techniques. Williams and Leavitt (1947) conducted one of the first studies of the predictive validity of peer ratings using Marine Corps officers as the sample. The researchers concluded that peer evaluations were more valid predictors of success in officer candidate school more than other more objective assessments, and that peer evaluations were more valid predictors of future performance than supervisor

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ratings. Another study on military officer candidates by Wherry and Fryer (1949) also

concluded that peer ratings were a better measure of leadership than the criteria of

academic grades and instructor ratings. The research on peer ratings "offers compelling

evidence in support of their reliability and validity; peer ratings predicted such diverse

criteria as Officer Candidate School performance, success in flight training, and

leadership effectiveness (Bracken et al., 2001).

Mental heuristics, thinking traps, cognitive biases, and various other errors to

judgment can often undermine the peer and supervisor rating process (Bracken et al.,

2001). The following are some of the most common rater biases: first impression

(primacy effect), halo effect, pitchfork effect, spillover effect, and recency effect

(Kahneman, 2011; Pink, 2009; Robbins, 2013; Senge, 1990; UFMCS, 2015). The halo

effect is a tendency to rate an individual uniformly high in other traits if that individual is

exceptionally high in one particular trait that is highly valued by the rater (Bracken,

Timmreck, & Church, 2001; UFMCS, 2015). The pitchfork effect is the opposite of the

halo effect, and is sometimes called the horn effect within management and psychology

literature (Drucker, 1999; Hersey et al., 1996). The spillover effect is the tendency to rate

an individual's present performance based on past performance (Robbins, 2013; Senge,

1990). Recency effect is the rater tendency to over or under value the most recent events

(UFMCS, 2015).

Supervisor ratings. Despite known rater biases, the U.S. Army currently has a

supervisor evaluation concept that allows a rater (normally immediate supervisor) to

provide an assessment on performance, and a senior-rater that provides a judgment on

potential (DA, 2012L, 2015d). The evaluation formats and criteria are different based on

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categories like commissioned officers, warrant officer, noncommissioned officers, and civilian. Plus, evaluations are slightly different based on rank levels within each category (DA, 2014d, 2014e). Most of the performance criteria for all the various types of evaluations currently used throughout the organization are rooted in the U.S. Army's Leadership Requirements Model (DA, 2012L, 2012d, 2014h). Regardless of rank or specialty, the organization's evaluation criteria for potential are more subjective than the performance criteria (DA, 2014d, 2014h). In the private sector, "those executives who lacked emotional intelligence were rarely rated as outstanding in their annual performance reviews, and their divisions underperformed by an average of almost 20%" (Goleman, 2000, p. 3).

Peer ratings. Kane and Lawler (1978) conducted a review of nearly 30 years of literature on peer ratings and "found the data encouraging with respect to the reliability, validity, and freedom from bias of peer-assessment methods; they concluded that peer assessments are tapping important performance-related variance" (p. 556) However, other researchers of peer ratings noted that peer feedback is best used for developmental purposes instead of for formal evaluations because of "intragroup conflict" (McEvoy & Butler, 1987, p. 789). In addition to mental biases, all forms of feedback or ratings by either peers, subordinates, and supervisors can be negatively influenced by egos, agendas, and personality differences (DA, 2015d; Kane, & Lawler, 1979; McEvoy & Butler, 1987).

Multi-source ratings. Edwards, and Ewen (1996) discovered that more than 95% of the Fortune 2000 companies used some form of multisource feedback (MSF). In the private sector, the two primary organizational purposes for using MSF is either as a tool

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for individual development or as a tool to complement performance management (DA, 2015e; Edwards & Ewen, 1996; McEvoy & Butler, 1987). According to Chief of Staff of the Army, General Raymond Odierno, "multi-dimensional feedback is an important component to holistic leader development…. By encouraging input from peers, subordinates, and superiors alike, leaders can better see themselves and increase self-awareness" (DA, 2015e, p. 1). The purpose of the U.S. Army's current multisource feedback program "is to promote self-awareness and individual development based on 360-degree feedback provided to the leader…. Improved self-awareness leads to skill improvement, adaptability, and better performance" (DA, 2009, p. 1). The U.S. Army's multisource assessment and 360-degree feedback programs are key aspects of the organization's goals to develop adaptive leaders for a complex world (DA, 2009, 2012L, 2014b, 2014g, 2014i).

The U.S. Army started a Multi-Source Assessment and Feedback (MSAF) program pilot in February 2004 to test and demonstrate the value of 360-degree assessments (from subordinates, peers, and superiors) for leader development (DA, 2009). The results of the MSAF pilot program showed that 97% of participants believed the 360-degree developmental feedback concept to be worthwhile, and the U.S. Army's current web-based MSAF tool was established in 2007 (DA, 2009). In 2011, the MSAF was added as part of the officer evaluation system, but only in the context that raters had to acknowledge on an officer's evaluation report that a MSAF was initiated (DA, 2014i). Thus, the results of a MSAF are not used as part of the rated officer's formal performance and potential evaluation, and the purpose for adding MSAF to the commissioned officer rater evaluation process is centered on the self-development domain of the organization's

leader development strategy instead of the operational and institutional domains (DA, 2013, 2014i). Today, the MSAF is available to all the categories of leaders throughout the U.S. Army, including commissioned officers, noncommissioned officers, warrant officers, and DA civilians (DA, 2014i, 2015e). Plus, the U.S. Army's current MSAF program is free for all participating individuals throughout the Active and Reserve components (DA, 2015e).

The MSAF addresses eight personal attributes that are associated with leadership and teamwork (DA, 2015e). The eight feedback categories of the MSAF are trust, tough-minded, teamwork, social confidence, resourcefulness, leadership motivation, intellectual capacity, and achievement-seeking (DA, 2009, 2013, 2015e). The MSAF's eight categories are rooted in U.S. Army leadership doctrine but do not exactly align with the leadership attributes and competencies within the Army's Leadership Requirements Model (DA, 2012L, 2015b). The MSAF allows leaders to conduct a self-assessment and then self-select subordinates, peers, and superiors to complete assessments of the leader (DA, 2013). One of the key self-awareness enhancing aspect of tools like the MSAF is the opportunity for an individual to receive feedback from others relative to how they see themselves, and often there are substantial gaps between self-efficacy (or leadership identity) and the perceptions of others (Edwards, & Ewen, 1996).

Self-Awareness and Blind Spots

The following are some of the definitions discovered throughout leadership and personal development literature on the concept of self-awareness. "Self-awareness is your ability to accurately perceive your own emotions in the moment and understand your tendencies across situations" (Bradberry & Greaves, 2009, p. 24). "The ability to

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identify thoughts, emotions, and behaviors, particularly counterproductive patterns;

remaining open and curious" (Reivich et al., 2014, p. 31). "Understanding how our values

and beliefs affect how we think and how that differs for others" (UFMCS, 2015, p. 6).

"A self-aware person has dedicated introspective time to acknowledge personality traits,

personal values, habits, psychological needs and emotions that drive behaviors"

(UFMCS, 2015, p. 10).

Bradberry and Greaves (2012) core and adaptive leadership skills (*Tables 5 and 6*

on pages 94-95) outlines 22 leadership traits. Ten of the skills are defined as core

leadership skills (*Table 5*), and 12 are defined as adaptive leadership skills (*Table 6*).

One of the adaptive leadership traits or skills is self-awareness within the Emotional

Intelligence domain (Bradberry & Greaves, 2012). Bradberry and Greaves (2012) used a

large cross section of industries to implement a 360-degree feedback process on the 22

different leadership skills from direct reports (subordinates), peers, and bosses. Table 8

helps to illustrate the areas with the biggest gaps relative to how individuals rate

themselves (self-efficacy or leadership identity) compared to the rated perspectives of

others on the same traits.

Table 8

Top 5 Gaps in Leaders Awareness as Rated by Others

DIRECT REPORTS	PEERS	BOSS(ES)
1. Self-Awareness 2. Information Sharing 3. Social Awareness 4. Outcome Concern 5. Developing Others	1. Self-Awareness 2. Information Sharing 3. Outcome Concern 4. Developing Others 5. Social Awareness	1. Self-Awareness 2. Information Sharing 3. Social Awareness 4. Values Differences 5. Outcome Concern

Note. Adapted from "Leadership 2.0," by T. Bradberry, & J. Greaves, 2012. San Diego,
CA: TalentSmart, p. 12.

"The fact that leaders' greatest overestimations are limited to the adaptive leadership skills shows how tough these skills are to master and how few leaders have honed their skills adequately" (Bradberry & Greaves, 2012, p. 12). Specifically, leaders overestimate their strength in the adaptive leadership trait of self-awareness and relative to feedback from direct reports, peers, and bosses a leader's self-awareness is viewed as a leader's biggest weakness.

The cornerstone for developing and enhancing critical thinking skills and adaptive leadership abilities is learning how to reflect and think critically about yourself (Bradberry & Greaves, 2012; Covey, 1989; DA, 2015b). Thus, a leader increasing self-awareness about their mental heuristics, their conscious (system 2) and subconscious (system 1) biases, their openness and willingness to change, their needs and goals, their strengths and weaknesses, their intrinsic and extrinsic motivators, and their core values are all key variables related to leader development (Crommelinck & Anseel, 2013; Brafman & Brafman, 2008; DA, 2015b; Heifetz et al., 2009; Jones, 1998; Sherman, 1994). Everyone sees the world from where they are sitting, and fundamentally everyone has their own unique concept of reality (Fisher & Shapiro, 2005). The filters for reality are connected to our self-concept. "Everything we do or say, everything we hear, feel, or otherwise perceive, is influenced by how we see ourselves" (Brouwer, 1964, p. 1). Bradberry and Greaves (2012) define self-awareness as "the ability to accurately perceive your emotions in the moment and understand your tendencies across situations" (p. 8). Self-awareness is a foundational skill of emotional intelligence, and "83% of those who test high in self-awareness are top performers" (p.135) within their organization. Of equal importance, it is a safe assumption that those with high levels of self-awareness are

usually more talented at establishing, building, and maintaining trust and mutual trust in

all four of the U.S. Army's paradigms of trust and in the fifth paradigm of trusting

yourself both in character and in competency. "People high in self-awareness are

remarkably clear in their understanding of what they do well, what motivates and satisfies

them, and which people and situations push their buttons" (Bradberry & Greaves, 2012,

p. 24).

      Blind Spots. According to Stone and Heen (2014), everyone has "blind spots" or

things that we are not able to see about ourselves without actively seeking and accepting

critical feedback. The trick is to purposefully seek out criticism and insights about the

things that only others can observe about you. A key aspect of self-awareness is being

able to identify and accurately label emotions (Fisher & Shapiro 2005; Sewell, 2014).

Emotions are a key aspect of who you are as a team member, leader, follower, peer, and

family member. Even the *Star Trek* character Spock, one of popular culture's most

logical characters, had emotions and he was only half human. According to some

studies, only 36% of people can accurately identify their emotions as they happen

(Bradberry & Greaves, 2009).

      The ability to accurately label emotions as they occur and clearly understand

your emotional habits are the basic building blocks of self-awareness (Goleman, 1995).

Everyone sees the world from where they are sitting, everyone has their own reality, and

each individual perceives the world form their own window (Fisher, Ury, & Patton,

2011). Most people think that they are very self-aware, but research using 360-degree

review data highlights the fact that self-awareness is the adaptive leadership skill that

leaders tend to overestimate their abilities in (Bradberry & Greaves, 2012). Not only is it

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common for leaders to overestimate their level of self-awareness, but feedback from direct reports, peers, and bosses often reveals that the other adaptive leadership traits directly related to emotional intelligence are usually identified by others as an individual's weakest aptitudes (Bradberry & Greaves, 2012). Hence, as leaders and team members, the one thing we assume we know the most about (ourselves) happens to be the one area that others feel we are the most ignorant.

As an organization, the U.S. Army fundamentally teaches leadership via modeling (DA, 2012L). Hence, the importance of "leading by example" in the Army's Leadership Requirements Model, but modeling is not leading from within (Covey, 1989). Most people have witnessed the leader who steps outside themselves trying to emulate a leadership style or method that clearly did not represent their sense of identity or natural personality. Authentic leadership begins at the core and truly being a lifelong learner about the one topic you assume you know the most about—yourself (DA, 2015b). Authentic leadership requires consent reflection and the deliberate goal to gain self-awareness (Bradberry & Greaves, 2012).

Reflection. Covey (1989) addressed the issue of self-reflection as the habit of sharpening the saw. Gardner's (1985) Intrapersonal Intelligence is rooted in self-awareness. Self-awareness is the start point for leading from within, and successfully using the power of emotions to influence others (Goleman et al., 2013). According to Adaptive Leadership Theory, a fundamental aspect of adaptive leadership is not thinking that everything is broken and seeking a wholesale transformation (Heifetz et al., 2009). Instead, the key to adaptive leadership is small incremental changes based on being able to process new information and having a solid understanding of what your core is as an

individual and as a leader. Clearly and accurately understanding your core requires a

consistent analysis, self-reflection, and actively seeking critical feedback (Heifetz et al.,

2009; Stone & Heen, 2015). Leadership starts from within, and understanding your core

requires self-awareness. Regardless of your formal education level, years of experience,

personality type, or demographic background, leaders are human and all humans have

emotions (Jones, 1998). Without a sustained and deliberate attempt to understand

emotions via reflection, a leader will probably forever stay in the category of 64% of

humans who do not have situational awareness about the one thing that they "assume"

that they know the most about—themselves (Bradberry & Greaves, 2012). Emotions are

complex variables that require constant analysis and reflection (Dalgleish, & Power,

1999). Of equal importance is our ability to gain awareness about our emotions and how

emotions influence our conscious and subconscious behaviors, decisions, and biases

directly relates to our ability to trust ourselves, trust others, and facilitate trust throughout

the team (Cangemi et al., 2005). "The unexamined life becomes a liability…. Leaders

need to heed the voice within" (Sherman, 1994, p. 9). "Being self-aware means having

insight into how one learns, and the thought patterns and strategies that are typically used

when thinking" (DA, 2015b, p. 5-2).

        "Reflection is probably the most important part of the developmental process and

the most misunderstood and least applied…. As soon as we complete the latest task,

assignment, or mission and no matter how challenging it was, we move immediately to

the next task" (DA, 2015b, p. 5-2). Reflection includes feedback, coaching, mentoring,

and self-reflection (DA, 2015b). Current U.S. Army leadership doctrine identifies the

necessity for leaders to constantly assess themselves and examine what they believe and

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who they are. "Self-aware leaders analyze themselves and ask hard questions about experiences, events, and their actions…. They should examine their own behavior seriously…. Competent and confident leaders make sense of their experience and use it to learn more about themselves" (DA, 2012L, para. 7-46).

U.S. Army Leader Development Section Summary

The U.S. Army's strategy to develop adaptive leaders for a complex world is nested within the operational, institutional, and self-development domains (DA, 2013). The U.S. Army has five tenets of leader development that seek to make the most of an individualized mix of education, training, and experience (DA, 2015b). Although leader and leadership development are mutually beneficial, there is a distinct difference between developing human capital (leader) and developing social capital (leadership) (Day, 2000). Leader development centers on informing and enhancing self-awareness, self-regulation, and self-motivation (Covey, 1989; Day, 2000; Goleman, 2000). Hence, leader development requires intrapersonal feedback that enables leading from within a well understood core and an enlightened leader identity (Day, 2000; DA, 2012L; Gardner, 1985; Goleman et al., 2013). Currently, the two primary instruments used by the U.S. Army that provide intrapersonal (self-awareness enhancing) feedback are the Global Assessment Tool (GAT 2.0) and the Multi-Source Assessment Feedback (MSAF) program. The GAT 2.0 is a component of the Army's Resiliency enhancing strategy and is not officially part of the organization's leader development program (DA, 2014i; DA, 2015b). However, the Emotional dimension of the GAT 2.0 does have aspects of Emotional Intelligence science incorporated within (Harms et al., 2013; Lester et al., 2001), and the six Master Fitness Trainer competencies have commonalities with the

Trait Emotional Intelligence model (Gokeen, Furnham, Mavroveli, & Petrides, 2014; Sevdalis, Petrides, & Harvey, 2007; Siegling, Nielson, & Petrides, 2014). The U.S. Army's leader development program could be enhanced with feedback specific to the emotional aspects of leading and developing (Sewell, 2014). "Recognizing your own feelings, what causes them, and how they impact your thoughts and actions is emotional self-awareness" (UFMCS, 2015, p. 10). Emotional self-awareness is the foundation of Emotional Intelligence.

Emotional Intelligence

"Psychologists and other social scientists have been reluctant throughout history to admit that emotions might actually function to sharpen cognitive activities and to motivate adaptive behavior" (Salovey et al., 2003, p. 251). Furthermore, throughout the literature, the various cognitive sciences have not uniformly agreed on a construct for human intelligence, nor is there much agreement on how to best measure human intelligence. For more than a century, the literature on the different human intelligence theories is best described as cognitive dissonance (conflicting attitudes and beliefs). Simon and Binet developed the first *Intelligence Quotient* (IQ) test in 1905, Edward Thorndike developed the idea of *social intelligence* in 1920, Howard Gardner introduced the theory of *multiple intelligences* in 1983, Peter Salovey and Jack Mayer first proposed the concept of *emotional intelligence* in 1990, and Scott Kaufman coined the concept of *personal intelligence* in 2006 (Gardner, 1983; Kaufman, 2013; Salovey & Mayer, 1990; Thorndike, 1920). A necessary step in identifying a theory about human intelligence is to determine whether an intelligence construct is distinct from already existing types of theories, models, and measurements (Mayer et al., 2004). Unlike social intelligence and

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IQ, emotional intelligence focuses more on emotional problem solving, rather than on the social, political, or verbal aspects inherent within other intelligence theories (Mayer & Salovey, 1997).

Thorndike (1920) defined social intelligence as the ability to perceive one's own and others' behaviors and motives to successfully make use of that information in social situations. Social Intelligence involves adapting to social situations and using social knowledge while making behavior choices in a group setting (Mayer & Salovey, 1997). Both Emotional Intelligence and Social Intelligence are similar to the Interpersonal and Intrapersonal Intelligences, as defined by Gardner (1985) in his Multiple Intelligences theory. Gardner (1985) described Interpersonal Intelligence as the ability to understand others, and Intrapersonal Intelligence as the ability to understand oneself. Most Emotional Intelligence models are a merger of aspects from Thorndike's Social Intelligence theory and Gardner's Multiple Intelligences concept (Bar-On, 1997; Goleman, 1995; Reivich & Shatte, 2002).

Daniel Goleman's (1995) book titled *Emotional Intelligence: Why It Can Matter More Than IQ*, moved the phrase Emotional Intelligence from academic journals to the mainstream public (Momeni, 2009). Goleman's (1995) definition for Emotional Intelligence (EI) is "the capacity for recognizing our own feelings and those of others, for motivating ourselves, and for managing emotions well in ourselves and our relationships" (p. 43). However, throughout the body of literature on EI, there are numerous other definitions, constructs, and models for EI (Bar-On, 1997; Bradberry & Greaves, 2012; Nelson & Low, 2011; Salovey & Mayer, 1990).

This third and final major section of reviewed literature works to gain

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understanding about emotions, intelligence, and some of the most popular constructs of

Emotional Intelligence (EI). Outlining the two operationalized EI constructs of ability

and trait models helps the U.S. Army determine which EI model best meet organizational

needs related to developing adaptive leaders for a complex world. This section also

analyzes the literature that connects EI to leadership, leader development (human

capital), and to other forms of intelligence tests currently used by the U.S. Army. In

addition, this section discusses some of the most commonly used EI assessments

(instruments) and explains the reasoning for selecting the Trait Emotional Intelligence

Questionnaire (TEIQ) for the present study. This section concludes with a brief analysis

of personality assessments and the Big Five personality traits.

Human Emotions

What are human emotions and what do they have to do with leadership?

Emotions are feelings that are usually accompanied by physiological and behavioral

changes in the body and mind (Reivich et al., 2014). According to Fisher and Shapiro

(2005), emotions are ever-present, and along with the power of reason, emotions

influence how people evaluate and react to situations. Thus, emotions are an inherent

aspect of adaptive leadership and leader development (Dalgleish & Power, 1999;

Goleman et al., 2013; Momeni, 2009). One of the pioneers in the study of basic

emotions, Paul Ekman views basic emotions as having evolutionary roots and an adaptive

function for survival (Dalgleish & Power, 1999). The word emotion has the following

three definitions: "the affective aspect of consciousness, a state of feeling, or a conscious

mental reaction subjectively experienced as strong feeling usually directed toward a

specific object and typically accompanied by physiological and behavioral changes in the

body" (Merriam-Webster, n.d.). Goleman (1995) identified the eight basic or core

emotions as anger, sadness, fear, enjoyment, love, surprise, disgust, and shame.

However, Ekman (1992a) outlined the following as the six core human emotions: anger,

sadness, fear, disgust, sadness, happiness, and surprise. The two ideologies on core

human emotions mostly match (fear, anger, sadness, disgust, surprise), with the

difference being that Goleman (1995) claimed that enjoyment, love, and shame are also

core emotions. Whereas, Ekman (1992a) argued for happiness (joy), and did not

acknowledge love or shame as core human emotions. Core emotions are different from

moods and temperaments. Moods tend to be more muted and last longer than an emotion

(Ekman, 1992b). Like emotions, "moods are contagious, so if you are sullen, angry, or

sad much of the time, your friends will catch it" (Reivich & Shatte, 2002).

Temperaments are a readiness to evoke a given emotion or mood (Ekman, 1992a).

"Ignore emotions at your peril…. You may try to ignore them, but they will not

ignore you" (Fisher & Shapiro, 2005, p. 11). Emotions affect the human body, human

thinking, and human behavior. Of equal importance, in a group setting, emotions are

usually contagious (p. 13). Emotions affect the human body. "Emotions can have an

immediate impact on your physiology, causing you to perspire, to blush, to laugh, or to

feel butterflies in your stomach…. After you feel an emotion, you might try to control the

expression of that emotion…but your body still experiences physiological changes"

(Fisher & Shapiro, 2005, p. 11). Emotions also directly influence human thinking,

motivation, communication, and behavior (Fisher, & Shapiro, 2005; Goleman et al.,

2013; Reivich & Shatte, 2002). Hence, since leadership is about influence, both positive

and negative human emotions are the things that are being influenced by leaders, peers,

and subordinates (Cherniss & Goleman, 2001: Maxwell, 1993).

Psychologists Fehr and Russell noted that "everyone knows what an emotion is, until asked to give a definition…. Then, it seems, no one knows" (Fisher & Shapiro, 2005, p. 4). Being able to correctly label emotions based on facial expressions and intonations is a key aspect of most Emotional Intelligence models (Goleman, 1995; Mayer et al., 2002; Petrides, 2009). Ekman (1992a) connected emotions with nonverbal behaviors like facial movements and conversational signals. Ekman (1992a) began research into emotion recognition in the 1960s using photos of faces showing different emotional states. Ekman (1992b) discovered that each of the six core emotions were commonly communicated via the same facial expressions. Ekman's research team also discovered that facial expressions and other forms of nonverbal communication have nearly universal (cross cultural) meaning (Ekman, 1992a, 1992b). For example, the emotion of happiness is universally symbolized by raising of the mouth corners and tightening of the eyelids, whereas the emotion of sadness is globally symbolized by lowering of the mouth corners, the eyebrows descending to the inner corners and the eyelids drooping. One of the Ability Emotional Intelligence measurements (MSCEIT) is based on Ekman's (1992a) work on the recognition of emotional facial expressions (Mayer et al., 2002). Hence, the ability to recognize emotions is how most ability EI instruments are performance-based. Since emotions occur on a spectrum and people experience more than just core emotions, there is value in creating an extensive emotional vocabulary (Reivich & Shatte, 2002). According to Goleman (1995) Emotional Intelligence is emotional literacy. Table 9 is a list of some of the commonly used positive and negative human emotions.

Table 9

List of Common Positive and Negative Emotions

POSITIVE EMOTIONS		NEGATIVE EMOTIONS	
Excited	Relieved	Guilty	Intimidated
Glad	Comforted	Ashamed	Worried
Amused	Content	Humiliated	Surprised
Enthusiastic	Relaxed	Embarrassed	Fearful
Cheerful	Patient	Regretful	Panicked
Jovial	Tranquil		Horrified
Delighted	Calm	Envious	
Ecstatic		Jealous	Sad
	Hopeful	Disgusted	Hopeless
Proud	In awe	Resentful	Miserable
Gratified	Wonder	Contemptuous	Devastated
Happy			
Jubilant		Impatient	
Thrilled		Irritated	
Overjoyed		Angry	
Elated		Furious	
		Outraged	

Note. Adapted from "Beyond Reason: Using Emotions as You Negotiate," by R. Fisher and D. Shapiro, 2005. New York, NY: Penguin Group. p. 13.

The fact that emojis were invented and widely implemented into modern electronic communications (texting, emails, social media, etc.) helps to highlight the importance of emotional expression throughout all aspects of group dynamics, specifically the importance of emotion in communication within and across cultures and age groups (Forsyth, 2010). U.S. Army leaders can be on a spectrum from emotionally intelligent to emotionally ignorant. Regardless, emotions will influence leadership outcomes. "Reports about the unavoidable influence of emotion on behavior and decision making have emerged from a variety of academic disciplines including psychology, organizational behavior, sociology, anthropology, and neuroscience" (Druskat, Sala, & Mount, 2013, p. xxvii). "There is an emotional dimension to almost

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every thought we have and every decision we make" (Jones, 1998, p. 13).

Human Intelligence

What is human intelligence and how is intelligence in human's measured? Thorndike (1920) organized the concept of human intelligence into three facets: abstract intelligence (managing and understanding ideas), mechanical intelligence (managing and understanding material things), and social intelligence (managing and understanding people). Scientists have attempted to measure human intelligence for centuries (Petrides, 2011). Assuming that individuals with larger brains and skulls were naturally smarter, some of the initial attempts to gauge human intelligence measured the size of the human skulls (Deary, Penke, & Johnson, 2010). Introspection is the label for another historic approach to measuring human intelligence which analyzed an individual's ability to reflect on their own thoughts and mental processes (Flynn, 1987). Today, neuroscientists have a general understanding about the mechanical aspects of human intelligence via tracking activity in different parts and regions of the human brain (Stanovich & West, 2000). Specific features like the size and shape of the frontal lobes and the amount of blood and chemical activity in the frontal lobes may influence intelligence in humans (Caramazza & Coltheart, 2006).

One of the first measures of human intelligence called the Simon-Binet IQ test was developed in 1905 for the French Ministry of Education by Theodore Simon and Alfred Binet (Deary et al., 2010). The Simon-Binet IQ score (or Intelligence Quotient) was obtained by dividing an individual's mental age score on the Simon-Binet assessment by the individual's chronological age, and then multiplying the resulting fraction by 100 (Kennedy & McNeil, 2006). The Simon-Binet IQ test focused on logical

reasoning and verbal-linguistic abilities like finding rhyming words and naming objects (Flynn, 1987). A British psychologist named Charles Spearman believed that there was an underlying general mental ability that explained human intelligence, and he conducted the first formal factor analysis of correlations between IQ tests (Caramazza & Coltheart, 2006). Since the early 20th century, Spearman and other psychologists have regarded the general factor (g factor) as closely related to the essence of human intelligence (Kaufman, 2013). Today, various modern versions of IQ assessments are used to predict educational achievement, special needs, and profession (job) placement (Deary et al., 2010). Since the invention of Intelligence Quotient measurements, scores on IQ tests have increased in most parts of the world around three IQ points per decade (Flynn, 1987). This phenomenon of rising IQ scores is called the Flynn Effect (Deary et al., 2010).

Dating back to World War I, the U.S. Army has a storied history with intelligence tests (Kennedy & McNeil, 2006). In 1917, the head of the American Psychological Association (APA), Robert Yerkes, was commissioned as a Major in the U.S. Army to help with the requirement to evaluate millions of Army recruits and assign them to the right jobs (Caramazza & Coltheart, 2006; Kennedy & McNeil, 2006). Yerkes and other military psychologists and statisticians developed the U.S. Army's first intelligence assessments called the Alpha and Beta tests. "The Army's Alpha was for those who were literate in English, and Beta was for those who were not literate, who were literate in another language, and/or who failed the Alpha" (Kennedy & McNeil, 2006, p. 5). The Alpha and Beta intelligence tests were administered to 1,750,000 American men during World War I and evolved into the Wechsler-Bellevue Scale, which was the precursor to the Wechsler Adult Intelligence Scale (Kaufman, 2013). The Wechsler Adult

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Intelligence Scale "is the most frequently used intelligence test today" (Kennedy &

McNeil, 2006, p. 5). Also developed during WWI was the Woodworth Personality Data

Sheet, which became the model for subsequent personality assessments (Kaufman, 2013).

"The success of psychological testing in WWI was the impetus for the earliest

recognition of psychology as a respected field" (Kennedy & McNeil, 2006, p. 6).

Kaufman (2013) argued that nearly all standardized tests are fundamentally

intelligence tests. "Many tests may appear on the surface to be measuring a diverse set of

skills, but they are really just disguised IQ tests…. They may be called something

different (academic achievement, SAT, ACT, GRE, LSAT)…. But don't let them fool

you, they are all measuring the same thing: human intelligence" (Kaufman, 2013, p. xvii).

During WWII, the Army General Classification Test (AGCT) replaced the Alpha and

Beta tests. The AGCT used arithmetic, vocabulary, and spatial relationship items to test

general learning ability, and was used by the Army to assign recruits to military jobs

(Giangreco, 2011). In 1976, a few years after America's military went to the all-

volunteer force concept, the first Armed Services Vocational Aptitude Battery (ASVAB)

was introduced (DA, 2012a). The ASVAB testing combined enlisted selection

(screening of applicants) and classification (matching of applicants to available job

positions) (Giangreco, 2011). The modern computerized test format and/or written test

version of the ASVAB is currently used by all branches of the US military as an aptitude

(intelligence test) to select individuals with sufficient skills and abilities to absorb

military training (DD, 2017).

The following are the nine categories for the current ASVAB test: General

Science (GS), Arithmetic Reasoning (AR), Work Knowledge (WK), Paragraph

Comprehension (PC), Mathematics Knowledge (MK), Electronics Information (EI), Automotive and Shop Information (AS), Mechanical Comprehension (MC), and Assembling Objects (AO) (DD, 2017). A 10th category called Verbal Expression (VE) is determined by adding Working Knowledge (WK) with Paragraph Comprehension (PC) (DA, 2017). It is important to note that EI on the ASVAB is Electronics Information and not Emotional Intelligence (EI). The computerized test format has less questions than the written test format of the multiple-choice ASVAB, and each of the nine tested sections (or categories) is timed (DD, 2017). To qualify for military service, applicants must achieve a qualifying score on four sections of the ASVAB (AR, MK, WK, PC), which is known as the Armed Forces Qualification Test (AFQT). The minimum AFQT score for enlistment varies according to the different US military services (DA, 2017). Among other variables like obesity, medical conditions, and criminal records, not being able to achieve a qualifying score on the ASVAB helps to explain why only 24% of Americans between the ages of 17-24 qualify for military service (DD, 2017). Relative to Gardner's (1985) multiple intelligences theory, applicants must demonstrate both mathematical intelligence and verbal-linguistic intelligence on the ASVAB to enlist in the US military. The composite scores on the ASVAB also determine what military occupational specialty (MOS) that an applicant qualifies to perform. It is important to note that commissioned officers in the U.S. Army are not required to take the ASVAB. Thus, MOS is for enlisted Soldiers, and commissioned officers have branches that define military specialty. One universal reality for both enlisted and commissioned Soldiers in the U.S. Army is that job specialty is often determined by the needs of the Army. Table 10 outlines the U.S. Army's current composite score categories on the ASVAB.

Table 10

U.S. Army's ASVAB Composite Score Categories

Armed Forces Qualification Test (AFQT)	Paragraph Comprehension (PC), Word Knowledge (WK), Mathematics Knowledge (MK), Arithmetic Reasoning (AR)
Clerical (CL)	Paragraph Comprehension (PC), Word Knowledge (WK), Mathematics Knowledge (MK), Arithmetic Reasoning (AR)
Combat Operations (CO)	Paragraph Comprehension (PC), Word Knowledge (WK), Auto Shop (AS), Mechanical Comprehension (MC)
Electronics (EL)	General Science (GS), Arithmetic Reasoning (AR), Mathematical Knowledge (MK), Electronic Information (EI)
Field Artillery (FA)	Arithmetic Reasoning (AR), Mathematics Knowledge (MK), Mechanical Comprehension (MC)
General Maintenance (GM)	General Science (GS), Auto & Shop (AS), Mathematics Knowledge (MK), Electronics Information (EI)
General Technical (GT)	Word Knowledge (WK), Paragraph Comprehension (PC), Arithmetic Reasoning (AR)
Mechanical Maintenance (MM)	Auto & Shop (AS), Mechanical Comprehension (MC), Electronic Information (EI)
Operators and Food (OF)	Word Knowledge (WK), Paragraph Comprehension (PC), Auto & Shop (AS), Mechanical Comprehension (MC)
Surveillance and Communications (SC)	Word Knowledge (WK), Paragraph Comprehension (PC), Arithmetic Reasoning (AR), Auto & Shop (AS), Mechanical Comprehension (MC)
Skilled Technical (ST)	Word Knowledge (WK), Paragraph Comprehension (PC), General Science (GS), Mechanical Comprehension (MC), Mathematics Knowledge (MK)

Note. Adapted from the Go Army website page titled "Understanding the ASVAB." Retrieved on 14 November 2017 from https://www.goarmy.com/learn/understanding-the-asvab.html.

The U.S. Army's history with intelligence tests began in WWI with some of the most notable pioneers in the field of intelligence theory (Karl Pearson, Charles Spearman, Edward Thorndike, David Wechsler, and Robert Yerkes) working together as commissioned officers in the British and American Armies (Fancher, 1985). A century later, the U.S. Army maintains the organization's tradition with human intelligence with assessments such as the ASVAB (DA, 2017). Yet, the debate on exactly what human

intelligence is and how to measure human intelligence continues. In 1918, serving as a U.S. Army officer, David Wechsler worked in London with the two prominent British psychologist Pearson and Spearman (Kaufman, 2013). Years later, Wechsler concluded that Spearman's theory of a general intelligence (g intelligence) was too constricted, and that other factors like personality influenced the development of each person's intelligence (Wechsler, 1940). Wechsler (1940) defined human intelligence as "the aggregate or global capacity of the individual to act purposefully, to think rationally and to deal effectively with his environment" (p. 445). Like Gardner's multiple intelligences theory in 1985, Wechsler argued in 1940 that intelligence was comprised of non-intellective and intellective elements; and he proposed that non-intellective elements were crucial for predicting a person's ability to succeed in life (Fancher, 1985; Gardner, 1985; Wechsler, 1940).

Human intelligence and leadership success. Much like the concepts of human intelligence and leadership, success is another concept with differing points of view. Just like human intelligence and leadership, there are different ways to define and structure the abstract concept of success (Goleman, 2005). For some individuals and organizations, success is effectiveness or the capacity to generate positive results much like the U.S. Army's leadership competency *Gets Results* (DA, 2012L; Drucker, 1999; Magretta, 2012). While for others, success is defined as quality relationships, and a capacity to build and maintain strong interpersonal connections (Gardner, 1985; Wechsler, 1940). A third perspective on success is quality of life and a capacity to create true happiness from a life well lived (Goleman, 2005; Reivich & Shate, 2002). Regardless of the criteria used for defining and personalizing the concept of success, the

enduring social science question is the following: Why are some people successful and others not? IQ by itself is not a very good predictor of success (Bradberry & Greaves, 2012; Cherniss, 2000; Gardner, 1985; Kaufman, 2013). In many scenarios, success is not objective. Instead, success is usually exclusively subjective and based on personal emotions, interpretations, opinions, judgment, and points of view (Gardner, 1985). Success being subjective supports the argument that other variables like emotional intelligence may have a stronger influence on success than IQ (Goleman, 2005). Specifically, success in leadership and other aspects of life that pertain to working with people (McKee, Boyatzis, & Johnston, 2008). Being an intelligent and successful organizational leader (military leader) requires emotional intelligence (Sewell, 2014).

> Obviously, you have to be talented, smart, and experienced to lead a complex organization or social system…. How could you hope to succeed if you don't understand stakeholders, the environment, your technology, or your numbers?... But this is not enough…. The research tells us that cognitive intelligence (IQ) is simply baseline…. In other words, you have to be smart to get in the door…. Competencies related to emotional and social intelligence (not IQ, college degrees, or technical experience) are the single most important factors in distinguishing great leadership from average leadership. (McKee et al., 2008, p. 25)

Albert Einstein cautioned, "we should take care not to make the intellect our god…It has, of course, powerful muscles, but not personality…It cannot lead, it can only serve" (Goleman, Boyatzis, McKee, 2013, p. 27). The book that brought Emotional Intelligence theory out of academic journals and into mainstream society titled *Emotional*

Intelligence: Why it can matter more than IQ was published a year after a highly

controversial book titled *The Bell Curve: Intelligence and Class Structure in American*

Life. The Bell Curve book "proposed that different rates of success between races were

due to differences in intelligence" (MacCann, 2012, p. 1). Hence, in 1995, research

scientists and mainstream America were eagerly looking for an alternative from IQ to

predict success (Cherniss, 2000). In the mid 1990's it was widely believed that IQ

measurements could be biased toward certain segments of society, plus numerous other

studies had already proved that IQ alone was not a very accurate predictor of success,

specifically leadership success (Goleman, 1995). One example of the limitations of IQ as

a predictor of success is known as the Sommerville study, which was a 40-year

longitudinal study of 450 boys from different social economic backgrounds and different

IQ levels from a town (Sommerville) in Massachusetts (Cherniss, 2000). The

Sommerville investigation discovered that instead of IQ, the variables that were better

predictors of success were the childhood abilities to handle frustration, control emotions,

and get along with other people (Cherniss, 2000). Another 40-year longitudinal study

that started in the 1950s using 80 science PhDs who were interviewed and took a battery

of personality and IQ tests as graduate students at Berkeley. "It turned out that social and

emotional abilities were four times more important than IQ in determining professional

success and prestige" (Cherniss, 2000, p. 2). Prior to Emotional Intelligence becoming

popular in the 1990s, various studies had already proved that "people with the highest

levels of intelligence (IQ) outperformed those with average IQs just 20 percent of the

time, while people with average IQ outperformed those with high IQs 70 percent of the

time" (Bradberry & Greaves, 2009, p. 7).

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Throughout the literature, there are different claims that emotional intelligence can be used to select and develop successful leaders (Bar-On, 1997; Bradberry & Greaves, 2013; Goleman, 1998; Mayer et al., 2004).

Goleman (2000) argued that the purpose of leadership is to get results and outlined the following six leadership styles: Authoritative, Affiliative, Democratic, Coaching, Pacesetting, and Coercive. According to Goleman, Authoritative leaders mobilize people toward a vision, and the US Infantry's Iron Mike slogan "Follow Me" is a good example of Goleman's version of an Authoritative leader (DA, 2012h, 2015b). Goleman's Affiliative leadership style is someone who works to create harmony and builds emotional bonds. A popular email signature block slogan in the U.S. Army is "mission first, people always," which is reflective of Goleman's Affiliative leadership style example of "people come first" (Goleman, 2000, p. 4). Leaders with Democratic leadership styles ask, "What do you think?" and work to forge consensus through participation. The Coaching leadership style centers on developing people for the future much like the U.S. Army's leadership competency category Develops (develops others). The U.S. Army's Leads competency (leads by example) mirrors Goleman's Pacesetting leadership style by setting high standards for performance and saying things like "Do as I do, now" (Goleman, 2000, p. 5). As already explained in the U.S. Army's Leadership Definition section of this literature review, the U.S. Army wants and needs leaders throughout the organization to influence via providing purpose, direction, and motivation. Thus, according to current U.S. Army leadership doctrine, Goleman's (2000) Coercive leadership style is used to describe both leadership styles and scenarios that demand immediate compliance and a "Do what I tell you" mindset is no longer the stereotypical

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U.S. Army leadership ideology (p. 4). Goleman (2000) claimed that *Leadership That Gets Results* or successful leaders use different leadership styles depending on the context of a situation, and leaders who have higher levels of emotional intelligence are usually more effective at using the right style, to the right degree, and at the right time to have a positive leadership influence instead of having a negative impact. To define positive leadership influence, Goleman (2000) used the concepts of work climate and financial results (the bottom line) (p. 5). Work or organizational climate is not the only thing that is a driver of performance, but "climate accounts for nearly a third of results" (p. 6).

Goleman helped author another EI and Leadership book titled *Primal Leadership* that defined the following six core challenges of a leader: building effective teams, planning and deciding effectively, motivating people, communicating a vision, promoting change, creating effective interpersonal relationships (Goleman et al., 2013). Reflective of their ability EI model and theory, Caruso and Salovey (2004) connected leadership to the four key emotional skills of identify, understand, manage, and use. Caruso and Salovey (2004) pointed out that western societies view emotions in the workplace as things that should be carefully controlled and expressed in order to maintain a professional setting. Instead, Caruso and Salovey (2004) argued that the most effective leaders understand that "the emotion centers of the brain, are not regulated to a secondary place in our thinking and reasoning, but instead are an integral part of what it means to think, reason, and to be intelligent" (p. 9). Thus, for leaders, emotions are not just important, but "absolutely necessary" for making good decisions, taking action to solve problems, coping with change, and succeeding as an individual and as a team (p. 11). According to Caruso and Salovey, leaders need to master the following four key

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emotional skills of leadership. First, *identify emotion* and become aware of emotions

within the individual leader and throughout the team by allowing the expression of

emotions. Second, *understand emotion* and find out what the emotions mean. Third,

manage emotion by staying open to emotions and by integrating emotions into individual

and group thinking. The fourth key emotional skills for leadership is the ability to *use*

emotions to influence thinking and being able to match emotion to the task.

Nelson and Low (2011) connected Emotional Intelligence to the four leadership

skills of social awareness, empathy, positive influence, and decision making.   Social

Awareness (or comfort) is the ability to choose the appropriate emotional, social, and

physical distance during verbal and nonverbal interactions with others and to affect and

influence others in positive ways.   Empathy is the ability to accurately understand and

constructively respond to the expressed feelings, thoughts, behaviors and needs of others.

Positive Influence is the ability to positively affect, persuade, and influence others and to

make a positive difference. Decision making is the ability to plan, formulate, initiate, and

implement effective problem-solving or conflict resolution procedures to resolve personal

problems and to use a skills approach when making decisions.

Emotional intelligence and decision-making. "The ability to make smart

choices is a fundamental life skill" (Hammond et al., 1999).   Decision-making is a key

aspect of leadership (DA, 2012L). Yet, how often are a leader's decisions influenced by

emotions and to what degree? "There is no thinking without emotion" (Dorner, 1996, p.

8). "Emotions play a major role in decision-making" (Brafman & Brafman, 2008, p. 5).

"Decision-making is a complex process involving cognitive (thinking), social, and

emotional components" (Russo & Schoemaker, 2002, p. xvii). Simon (1956) identified a

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decision-making strategy he called *satisficing*, which is selecting the first option that works. "A good solution to a well-posed decision problem is almost always a smarter choice than an excellent solution to a poorly posed one" (Hammond et al., 1999, p. 8). Satisficing is different from optimizing, which means trying to come up with the best strategy. Optimizing is hard, and it takes more time and energy, whereas satisficing is more efficient (Simon, 1956, 1957). "We settle for partial solutions because our minds simply can't digest or cope with all of the intricacies of complex problems" (Jones, 1998, p. xii). Simon used the concept of satisficing to describe the decision behavior of managers in the corporate sector, but the satisficing concept relates to leaders regardless of context. Russo and Schoemaker (2002) outlined the following 10 reasons decision-making is increasingly challenging: "information overload, a galloping rate of change, rising uncertainty, few historical precedents, more frequent decisions, more important decision, conflicting goals, more opportunities for miscommunication, fewer opportunities to correct mistakes, higher stakes" (p. xii). The U.S. Army's strategic goal to develop adaptive leaders for a complex world is reflective of the increasing decision-making challenges imposed on U.S. Army leaders at all levels and ranks (DA, 2015c, 2015d).

"Groupthink refers to a deterioration of mental efficiency, reality testing, and moral judgment that results from in-group pressures" (Janis, 1982, p. 9). Janis (1982) discovered and coined the term "groupthink" while analyzing the importance of the "psychology of *emotion* and *personality* dynamics" in relation to how and why certain decision-making groups in history made choices that resulted in "major fiascoes" (p. ix). Hence, the discovery and labeling of the group dynamic phenomenon known as

"groupthink" was exposed by a social scientist while merging the three disciplines of social psychology, political science, and history (p. x). Regarding this research project, there are three key points to Janis' discovery of groupthink. First, the discovery of groupthink demonstrates how the merger of different bodies of knowledge can create new understandings about decision-making and human interactions. Second, Janis's findings highlight the reality that all issues pertaining to the behaviors of individual humans (leaders) and the collective behaviors of humans are inherently interwoven with emotions, needs, habits, and personality difference. Third, any discussions about social awareness, decision making, and leadership should center on the biological fact that all humans have emotions, and those emotions influence daily interaction and outcomes which impact the individual and a group. It is also important to note that the U.S. Army is fundamentally an organization made up of people; and people have emotions, needs, personalities, and habits that influence behavior and social interactions. Most leaders perceive themselves as rational, but leaders (like all humans) are much more prone to irrational behavior than they tend to realize (Brafman & Brafman, 2008; Jones, 1998).

A growing body of research reveals that our behavior and decision making are influenced by an array of psychological undercurrents that are much more powerful and pervasive than most social scientists realized (Brafman & Brafman, 2008). According to U.S. Army "Mission Command" doctrine, "decision making requires knowing *it, when, and what* to decide and understanding the consequences of any decision" (DA, 2012k, p. 7). Emotions can have a small or large impact on the decisions that leaders make depending on the type of emotion (Angie et al., 2011). For example, leadership decisions and judgments influenced by anger differ from those made out of fear or sadness. Fear is

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associated with uncertainty, whereas, sadness is based on "perceptions that outcomes are

due to the situation" (Angie et al., 2011, p. 1398). "Angry decision makers tend to make

choices quickly and are unlikely to analyze their decisions" (Angie et al., 2011, p. 1399).

A nearly universal theme throughout the literature that connects Emotional Intelligence

with Leadership is the idea that those leaders with higher levels of EI usually make better

decisions (Bradberry & Greaves, 2012; Caruso & Salovey, 2004; Goleman, 2000;

Goleman et al., 2013; Nelson & Low, 2011)

Emotional Intelligence Models

There is an enduring debate within the Emotional Intelligence (EI) field of study

related to whether EI is trait-based, ability-based, competency-based, behavior-based, or

a mix between both traits and ability (Druskat et al., 2013). Reflective of the differences

in ideologies and definitions are the increasing number of instruments that measure

various constructs of EI. This section primarily focuses on EI Models that fall within the

labels of Ability, Trait, and Mixed constructs. Ability EI instruments are performance-

based assessments that tend to have right or wrong answers. Ability EI fundamentally

measures an individual's *ability* to identify and label emotions based on depictions of

human facial features (Salovey et. al., 2003), whereas trait EI instruments are self-report

or self-efficacy measurements (Petrides & Furnham, 2001). At the heart of the

differences between Ability and Trait EI theory is the conceptual disagreement that EI is

either a cognitive ability or a personality trait (Petrides, 2017).

Ability emotional intelligence. Facial expressions and other forms of nonverbal

communication have nearly universal meaning (Ekman, 1992a, 1992b). Studies

conducted by Ekman (1992a) determined that facial expressions can instantly convey

(communicate) all types of emotions. Ekman (1992b) determined that subtle differences in facial expressions can be accurately measured. Building on Ekman's work, three American psychologists at Yale operationalized the first published ability EI assessment called the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT). The MSCEIT consists of 141 items that measure four branches of emotion called the perceiving emotion branch, using emotion branch, understanding emotion branch, and managing emotion branch (Mayer, Salovey, & Caruso, 2002). The MSCEIT is based on traditional intelligence test like the IQ test, and the model is based on a cycle that starts with the initial perception of any emotional stimuli (Mayer et al., 2004). The start of the cycle is the branch called Perceiving Emotions (Mayer & Salovey, 1997). The Perceiving Emotions branch is the ability to perceive emotions in oneself and others as well as in objects, art, stories, music, and other stimuli. The second step in this model is the Facilitating Thought branch. Facilitating Thought branch is the ability to generate, use, and feel emotion as necessary to communicate feelings or employ them in other cognitive processes. The third step is the Understanding Emotions branch, which is the ability to understand emotional information, to understand how emotions combine and progress through relationship transitions, and to appreciate such emotional meanings. The fourth step of the cycle is the Managing Emotions branch, and this is not the final step because the cycle works back to the Perceptions branch. The Managing Emotions branch is the ability to be open to feelings, and to modulate them in oneself and others to promote personal understanding and growth. Figure 6 illustrates the Mayer et al., (2004) construct of Ability EI. The MSCEIT measurement is organized into eight individual tasks with two tasks each being used to generate branch scores; e.g., performance on the two tasks

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of *faces* and *pictures* creates the scores for the *Perceiving Emotion* branch.
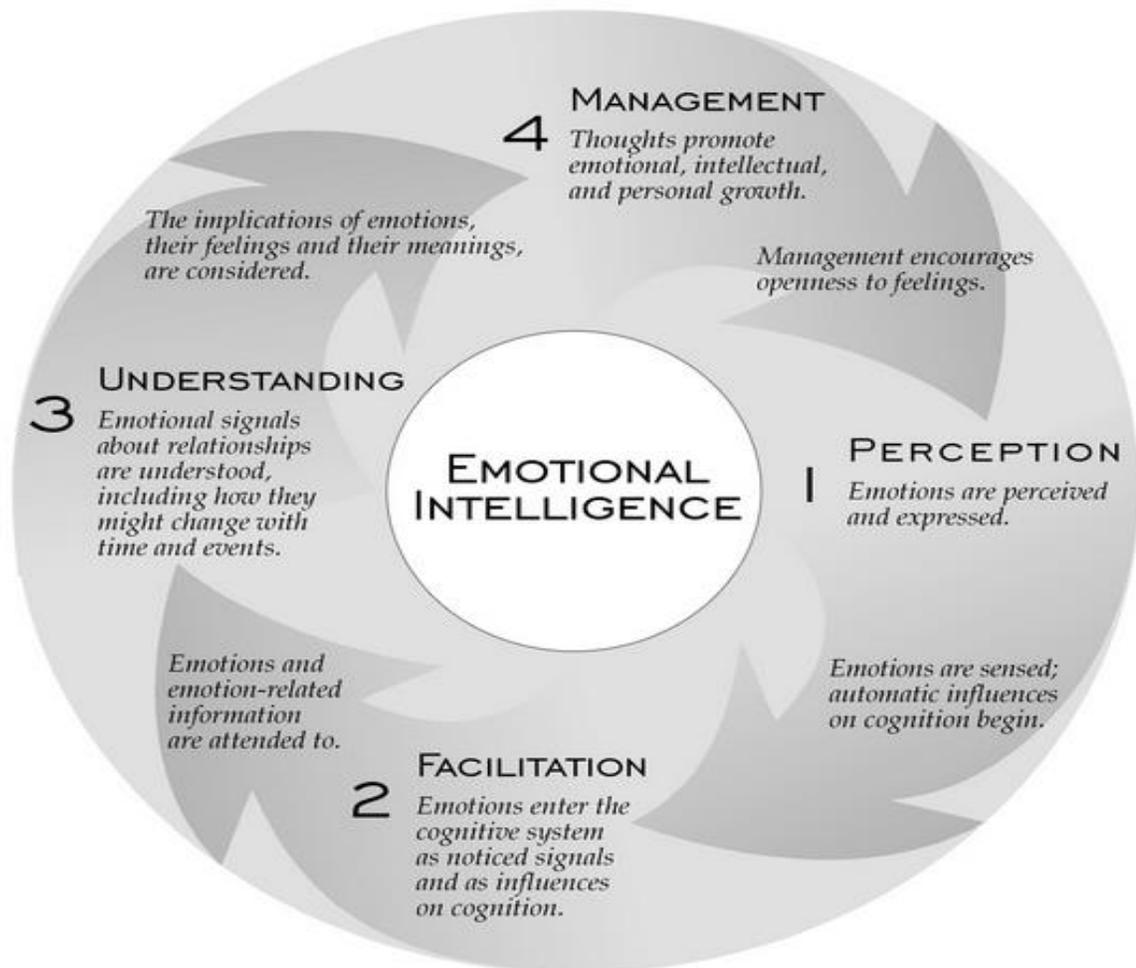
Figure 6. The Four-branch Ability Emotional Intelligence Circular Model. Adapted from "What is emotional intelligence? Emotional development and emotional intelligence: Educational implications" by J. D. Mayer and P. Salovey, 1997. New York, NY: Basic Books.

Ability EI theorists understand Emotional Intelligence as "the ability to perceive emotion, integrate emotion to facilitate thought, understand emotions and to regulate emotions to promote personal growth" (Salovey et al., 2003, p. 251). As depicted in Figure 6, Ability EI is the ability to perceive, appraise, and accurately express emotions. Key aspects of Ability EI theory are the abilities to access and generate feelings that "facilitate cognitive activities" and the ability to "understand affect-laden information

(Salovey et al., 2003, p. 251). Ability EI is defined as "the ability to perceive emotions, to access and generate emotions so as to assist thought, to understand emotions and emotional knowledge, and to reflectively regulate emotions so as to promote emotional and intellectual growth" (Mayer & Salovey, 1997, p. 5). On the other hand of the EI debate are the scientists who have developed self-reporting instruments that measure EI as a menu of personality traits.

   Trait Emotional Intelligence. "A trait is typically defined as a distinguishing characteristic or quality" (Mayer, Salovey, & Caruso, 2004, p. 199). "Trait EI (or trait emotional self-efficacy) is defined as a constellation of self-perceptions located at the lower levels of personality hierarchies" (Petrides et al., 2007, p. 7). Trait EI theorists understand Emotional Intelligences as a set of traits and argue that it is not possible to develop EI measurements on items along cognitive ability lines, because the emotional experience is inherently subjective and linked to personality traits (Perez et al., 2005; Petrides, 2009). Petrides (2009) began the development of the first version of the Trait Emotional Intelligence Questionnaire (TEIQue) while working on his doctoral dissertation at University College London (UCL) in 1990. During his post-doctoral work as an appointed Lecturer in Psychology at UCL's Institute of Education, Petrides set up the trait emotional intelligence research program (Petrides, 2016). UCL's trait emotional intelligence research program collaborated with distinguished researchers in more than a dozen different countries and evolved into one of the leading personality research programs in the world. The trait emotional intelligence research program transferred to the London Psychometric at UCL (Petrides, 2016). Today, the TEIQue is available in 12 languages with thousands of questionnaires used in quantitative genetic investigations,

medicine, mental health, neuropsychology, decision-making, nursing, business, educational, and other contexts (Costa, Petrides, & Tillmann, 2014; Siegling, Furnham, & Petrides, 2015).

The three most prominent dictionary definitions for the term psychometrics are the following: "the psychological theory or technique of mental measurement," "a branch of clinical or applied psychology dealing with the use and application of mental measurement," and "the use of quantitative devices for assessing psychological trends" (Merriam-Webster, n.d.). Currently, the TEIQue is one of the world's best researched psychometric instruments (Costa et al., 2014; Siegling et al., 2015). As a self-report instrument, the TEIQue captures emotional self-perceptions located at the lower levels of the personality hierarchies (Petrides, 2010). The TEIQue "integrates the affective aspects of personality through 15 distinct facets that are combined into the four broad factors" of emotionality, self-control, sociability, and well-being (Costa et al., 2013, p. 182).

The jangle fallacy is the "groundless inference that two constructs are different simply because they have different labels" (Siegling et al., 2015, p. 381). Relative to the U.S. Army's Resiliency program and the self-report Global Assessment Tool (GAT 2.0), the TEIQue has sampling domains that focus on the emotional dimension of strength (Lester et al., 2001; Petrides, 2017). The GAT 2.0 and TEIQue may have different names, but they could be used to provide psychological and emotional (affective) feedback to all Soldiers in the U.S. Army. "Other psychological aspects that can moderate stress and negative emotions are emotion control and emotion management" (Costa et al., 2013, p. 181). Unlike the GAT 2.0, the TEIQue purposefully measures the facets of emotion control and emotion management. The GAT 2.0 focuses the emotional

facets of good and bad coping, catastrophizing, depression, optimism, and

positive/negative affect (Lester et al., 2011). Table 11 outlines the primary factors and 15

facets measured within the TEIQue and the TEIQue short-form.

Table 11

The Sampling Domain of the Trait Emotional Intelligence Questionnaire (TEIQue)

High scorers view themselves as…	
Well-being	
Self-esteem	…Successful and self-confident.
Trait happiness	…Cheerful and satisfied with their lives.
Trait optimism	…Confident and likely to "look on the bright side" of life.
Self-Control	
Emotion control	…Capable of controlling their emotions.
Stress management	…Capable of withstanding pressure and regulating stress.
Impulse control	…Reflective and less likely to give into their urges.
Emotionality	
Emotion perception	…Clear about their own and other people's feelings
Emotion expression	…Capable of communicating their feelings to others.
Relationships	…Capable of having full-filling personal relationships.
Trait empathy	…Capable of taking someone else's perspective
Sociability	
Social awareness	…Accomplished networkers with excellent social skills.
Emotion management	…Capable of influencing other people's feelings
Assertiveness	…Forthright, frank, and willing to stand up for their rights
Independent facets	
Adaptability	…Flexible and willing to adapt to new conditions.
Self-motivation	…Driven and unlikely to give up in the face of adversity.

Note. Adapted from "Intelligence, Emotional," by K. V. Petrides, 2017. Author's
personal copy. Retrieved from http://www.psychometriclab.com/adminsdata/files/
Emotional%20intelligence %20-%20Elsevier %20NBP%20encyclopedia%20(2017).pdf

The primary purpose of the present study is to help the U.S. Army develop

adaptive leaders for a complex world. The independent facets of Adaptability and Self-

motivation within the TEIQue directly meet the needs of the U.S. Army on the issue of

finding a valid instrument that provides individualized feedback on adaptability growth

(DA, 2015a). The sampling domain of the TEIQue may be ideal for providing feedback

to the U.S. Army for leader development, resiliency growth, and adaptability. Hence,

utilization of the TEIQue could allow the U.S. Army to nest aspects of both Soldier and

leader training, education, and experience into one feedback instrument. However, there

are no known studies that have used the TEIQue on a military sample, and there is

another Trait EI model and instrument that has been used by the Israeli Defense Force

and the US Air Force known as the Bar-On Emotional Quotient Inventory (EQ-i)

(Druskat et al., 2013).

Bar-On (1997) developed another Trait EI model and assessment that is

substantially different than Petrides' TEIQue instrument and theory. According to Bar-

On, emotional intelligence addresses the emotional, personal, social, and survival

dimensions of intelligence. Petrides' Trait EI theory is rooted in personality, whereas

Bar-On's Trait EI concept has foundations in traditional intelligence assessment (Bar-On,

2006). Bar-On (1997) argued that the four dimensions of intelligence (emotional,

personal, social, survival) "are often more important for daily functioning than the more

traditional cognitive aspects of intelligence" (p. 2). Bar-On (2004) declared that the goals

of EI are "understanding oneself and others, relating to people, and adapting to and

coping with the immediate surroundings to be more successful in dealing with

environmental demands" (p. 112). Bar-On (2006) established a Trait EI framework that

has many of the same domains and competencies as Goleman's (1995) Mixed EI model;

but instead of using the category names of domains and competencies, Bar-On used the

labels of Scales and Realms. Bar-On's EI model fits within the concept of Intrapersonal

leader development, or the development of human capital. In addition, Bar-On's model

also nests within the concept of Interpersonal leadership development, or the

development of social capital. Table12 defines the EI competencies and skills assessed

by the Bar-On Emotional Quotient Inventory (EQ-i).

Table 12

The Bar-On EQ-i Scales and what the scales assess

EQ-i Scales	EI Competencies and Skills Assessed by Each Scale
Intrapersonal	Self-awareness and self-expression:
Self-Regard	*To accurately perceive, understand and accept oneself.*
Emotional Self-Awareness	*To be aware of and understand one's emotions.*
Assertiveness	*To effectively and constructively express emotions and oneself.*
Independence	*To be self-reliant and free of emotional dependency on others.*
Self-Actualization	*To strive to achieve personal goals and actualize one's potential.*
Interpersonal	Social awareness and interpersonal relationship:
Empathy	*To be aware of and understand how others feel.*
Social Responsibility	*To identify with one's social group and cooperate.*
Interpersonal Relationship	*Establish mutually satisfying relationships, relate.*
Stress Management	Emotional management and regulation:
Stress Tolerance	*To effectively and constructively manage emotions.*
Impulse Control	*To effectively and constructively control emotions.*
Adaptability	Change management:
Reality-Testing	*To objectively validate one's feelings and thinking with reality.*
Flexibility	*To adapt and adjust one's feelings and thinking to new situations.*
Problem-Solving	*To effectively solve problems that are interpersonal & personal.*
General Mood	Self-motivation:
Optimism	*To be positive and look at the brighter side of life.*
Happiness	*To feel content with oneself, others and life in general.*

Note. Adapted from "The Bar-On Model of Emotional-Social Intelligence," by R. Bar-On, 2006. Psicothema, *18*, p. 18.

Bar-On's (2006) Adaptability Scale involves the ability to be flexible and

realistic, and to solve a range of problems as they arise. One of the first studies that

directly examined the relationship between Emotional and Social Intelligence (ESI) with occupational performance used the Bar-On EQ-i on a sample of US Air Force recruiters (Druskat et al., 2013; Handley, 1997). The following captures the details of that study:

> The EQ-i scores of 1,171 US Air Force (USAF) recruiters were compared with their ability to meet annual recruitment quotas. Based on USAF criteria, they were divided into those who were able to meet at least 10% of their annual quota ("high performers") and those who met less than 80% ("low performers")…. A discriminant function analysis indicated that EQ-i scores were able to fairly accurately identify high and low performers, demonstrating that the relationship between ESI and occupational performance is high (.53) based on the sample studied. Prior to 1996, it was costing the USAF approximately $3 million for an average 100 mismatches a year. After one year of combining pre-employment ESI screening with comparing EQ-i scores, the USAF was able to predict successful recruiters by nearly threefold, dramatically reduced first-year attrition due to mismatches and cut their financial loses by approximately 92%. (Bar-On, 2006, p. 15)

> Bar-On's (2006) *Adaptability Scale* captures three competencies of reality-testing, flexibility, and problem solving. Bar-On's definition for flexibility is comparable to Petride's definition for adaptability (Bar-On, 2006; Petrides, 2017). However, defining flexibility "as the ability to adjust your emotions, thoughts, and behavior to changing situations and conditions" may be more applicable to the U.S. Army's need for an instrument that provides developmental feedback to adaptive leaders for a complex world (Bar-On, 2004, p. 64). Plus, Bar-On's (2006) competencies of reality testing and problem

solving directly connect to the U.S. Army's need to develop leaders that adapt to unfamiliar, unpredictable, and dynamic circumstance (DA, 2015a). Based on face validity and the facets measured, either the TEIQue or the EQi would meet the needs of the present study that requires a proven Trait Emotional Intelligence instrument to test the Trait EI scores of current leaders in the U.S. Army, specifically the needs of the U.S. Army to find instruments that provide individualized feedback on adaptive development.

Mixed emotional intelligence models. There are numerous mixed EI models throughout the literature. However, based on the number of books sold, Goleman's evolving mixed EI model is one of the most popular in mainstream society (MacCann, 2012). Goleman (2000) viewed EI as "the ability to manage ourselves and our relationships effectively" (p. 8). "Emotional intelligence is the capacity for recognizing our own feelings and those of others, for motivating ourselves, and for managing emotions well in ourselves and our relationships" (Goleman, 1995, p. 43; cf. also, Sewell, 2014, p. 8). Hence, Goleman's model is a mix of Ability EI, Trait EI, and Social Intelligence (Bar-On, 2006; Goleman, 1998). Goleman's EI model and some of the key concepts nested within his model have changed over the years. The foundation of Goleman's (1995) model of EI is still fundamentally rooted on the four fundamental capabilities of self-awareness, self-management, social awareness, and social skill. However, as the EI field of study advanced, Goleman's EI model evolved, and his current EI model organizes 19 competencies into the two domains of personal competence and social competence. Personal competence is rooted in Intrapersonal traits and social competence nested in the Interpersonal abilities. Comparing Goleman's (2000) EI model (Table 13) with his most recently revised model that was published in 2013 (Table 14)

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helps to illustrate some of the evolving changes in the EI and leadership fields of study.

Table 13

Goleman's Initial Emotional Intelligence Model

Self-Awareness	Self-Management	Social Awareness	Social Skills
- Emotional Self-Awareness - Accurate Self-Assessment - Self-Confidence	- Self-Control - Trustworthiness - Conscientiousness - Adaptability - Achievement Orientation - Initiative	- Empathy - Organizational Awareness - Service Orientation	- Visionary Leadership - Influence - Developing Others - Communication - Change Catalyst - Building Bonds - Teamwork and Collaboration

Note. Adapted from "Leadership that gets results," by D. Goleman, 2011. Harvard Business Review's 10 Must Reads on Management, p. 8. Article was initially published in May 2000.

Table 14

Goleman's Current Emotional Intelligence Model

Personal Competence		Social Competence	
Self-Awareness	Self-Management	Social Awareness	Relationship Management
- Emotional Self-Awareness - Accurate Self-Assessment - Self-Confidence	- Emotional Self-Control - Transparency - Adaptability - Achievement - Initiative - Optimism	- Organizational Awareness - Service - Empathy	- Inspirational Leadership - Influence - Developing Others - Catalyst for Change - Conflict Management - Teamwork-Collaboration - Building Bonds

Note. Adapted from *"*Primal leadership: Unleashing the power of emotional intelligence," by D. Goleman, R. Boyatzis, and A. McKee, 2013. Boston, MA: Harvard Business School Publishing.

Directly comparing the changes in definitions for each of the domains highlights

some of the basic changes in Mixed EI theory and construct. Also, understanding the

evolution of the most popular Mixed EI model provides insights to EI's influence on current leadership theory. The first definition is the one provided by the Goleman (2000) article "Leadership That Gets Results," and the second is the revised definitions are from "Primal Leadership: Unleashing the Power of Emotional Intelligence" that was published in 2013 and authored by Goleman, Boyatzis, and Mckee.

The Self-Awareness Domain: *Emotional self-awareness* is "the ability to read and understand your emotions as well as recognize their impact on work performance, relationships, and the like" (Goleman, 2000, p. 8). "Reading one's own emotions and recognizing their impact; using gut sense to guide decision" (Goleman et al., 2013, p. 39). The revised definition removes the concept of ability and adds the intuitive phrase *gut sense* to refer to how emotions influence decision making. Both definitions reflect how Goleman viewed EI as emotional literacy. Hence, emotional intelligence begins with being able to accurately read your emotions while noticing how emotions are impacting your mind (thoughts) and body (physiological changes). *Accurate self-assessment* is "a realistic evaluation of your strengths and limitations" (Goleman, 2000, p. 8). "Knowing one's strengths and limits" (Goleman et al., 2013, p. 39). The updated definition for this competency moves beyond just evaluation to the level of knowing, which implies that accurate self-assessment of both strengths and limitations requires more than occasional reflection. *Self-confidence* is "a strong and positive sense of self-worth" (Goleman, 2000, p. 8). "A sound sense of one's self-worth and capabilities" (Goleman et al., 2013, p. 39). The key change in this definition is the replacement of *strong and positive* to *sound*. Goleman and other social scientists in the fields of leadership and Mixed Emotional Intelligence no longer view *sense of self-worth* as something that has to be positive

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(Bradberry & Greaves, 2012). Instead, they feel that it is better for self-confidence (specifically, leadership self-confidence) to be rooted in a strong, accurate, and realistic sense of self-worth (Day, 2014; Nelson & Low, 2011). Both of Goleman's models do not change the labeling of each of the three competencies in the Self-Awareness domain, and the sequencing of the competencies in this domain has significance. First is awareness and then assessment of emotion, which leads to realistic confidence (Cherniss & Goleman, 2001; Day, 2014; Goleman, 1995; Goleman, 1998).

The Self-Management Domain: *Self-control* is "the ability to keep disruptive emotions and impulses under control" (Goleman, 2000, p. 8). "Keeping disruptive emotions and impulses under control" (Goleman et al., 2013, p. 39). Again, the concept of ability is removed in the most recent definition, which is indicating a movement away from the ability EI ideology. *Trustworthiness (old) Transparency (new)* is "a consistent display of honesty and integrity" (Goleman, 2000, p. 8). "Displaying honesty and integrity; trustworthiness" (Goleman et al., 2013, p. 39). *Conscientiousness (old)* is "the ability to manage yourself and your responsibilities" (Goleman, 2000, p. 8). The Conscientiousness competency is completely removed in Goleman's newest Mixed EI model. It is important to note that conscientiousness is one of the personality traits in the Big Five Personality Model (Gosling, Rentfrow, & Swann, 2003). Thus, perhaps Goleman's most recent EI construct is also moving away from Trait EI theory. *Adaptability* is "skill at adjusting to changing situations and overcoming obstacles" (Goleman, 2000, p. 8). "Flexibility in adapting to changing situations or overcoming obstacles" (Goleman et al., 2013, p. 39). Not a great deal of change in Goleman's adaptability definition, but the removal of the word skill could be another indicator of

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further separation from ability EI theory. *Achievement orientation (old) Achievement (new)* is "the drive to meet an internal standard of excellence" (Goleman, 2000, p. 8). "The drive to improve performance to meet inner standards of excellence" (Goleman et al., 2013, p. 39). It is unknown exactly why the word orientation was taken out of the label for this competency, but perhaps the addition of *improve performance* to the definition provides hints. Improving performance is a constant and not a part-time endeavor (Covey, 1989). Plus, it is possible that the removal of *orientation* is a movement away from both trait and ability EI theories, because the word *orientation* could be construed as both a personal trait and an individual's ability. Achieves is one of the U.S. Army's three key leadership competency labels (Leads, Develops, Achieves), with *Gets Results* being the U.S. Army's definition for the required leadership competency Achieves. Throughout the Leadership and EI literature, the purpose of leadership is to accomplish (achieve) the assigned task or mission (Cherniss, 2000; DA, 2012L; Day, 2014; Magretta, 2012; Maxwell, 1993). *Initiative* is "a readiness to seize opportunities" (Goleman, 2000, p. 8). "Readiness to act and seize opportunities" (Goleman et al., 2013, p. 39). Adding the word *act* directly connects to the U.S. Army's Unified Land Action doctrine that states leaders "seize, retain, and exploit the initiative" to maintain a relative advantage (DA, 2011a). The U.S. Army's current expectations for leaders are to go beyond doing exactly what they are told to do (like seize), and being able to exploit the initiative requires adaptive leaders and mission command (or decentralized execution) (DA, 2012m; DA, 2012p; DA 2014h0. *Optimism (new)* is "seeing the upside in events" (Goleman et al., 2013, p. 39). Optimism is one of the six core principles of the U.S. Army's Resiliency program (Reivich et al., 2014).

The Social Awareness Domain: *Empathy* is "skill at sensing other people's emotions, understanding their perspective, and taking an active interest in their concerns" (Goleman, 2000, p. 8). "Sensing others' emotions, understanding their perspective, and taking active interest in their concerns" (Goleman et al., 2013, p. 39). Once again, Goleman removes the word skill, which is a word connected to ability EI theory (Mayer, Salovey & Caruso, 2004). Empathy is a key leadership attribute within the ALRM label Character (DA, 2012L). Hence, empathy is another EI domain that is required of all U.S. Army leaders that could provide developmental feedback to both individual leaders and those responsible for developing others. *Organizational awareness* is "the ability to read the currents of organizational life, build decision networks, and navigate politics" (Goleman, 2000, p. 8). "Reading the currents, decision networks, and politics at the organizational level" (Goleman et al., 2013, p. 39). *Service orientation* (old) *Service* (new) is "the ability to recognize and meet customers' needs" (Goleman, 2000, p. 8). "Recognizing and meeting follower, client, or customer needs" (Goleman et al., 2013, p. 39). The competency of service is inherently implied to all members of the U.S. Army regardless of rank, title, or position (DA, 2012a). Selfless-service is one of the core values for all members of the U.S. Army, and the organization's values are nested within the leadership attribute titled Character (DA, 2012L).

The Social Skills (old) Relationship Management (new) Domain: *Visionary Leadership* (old) *Inspirational Leadership* (new) is "the ability to take charge and inspire with a compelling vision" (Goleman, 2000, p. 8). "Guiding and motivating with a compelling vision" (Goleman et al., 2013, p. 39). *Influence* is "the ability to wield a range of persuasive tactics" (Goleman, 2000, p. 8). "Wielding a range of tactics for

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persuasion" (Goleman et al., 2013, p. 39). *Developing others* is "the propensity to bolster the abilities of others through feedback and guidance" (Goleman, 2000, p. 8). "Bolstering others' abilities through feedback and guidance" (Goleman et al., 2013, p. 39). *Communication* (old) is "skill at listening and at sending clear, convincing, and well-tuned messages" (Goleman, 2000, p. 8). *Change catalyst* is "proficiency in initiating new ideas and leading people in a new direction" (Goleman, 2000, p. 8). "Initiating, managing, and leading in a new direction." *Conflict management* is "the ability to de-escalate disagreements and orchestrate resolutions" (Goleman, 2000, p. 8). "Resolving disagreements" (Goleman et al., 2013, p. 39). *Building bonds* is "proficiency at cultivating and maintaining a web of relationships" (Goleman, 2000, p. 8). "Cultivating and maintaining a web of relationship" (Goleman et al., 2013, p. 39). *Teamwork and collaboration* is "competence at promoting cooperation and building teams" (Goleman, 2000, p. 8). "Cooperation and team building" (Goleman et al., 2013, p. 39). Communicates, influences, and develops others are key U.S. Army leadership competencies, and the U.S. Army's explanations for each competency mostly aligns with Goleman's Mixed EI definitions (DA, 2012L; Goleman et al., 2013).

Both of Goleman's Mixed EI models help support the argument that many of the leadership dynamics important to the U.S. Army such as adaptability, influencing others, developing others, empathy, organizational awareness, influence, confidence, inspirational leadership, service, self-confidence, and teamwork are both leadership and Mixed EI traits. Plus, emotional intelligence is about realizing the fact that emotions influence all humans individually and as groups (Goleman, 2000). Since leadership is influence (Maxwell, 1993), emotions are often the contagions that influence the work

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environment, culture, and outcome in group settings (Goleman et al., 2013).

Social Awareness and Personalities

"Resilience is comprised of seven abilities: emotion regulation, impulse control, empathy, optimism, causal analysis, self-efficacy, and reaching out…. We found that resilient people are able to monitor and regulate their own emotions and monitor the emotional states of others" (Reivich & Shatte, 2002, p. 33). The U.S. Army's Resiliency program focuses on the following five dimensions of strength: physical, emotional, social, family, and spiritual (Reivich et al., 2014). Social Strength is defined as "developing and maintaining trusted, valued relationships and friendships that are personally fulfilling and foster good communication including a comfortable exchange of ideas, views, and experiences" (Sewell, 2014, p. 112). It could be argued that social awareness is a key aspect of the U.S. Army's Social Strength dimension and Resiliency program. It could also be argued that social awareness is the bridge that connects leader (human capital) development with leadership (social capital) development (Day, 2014). Thus, social awareness enables a leader to influence and motivate (Goleman, Boyatzis, & Mckee, 2013). "Social awareness (particular empathy) supports the next step in the leader's primal task: driving resonance…. By being attuned to how others feel in the moment, a leader can say and do what's appropriate" (Goleman et al., 2013, p. 31). Leadership is about influencing humans, and all humans have emotions and moods (Jones, 1998). Goleman (2005) defined the four components of social awareness as primal empathy, empathic accuracy, attunement, and social cognition.

Kahn, Ermer, Salovey, and Kiehl (2016) used a version of the MSCEIT (ability EI instrument) with a sample of incarcerated American adolescents ($N = 141$) to determine if

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"youth with callous-unemotional traits demonstrate a variety of affective deficits, including impairment in recognition of emotion and reduced emotional responsiveness to distress or pain in other" (p. 903). The outcomes on the Kahn et al. (2016) study were comparable to other studies that used adult populations to measure the same social variables (mainly a capacity for accurate and sincere empathy). Those with lower Ability EI scores via the MSCEIT correlated with high levels of callous-unemotional and unempathetic traits (p. 903). Instead of using EI instruments as tools to predict success, perhaps a better application would be to use the various EI tools to provide self-awareness enhancing feedback to both the emotional and unemotional humans.

Social awareness is much like self-awareness, resiliency, and leadership in that it is something that most feel they know a great deal about; however, in truth they know very little without going through the process of reflection (Bradberry & Greaves, 2009; Covey, 1989; Day, 2014; Reivich & Shatte, 2002). "Capable young people who are entering the labor market for the first time rarely have a clear sense of who they are, of their limitation, and of their own real strengths and weaknesses" (Kotter, 1985, p. 123). "Without recognizing our own emotions, we will be poor at managing them, and less able to understand them in others" (Goleman et al., 2013, p. 30). In a leadership context, social awareness requires self-awareness and self-management (Goleman, 2000). "While not much can be done to improve your IQ, a lot can be done to improve your resilience, a key component of emotional intelligence" (Reivich & Shatte, 2002, p. 18). For members of the U.S. Army, resilience and social awareness require relationships (Reivich et al., 2014). When analyzing the dynamics of a relationship, the *4 Ways of Seeing* provides social and situational awareness (UFMCS, 2015). The *4 Ways of Seeing* is a tool that

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requires two individuals (X and Y) to analyze the following: "How X sees themselves, How X sees Y, How Y sees themselves, and How Y sees X" (UFMC, 2015, p. 77).

A key variable in social awareness or in group dynamics in general is the reality that humans have different personalities (Forsyth, 2010). The Myers-Briggs Type Indicator (MBTI) identifies 16 (best fit) personality types that derive from the psychological type theory of Dr. Jung as expanded by Isabel Myers and Katharine Briggs (Myers, McCauley, Quenk, & Hammer, 2003). The four MBTI dichotomies are: Where do we get our energy? (*Extraversion/Introversion*); How do we take in information? (*Sensing/Intuition*); How do we make decisions? (*Thinking/ Feeling*); How do we organize our world? (*Judging/Perceiving*) (Myers et al., 2003). Research suggests that most people who make a career out of the military are MBTI type Indicator ISTJ (Myers, et al., 2003).

Emotional Intelligence Section Summary

The important thing to realize about Emotional Intelligence is that it can easily be adapted to meet both individual and organizational needs, hence the divergent applications of various forms of emotional intelligence throughout the literature. Studies focused on different applications of emotional intelligence have demonstrated that emotional intelligence can help foster personal and leader development. Instead of using Emotional Intelligence instruments to predict success, perhaps a better application for the U.S. Army would be to implement EI science as a means (or tool) to develop success. Adaptability, influencing, developing others, organizational awareness, and teamwork are all fundamentally emotional intelligence domains (Goleman et al., 2013). Those same variables are key to effective leadership in the U.S. Army, and personalized feedback on

each of those EI domains could enhance the U.S. Army's development of leaders.

Developing Adaptive and Self-aware Leaders for a Complex World

"Complexity is not an objective factor but a subjective one" (Dorner, 1996, p. 39). "We interpret what we see based on our own life experiences, assumptions, preferences, priorities, and implicit rules about how things work and how one should be" (Stone & Heen, 2015, p. 55). This review of literature works to enhance understanding for all organizations that share the U.S. Army's goal of producing adaptive, agile, and self-aware leaders. Since most of the world's population does not live on the high seas or in the air domain, the U.S. Army is the principle US military organization for America in the human domain, and all humans have emotions. "If Army leaders are really interested in effective leadership they will embrace this key ingredient to successful relationships which underscores all organizational success…. The most valuable element in building and maintaining successful relationships, individual or team, is Emotional Intelligence" (Sewell, 2014, p. 9). In the words of Sir Basil Liddell Hart, "the only thing tougher than getting a new idea into a military mind is getting an old one out" (UFMCS, 2015, p. 1).

Barriers to Emotional Intelligence in the U.S. Army

"We instinctively rely on, and are susceptible to, biases and assumptions" (Jones, 1998, p. 22). It is prudent to debunk some of the myths often associated with emotional intelligence within the academic and mainstream literature. One of the most common false dilemmas related to emotional intelligence (EI) is the very western societal concept that humans are either rational or emotional (Kaufman, 2013). An example of this dichotomy is built within the Myer Briggs Personality indicator that categorizes how humans make decisions as either *Thinking* or *Feeling* (Myers et al., 2003), thus implying

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that on the spectrum of decision making at one end is emotions (feeling) and on the completely opposite end of is thinking. This myth is rooted in Western philosophical viewpoints dating back to antiquity (Nisbett, 2003).

"No longer do social scientists believe in the existence of a single truth… truth is contingent and conditional" (Weiss, 1998, p. 100). Within the literature on the topics of human emotions (Ekman, 1992a), human intelligence (Caramazza & Coltheart, 2006), social intelligence (Thorndike, 1920), and emotional intelligence different scientists present distinct contingent and conditional truths or viewpoints. Other social scientists present strong logical and emotion laden arguments against the importance of emotions and the entire emotional intelligence and social intelligence fields of study (Harms & Crede, 2010; Matthews, Zeidner, & Roberts, 2002). The human mind instinctively views the world "in terms of patterns, which it recognizes based on memories of past experiences" (Jones, 1998, p. 17).

Members of the U.S. Army are reflections of American society (Gardner et al., 2003). Most Americans are familiar with the common euphemism that some people have book smarts and others have street smarts (Althen et al., 1988). It could be argued that the Goleman et al. (2013) Mixed EI model that centers on self-awareness, self-management, social-awareness, and relationship management is fundamentally an operational model for street smarts. The U.S. Army is focused on recruiting individuals with science, technology, engineering, and mathematic (STEM) talents, but the ideal outcome is to attract and retain team members who are both book smart (IQ) and street smart (EQ). The U.S. Army's Leadership Doctrine highlights that leaders throughout the organization are required to have a certain level of both intelligence as measured via the

ASVAB and Human Strengths as measured by the GAT 2.0 (DA, 2014i).

Another institutional bias or barrier regarding the U.S. Army and Emotional

Intelligence is related to the concept that warriors are not supposed to show emotion. In

mainstream American society, individuals who express emotion are often viewed

negatively in organizational settings (Mayer & Salovey, 1997; Mayer et al., 2004). This

time-honored social and U.S. Army organizational norm is reflected in General Patton's

diary discoveries by Rick Atkinson (2002) in the novel *An Army At Dawn*. While

General Patton was traveling to various troop staging areas in preparation for

OPERATION TORCH and the North African campaign of 1942, he gave speeches to

America's unseasoned troops designed to "put iron in their souls" (p. 36). The opening

scene in the movie *Patton* helps to illustrate the nature of many of General Patton's

speeches during this period of American history. "At Fort Bragg, while he was

addressing troops he had once commanded in the 2nd Armored Division, tears coursed

down his cheeks and he stalked from the stage without a word…. The men roared their

approval" (Atkinson, 2002, p. 36). In his diary, Patton rebuked himself for being

"inclined to show emotion, a most unmilitary trait" (Atkinson, 2002, p. 37). Thus, a time

honored organizational norm and expectation within the U.S. Army is that a seasoned

warrior always displays the three Cs (calm, cool, and collected); and emotions are things

that warriors learn to suppress and not display (DA, 2015c). "We tend to cling to untrue

beliefs in the face of contradictory evidence…because we simply rationalize away the

disparity" (Jones, 1998, p. 45). The point is not to judge or speculate on biased opinions

if or how emotions should be displayed within an organization. Instead, the point is to

recognize the reality that anything related to the word "emotion" is going to be viewed

with a cynical and skeptical eye by some members of the U.S. Army (Sewell, 2014).

Another reason for the gap between the popularity of Emotional Intelligence throughout corporate and academic sectors of America relative to the U.S. Army is twofold. "First, people just don't understand it…. They often mistake emotional intelligence for a form of charisma or gregariousness…. Second, they don't see it as something that can be improved…. Either you have it or you don't" (Bradberry & Greaves, 2009, p. xvi). The reality is the proven fact that emotional intelligence is like any other skill (or competency). Emotional intelligence has to be learned and developed over a lifetime (Goleman, 1995). Social and Emotional Learning (SEL) programs have been implemented in thousands of America's schools for over the past 20 years from the preschool through high school levels (Goleman, 2005). Hence, with nearly 80% of the current U.S. Army team consisting of members from the millennial generation, some of today's uniformed team members have been exposed to the science of emotional intelligence during their formative years prior to joining the military (Sewell, 2014).

Historically, there have always been numerous barriers to the diffusion of new ideas and concepts, especially when new ideas are contrary to the norms of an organization or the collective beliefs of a group of people (Argyris, 1972; Kotter, 1990; Rogers, 1995). It is important to recognize that emotional intelligence is not a fad nor a trend and has been studied and researched as a scientific concept since Salovey and Mayer introduced the concept in 1990. One of the reasons why Salovey and Mayer (1990) chose the phrase emotional intelligence was because they "thought it would call attention to the view that emotions can serve rationality rather than interfere with it" (Salovey et al., 2003, p. 251).

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Summary

The primary purpose of this literature review was to help the U.S. Army address AWFC #10 while discovering and exploring answers to the following questions: What is leadership? How does an organization develop adaptive leaders? How do organizations measure if each individual leader is truly becoming more adaptive and open to change? Is adaptive leadership a thinking (cognitive) or an emotional (affective) psychological phenomenon, or are the human traits related to successful adaptability an applied mixture of both emotions and thinking? What is emotional intelligence? Can emotional intelligence (EI) science help the U.S. Army develop and assess adaptive leadership? Are there any commonalities between the U.S. Army's leadership doctrine and emotional intelligence science? How does EI relate to mission command?

Within the U.S. Army, leadership is "the process of influencing people by providing purpose, direction, and motivation to accomplish the mission and improve the organization" (DA, 2012L, p. 1). Organizations like the U.S. Army develop adaptive leaders via training, education, and experience (DA, 2013). Most important, organizations that utilize psychometric instruments and other tools that measure growth on the various leadership attributes and competencies important for that organization's success help to validate and foster leader development initiatives (Cherniss & Goleman, 2001). Adaptive leadership requires both cognitive and affective talents (Baltharzard et al., 2010). Thus, adaptive leader development programs need instruments that provide self-awareness enhancing feedback, and numerous Emotional Intelligence instruments have proven to meet that need in other organizations outside the U.S. Army (Druskat et al., 2013). The important thing to realize about Emotional Intelligence is that it can

easily be adapted to meet both individual and organizational needs. Without question,

there any commonalities between the U.S. Army's leadership doctrine and emotional

intelligence science. This study represents a start point for the U.S. Army on measuring

the investments into adaptive leader development by asking the question: What are the

Emotional Intelligence levels of current members of the organization?

CHAPTER III: METHODOLOGY

Introduction

The U.S. Army currently has 20 enduring first-order problems defined as Army Warfighting Challenges (AWFCs), "the solutions to which improve the combat effectiveness of the current and future force" (DA, 2015a, p. 1). The overarching purpose of this quantitative survey-based study was to assist the U.S. Army with possible solutions for AWFC #10 titled "Develop Agile and Adaptive Leaders" (DA, 2015a, p. 1). The U.S. Army continues to make significant changes to published doctrine, to professional military education programs, and to individual and unit-level training concepts while working towards the strategic goal of developing adaptive leaders for a complex world (DA, 2014b, 2014f). At this juncture, leader producing organizations like the U.S. Army need instruments that both enhance adaptive leader development and decisively measure (assess) adaptiveness as a leadership trait within each individual member of the organization. The present study was an initial look at the concept of adding the cognitive (thinking) and affective (emotional) aspects of trait emotional intelligence (EI) science to the U.S. Army's current leader development strategy. Sampling the trait EI scores of current mid-level leaders within the organization will help the U.S. Army gain insight on effectiveness at developing adaptive leaders. In addition, this exploratory study is the start point for determining some of the fundamental pros and cons of infusing trait EI science into the U.S. Army's leader development strategy.

This chapter presents the research design, the variables of interest, the target sample, survey instrumentation, the methodology for collecting and analyzing data, and ethical considerations. Within the outline of the research design, this chapter presents the

study's independent and dependent variables of interest as a logic model, and provides

definitions for each key variable of interest. To help explain the chosen research design,

this chapter outlines the study's central and additional research questions (RQs),

hypotheses, and previous research that influenced hypotheses. Details are provided about

the survey instrumentation assembled and used to collect the desired data for the present

study. In addition, this chapter presents information about the chosen target sample while

explaining how that sample was representative of a much larger U.S. Army leader

population. After clarifying the quantitative data collection and data analysis plan, this

chapter concludes with a section on the ethical considerations specific to the dynamics of

this study. The following can be found in the appendices: the survey instrument

(Appendices A-D), IRB documents (Appendices E-G), the informed consent statement

(Appendix F), survey invitation letters (Appendix J), approval to survey members of the

U.S. Army (Appendices H, I, and N), a quick reference guide for the variable definitions

and logic model (Appendix K), and variable coding (Appendix L).

Research Design and Logic Model

The research design of this correlational study includes an exploratory and

descriptive survey, supplemented by analysis of the relationship between

sociodemographic factors, personality factors, and the measured trait emotional

intelligence dimensions of the survey. The target sample for this study consisted of

students attending a 10-month U.S. Army resident school consisting primarily of mid-

career commissioned U.S. Army officers in the rank of Major. Mid-career U.S. Army

officers typically have at least 10 years of commissioned military experience, education,

and training. The goals of this study required sampling seasoned and experienced leaders

instead of new recruits or other emergent segments of the organization in order to assess the U.S. Army's effectiveness at developing adaptive leadership traits.

Within the scope of this study, the dependent variables of interest were the individual trait EI factor scores and the global (combined factor) trait EI scores of current leaders within the U.S. Army using the Trait Emotional Intelligence Questionnaire-Short Form (TEIQ-SF). The primary socio-demographic variables of focus throughout this study were gender and military specialty or Warfighting Function (career experience). The Big Five personality traits of Extraversion, Openness to Experience, Agreeableness, Conscientiousness, and Emotional Stability were also key independent variables of interest (Gosling, Rentfrow, & Swann, 2003). Thus, in addition to the TEIQ-SF, this study also used the (Big Five) Ten-Item Personality Inventory (TIPI). Figure 7 depicts the independent and dependent variables of interest for the present study.

Independent Variables		Dependent Variables
Demographic Variables		**TEIQ-SF** (Global Trait EI Scores)
Gender Service Category Military Experience Enlisted Experience Commissioning Source Commissioning Year Initial Branch Warfighting Function Command Time	**Ten Item Personality Inventory (TIPI)** **Big Five** Extraversion Openness to Experience Agreeableness Conscientiousness Emotional Stability	**Primary Factors** Well-being Self-control Emotionality Sociability **Nonaligned Facets** Adaptability Self-motivation

Figure 7. Independent and Dependent Variables of interest (Logic Model).

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The 30-item TEIQ-SF measures 15 facets (2 items per facet). Of the 15 facets, all but two facets analyze into the *primary factors* of Well-being, Self-control, Emotionality, and Sociability (Cooper & Petrides, 2010). The two independent facets that do not fit within the four primary factors are adaptability and self-motivation (Petrides, 2009). This study did not focus on each of the 15 individual facets measured by the TEIQ-SF. Instead, this study centered on the four primary factors and the two independent facets (nonaligned facets) of adaptability and self-motivation. The scope of the present study concentrated on the key independent variables of gender, military specialty, and personality types as they relate to individual trait EI factor scores and trait EI global scores measured by the TEIQ-SF. However, quantitative data were also collected on the following other socio-demographic independent variables: service category, military experience, enlisted experience, commissioning source, commissioning year, and command time. No pre-existing data were used in this study. All key variable definitions are in Appendix K.

Research Questions

The central research question for the present study was the following: *What are the trait emotional intelligence scores of mid-career commissioned U.S. Army officers?* This study's central and three additional exploratory research questions were rooted in the reality that most mid-career U.S. Army commissioned officers have a bachelor's degree and have successfully completed the professional military education required for promotion to the rank of Major. Depending on the job specialty (military branch), most mid-career commissioned U.S. Army officers have completed at least one Company level command. A large proportion of current U.S. Army mid-career commissioned officers in

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the National Guard (ARNG), Army Reserves (USAR), and on Active Duty have at least one combat or overseas deployment. In addition, most U.S. Army mid-career commissioned officers have at least 10 years of on-the-job training and experience developing their adaptive leadership attributes (what a leader is: Character, Presence, Intellect) and their adaptive leadership competencies (what a leader does: Leads, Develops, Achieves), as defined within the U.S. Army's Leadership Requirements Model (ALRM) (DA, 2012L). Of equal importance, a sample of mid-career U.S. Army commissioned officers represented years of real-world experience providing feedback to other members of the organization, i.e., experience practicing the ALRM traits of builds trust and develops others.

The following are the three additional empirical research questions (RQs) for this study, along with the respective hypotheses:

1. RQ 1: Is there a difference in the trait emotional intelligence scores of mid-career U.S. Army commissioned officers based on gender?

   Null Hypothesis: There is no significant difference in trait emotional intelligence scores of mid-career U.S. Army commissioned officers based on gender.

2. RQ 2: To what extent do trait emotional intelligence scores of mid-career U.S. Army commissioned officers differ based on military specialty (Branch) or Warfighting Function?

   Null Hypothesis: There is no significant difference in trait emotional intelligence scores of mid-career U.S. Army commissioned officers based on military specialty (Branch) or Warfighting Function.

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3. RQ3: Do the trait emotional intelligence scores of mid-career U.S. Army commissioned officers differ based on personality differences identified by the Big Five personality dimensions?

Hypothesis: Extraversion, Openness to Experience, Agreeableness, Conscientiousness, and Emotional Stability have a positive influence on trait EI scores; i.e., higher TIPI scores will result in higher trait emotional intelligence scores.

Evidence Influencing Hypotheses

The first empirical research question addressed gender. The Trait Emotional Intelligence Questionnaire-Short Form (TEIQ-SF) was the Emotional Intelligence (EI) measuring instrument used for this study. The TEIQ-SF is a self-report questionnaire that measures the four primary factors of Well-being, Self-control, Emotionality, Sociability, and the two independent facets of Adaptability and Self-motivation. The TEIQ comprises 153 items, measuring 15 distinct facets, while the TEIQ-SF is composed of only 30 items with two questions for each of the 15 facets (Petrides, 2009). Both the TEIQ and the TEIQ-SF are designed to measure EI as a set of traits instead of measuring EI as an ability; i.e., the TEIQ-SF measures EI as "personality traits" (Petrides & Furnham, 2000, 2001, 2006; Petrides, Sangareau, Furnham, & Frederickson, 2006; Petrides, Furnham, & Mavroveli, 2007; Siegling et al., 2015; Vernon et al., 2009).

Previous research using the 30-question (TEIQ-SF) and the much longer version of the same questionnaire (TEIQ) produced different results related to gender scores. In some studies females collectively scored slightly higher than males on some of the measured factors and facets (Sanchez-Ruiz, Perez-Gonzalez, & Petrides, 2010), while in

other studies males scored higher on the exact same factors and facets (Shahzad & Bagum, 2012). In further studies, there were no significant gender differences in any of the measured factors of Well-being, Self-Control, Emotionality, Sociability, Adaptability, and Self-motivation assessed by the TEIQ and the TEIQ-SF (Petrides & Furnham, 2000; Siegling et al., 2015). The same conflicting outcomes related to the independent variable of gender and the dependent variable EI scores were discovered using other types of EI measuring instruments. Some researchers have reported non-significant gender differences in EI levels (Bar-On, 1997; Fatima, Imran, & Awan, 2011; Goleman, 1998; Petrides & Furnham, 2000), while other scientists have reported significant gender difference in EI scores (Katyal & Awasthi, 2005; Mandell & Pherwani, 2003; Punia & Sangwan; 2011; Salman & Nasreen, 2012).

Since no known previous studies have been conducted specifically measuring the TEIQ-SF scores using a sample of U.S. Army Soldiers, and since previous studies using the same trait EI instrument (TEIQ-SF) have produced conflicting outcomes in regard to gender's influence on trait EI scores, the best educated guess was that there would not be a significant difference in trait EI scores within a sample of U.S. Army mid-career commissioned officers based on gender. In fact, one study on this topic discovered that any difference between males and females regarding trait EI levels was actually more related to cultural gender roles and "stereotypical perceptions of EI" rather than any actual measurable collective difference in trait EI scores in regard to gender (Petrides, Furnham, & Martin, 2004, p. 150). Regardless of the statistical outcomes of this study, the U.S. Army's recent integration of female Soldiers into every job specialty and career track made this question timely and relevant. Specifically, this question was relevant to

those members of the organization who currently serve in job specialties and career

tracks that were closed to females prior to April 2016.

The expectation that there would be no effect due to gender presented a problem

for hypothesis testing. "It is not possible to test directly a negatively stated research

hypothesis because of the indirect logic of the null hypothesis, i.e., the positive

expectation of the research hypothesis is stated and then the null version of that statement

is tested empirically…. Thus, the research hypothesis for gender has to be stated as

having an effect, despite the expectation that there will *not* be an effect" (S. Miller,

personal communication, November 11, 2016). It follows that the research and null

hypotheses for this study were the reverse of expectations from the literature.

The second empirical question of the present study measured differences in trait

EI scores based on commissioned officer branch (military specialty) or warfighting

function. This question was designed to identify variance in trait EI scores that may have

been influenced by differences in specialized military education, training, and

experiences. There are a number of commissioned officer branches (military specialties)

in the U.S. Army ranging from primarily administrative roles like Finance and Chaplain

to the combat roles of Infantry and Armor. Plus, there are other officer branches that are

a blend of both combat and combat support such as Signal, Military Police, Ordnance,

and Transportation (DA, 2014e). The survey instrument for the present study captured

19 basic officer branches of the U.S. Army. However, there are currently more than just

19 officer branches, and commissioned officers also serve in functional areas that require

specialized training and education beyond just a basic branch. Due to the large number

of commissioned officer branches and functional areas, it may be challenging to collect a

sample that is representative of all the different commissioned officer specialties. Thus, the survey for the present study also asked participants to identify with one of the six warfighting functions that currently fall under the U.S. Army's Unified Land Operation doctrine (DA, 2011a). The following are the U.S. Army's six warfighting functions: Mission Command (DA, 2010a), Movement and Maneuver (DA, 2010b), Intelligence (DA, 2012b), Fires (DA, 2012c), Sustainment (DA, 2012i), and Protection (DA, 2012g).

The warfighting function question of this study was exploratory because there are no known previous studies related to trait EI and job-related experiences, education, and training. However, the default assumption was that the six warfighting function categories or six different career trajectories likely would have some relationship to individual emotional intelligence traits.

The third empirical research question examined the relationship between personality constructs and the six factors measured by the TEIQ-SF. "Personality normally deals with individual differences among people in behavior patterns, cognition, and emotion" (Dehghanan et al., 2014, p. 1279). One advantage of trait EI theory over other EI theories, ideologies, and measuring instruments is the fact that trait EI is a construct rooted within mainstream personality literature and theory (Petrides & Furnham, 2001). Fundamentally, trait EI theory is "a compound personality construct located at the lower levels of the personality taxonomies" (Petrides et al., 2007, p. 1). Hence, there is widespread empirical research use of both the TEIQ and the TEIQ-Short Form in relation to the Big Five personality inventory (Atta, Ather, & Dano, 2013; Dehghanan et al., 2014; Petrides et al., 2010; Petrides & Furnham, 2001; Siegling et al., 2015). The Big Five personality inventory is also referred to in the literature as the Five-

Factor Model of personality or FFM (Siegling et al., 2015). The Big Five organizes

personality into the categories of Neuroticism, Extraversion, Agreeableness,

Conscientiousness, and Openness to Experience. Based on the outcomes of previous Big

Five and trait EI studies (Atta et al., 2013; Dehghanan et al., 2014; Petrides et al., 2010),

the present study hypothesized that correlational analysis would show that in a sample of

mid-career U.S. Army commissioned officers; Emotional Stability, Extraversion,

Openness to Experience, Agreeableness, and Conscientiousness would have a positive

relationship with global trait EI scores.

Instrumentation

The survey instrument assembled and designed for this study included a 30-item

trait emotional intelligence questionnaire (see Appendix A), a 10-item personality

questionnaire, a 9-item demographic background questionnaire (see Appendix C), and

one optional open-ended (or open-response) question. The survey had a total of 50 items

or questions. The researcher purposefully worked to limit the total amount of items on

the survey instrument to help foster survey participation rates and to enable survey

completion rates. Thus, the researcher used the 30-item TEIQ-SF (short form) instead of

the more comprehensive and longer TEIQue which has 153 questions (Petrides, 2009).

For the same reasons, the short Ten Item Personality Inventory (TIPI) was the instrument

chosen to address RQ 3 (Gosling et al., 2003). The demographic background section of

the survey instrument was carefully designed to generate the quantitative data needed for

the scope of this study, and was purposefully limited to just the nine items required for

the present study. Any qualitative feedback generated by the one open-response question

(see Appendix C) was primarily used to inform possible future studies related to

Emotional Intelligence's role and purpose in the U.S. Army's leadership development program or the U.S. Army's leadership development instruments. Those responses were not analyzed as part of the current study.

Validity

Psychometrics is a systematic set of tools and procedures to help quantitative researchers measure and assess reliability and validity (Fowler, 2009; Weiss, 1998). The concept of validity relates to truthfully and accurately measuring what an instrument is intended to measure (Pelham, 2013). According to Weiss (1998), many measurement experts "often point out that a measure is not valid in and of itself… it can only be valid for certain uses" (p. 145). There are numerous ways to determine whether a tool is a valid measure of a construct: face validity, content validity, criterion-related validity, construct validity, and external validity (Fowler, 2009; Pelham, 2013; Slavin, 2007). Face validity is "the degree to which a given measure appears to assess what it is supposed to assess" (Slavin, 2007, p. 179). Content validity refers to the adequacy with which a measure "has sampled from the intended universe or domain of content" (Pelham, 2013, p. 7).

Measuring instruments for trait emotional intelligence (EI) are very different than those for ability EI. Ability EI measuring tools have right or wrong answers, and most ability EI instruments tend to *performance-based* multiple-choice assessments (Salovey & Mayer, 1997). Most ability EI tools ask participants to correctly identify an emotion that has been displayed via a photograph, and participants must choose from a list of words which word best defines the emotion depicted in the photo. Trait EI instruments are all self-report surveys with questions that typically do not have right or wrong

answers (Cooper & Petrides, 2010). For the purposes of this study, trait EI instruments were the best fit because they tend to offer more feedback that enlightens self-awareness. Hence, a trait EI instrument was chosen for this study because relative to ability EI instruments, trait EI instruments could be used for the leadership developmental needs of the U.S. Army instead of purely assessment purposes.

Reliability

A survey instrument can have reliability without having validity, but it cannot have validity unless it is reliable (Fowler, 2009; Weiss, 1998). The concept of reliability is essentially whether or not an instrument measures a construct the same way every time that it is used. One of the best ways to think about the reliability of an instrument or measurement is to think in terms of consistency (Pelham, 2013). In terms of the reliability of a tool, the researcher wanted to produce the same readings when measuring the same things. Slavin (2007) defined reliability as "the degree to which measures produce consistent, stable indicators of the level of a variable" (p. 387). Internal consistency can be measured using Cronbach's Alpha which can "range from 0 (no reliability) to 1 (perfect reliability)" (p. 174). Reliability is important when choosing an instrument that measures Emotional Intelligence for a number of reasons. The paramount reason is that an instrument that does not have a high degree of reliability will most likely produce different results every time it is used. "Reliability mainly refers to the degree of variation in responses in repeated trials" (Blair, Czaja, & Blair, 2014, p. 257). One of the best ways to determine the reliability of an instrument is to conduct a test-retest and correlate the scores of individuals who were surveyed by the instrument at two different times. The three measures of reliability are internal consistency (coefficient alpha, KR

20), test-retest correlation, and inter-rater reliability (Pelham, 2013; Slavin, 2007). The validity and reliability of the TEIQ-SF has been recently tested and validated (Andrei, Siegling, Aloe, Baldaro, & Petrides, 2016; Cooper & Petrides, 2010; Petrides, 2016).

Trait Emotional Intelligence Instrument—Short Form (TEIQ-SF)

The first section of this study's survey instrument (Part I) is the Trait Emotional Intelligence Questionnaire Short Form (TEIQ-SF). The researcher was given permission (see Appendix B) to use the TEIQ-SF from the scientist who created and validated the instrument, Dr. Petrides (Petrides, 2009). Dr. Petrides currently directs the London Psychometric Laboratory based at University College London, and the laboratory is known as the home to the trait emotional intelligence research program (Petrides, 2016; Petrides & Furnham, 2006). "For academic purposes," the researcher was allowed to use the TEIQ-SF free of charge (Appendix B). The researcher did not alter any aspects of the TEIQ-SF (see Appendix A relative to Appendix C) from the original construct provided by Dr. Petrides and the London Psychometric Laboratory.

The TEIQ-SF measures using a 7-degree Likert scale ranging from 1 (*Completely Disagree*) to 7 (*Completely Agree*) (see Appendix C). Scores from the TEIQ-SF are typically in decimals and can have a theoretical average (or mean) of 3.5, with a max score of 7.0 and a low score of 1.0. The 30 items on TEIQ-SF measure 15 facets (traits), and the TEIQ-SF dedicates two items (two questions) for each facet. Again, the two facets of Adaptability and Self-motivated are independent; and although those two independent facets factor into the overall trait EI score (or global score), they do not factor into the four primary factors like the other 13 facets measured by the TEIQ-SF. The following are the four primary factors measured by the TEIQ-SF with the traits

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(facets) that represent each factor:

Well-being: self-esteem, trait happiness, and trait optimism (six items total on the TEIQ-SF two items for each of the three facets). *Self-control*: emotion regulation, stress management, low impulsiveness (six items). *Emotionality*: emotion perception, trait empathy, emotion expression, and relationships (eight items). *Sociability*: assertiveness, emotion management, and social awareness (six items) (Petrides, 2009; Siegling, Vesely, Petrides, & Saklofske, 2015).

The list of the 30 TEIQ-SF questions, and the factor (plus two independent facets) that each question addresses is outlined in Appendix K (Variable Definitions and Logic Model) and in Appendix L (Variable Coding). A total of 15 items on the TEIQ-SF are reverse scored and have to be recoded after data is collected. The questions (items) that need to be recoded are listed in Appendix L. The directions for this initial section of the survey instrument for the present study were key for participants to read and react to (see Appendix C) and are repeated here to give a sense of the instrument.

Please answer each statement by clicking on the number that best reflects your degree of agreement or disagreement with that statement. Do not think too long about the exact meaning of the statement. Work quickly and try to answer as accurately as possible. There are no right or wrong answers.

This study provides the opportunity to compare the mean trait EI scores of a sample of U.S. Army Majors relative to the mean scores from other samples, ideally comparable samples that used the exact same trait EI instrument (TEIQ-SF). Because of the focus of this study, the key comparison was the mean scores in the independent facet of Adaptability, specifically the mean scores of males and females on the facet of

Adaptability as measured via the TEIQue or the TEIQue-SF. Regardless of the factor or facet scores being compared, a limitation to comparing mean trait EI scores generated equivalent sample sizes. The challenges related to equivalent sample sizes also pertained to demographic variables like gender.

Table 15 outlines the trait EI scores of a sample ($N = 1,592$) from the United Kingdom (UK) based on research conducted by Petrides (2009). The mean age for men was 32.67 years (*SD*: 11.95; range: 16-77) and for women 27.10 (*SD*: 10.64 range: 16-74). "Most participants were of white UK origin (58%), followed by white European (19.2%), Indian (6.6%), African and Caribbean (5.7%), and East Asian (5.1%)" (Aluja, Blanch, & Petrides, 2016, p. 134).

Table 15

Mean Values – Female vs. Male – Measures of Trait Emotional Intelligence (United Kingdom Sample)

	Female ($n = 863$)		Male ($n = 729$)	
	M	*SD*	*M*	*SD*
Well Being	5.19	0.83	5.28	0.83
Self-Control	4.26	0.76	4.69	0.74
Emotionality	5.13	0.68	4.92	0.73
Sociability	4.77	0.72	5.04	0.76
Adaptability	4.56	0.84	4.73	0.85

Note. Adapted from "Psychometric properties of the Catalan version of the Trait Emotional Intelligence (TEIQue): Comparison between Catalan and English data," by A. Anton, B. Blanch, and K. V. Petrides, 2016, *Personality and Individual Differences, 99,* p. 137.

Ten-Item Personality Inventory (TIPI)

Part II of the survey instrument for the present study is the Ten Item Personality Inventory (TIPI) (see Appendix C). Like the TEIQ-SF section, the answers to this section of the survey were also organized by a 7-item Likert scale ranging from

Completely disagree (1.0) to *Completely agree* (7.0) (Gosling et al., 2003). The original

scale of the TIPI was not altered for the purposes of the present study, but the labels used

for the scales were slightly altered to match the language used within to label the scales

on the TEIQ-SF (see Appendix C: original TIPI instrument relative to Appendix D:

Survey Instrument). The intent of the label alterations on the TIPI was to provide survey

participants consistently and to mitigate confusion.

The TIPI measures the following five personality factors: *Openness*: Being

curious, original, intellectual, creative, and open to new ideas; *Conscientiousness*: being

organized, systematic, punctual, achievement-oriented, and dependable; *Extraversion*:

being outgoing, talkative, sociable, and enjoying social situations; *Agreeableness*: being

affable, tolerant, sensitive, trusting, kind, and warm and *Emotional stability*: (Not) being

anxious, irritable, temperamental, and moody. Emotional Stability is basically the

opposite of Neuroticism, which means being irritable, temperamental, and moody

(Dehghanan et al., 2014).

The 10-question TIPI is slightly different than most of the other much longer Big

Five personality measurements. Most Big Five measurements organize personality into

the categories of Neuroticism, Extraversion, Openness to Experience, Agreeableness, and

Conscientiousness. However, the TIPI measures the factor of Emotional Stability instead

of Neuroticism. Thus, based on the outcomes of previous studies that used both a Big

Five instrument and a version of the TEIQ (either the entire TEIQ or the short-form

version), this study assumed that correlational analysis would show the following in a

sample of mid-career U.S. Army commissioned officers: Neuroticism influences

negatively on trait EI scores, while Extraversion, Openness to Experience,

Agreeableness, and Conscientiousness influence positively on trait EI scores (Atta et al., 2013; Dehghanan et al., 2014; Petrides, et al., 2010). Since the TIPI measures Emotional Stability which is the positive end of the Neuroticism scale, the hypothesis for the present study was that all five measured factors of the TIPI would have a positive influence on trait EI scores. Thus, higher scores on the TIPI should have resulted in higher global trait EI scores on the TEIQ-SF.

Demographic Survey Questions

Part III of the survey instrument for the present study focused on the demographic information of the participants. This section was purposefully limited to just nine questions that provided information on the independent variables of gender (GEN), service category (SVC), years of service (YRSSV), enlisted background (if applicable) (ENL), commissioning source (COMSOR), initial branch (INBR), years commissioned (YRCOM), warfighting function (WFF), and command time (CMDTM). Reference Appendix D for exact demographic questions and drop-down menu of answer options for this section of the survey.

Open-Response Question

One open-response (or open-ended) question was added to the very end of the survey instrument in an attempt to gain understanding on the following two questions that were generated during the literature review of this study: What is the initial diagnosis bias or anchoring bias within the U.S. Army on the idea of adding emotional intelligence science to the organization's leader development program? Based on the warrior culture of the U.S. Army, what are the mental heuristics throughout the organization related to the word *emotions*?

The optional open response question was the fourth and final part of the survey used for the present study. The parameter for the answer box for this section were set at a max of 500 words. The following was the prompt for this section of the survey:

The purpose of this survey is to help the researcher determine the trait emotional intelligence scores of current leaders in the military. The overarching goal of this research is to help the U.S. Army address Army Warfighter Challenge #10 Develop Agile and Adaptive Leaders. Can emotional intelligence instruments help the U.S. Army develop adaptive leaders by providing individualized feedback that informs self-awareness? Your perspective on this topic is absolutely appreciated, and thank you for taking the time to participate in this research project.

Population and Sample

The Defense Manpower Data Center (DMDC) serves under the Office of the Secretary of Defense and provides manpower, personnel, and other data for the Department of Defense (DoD). Based on DMDC manpower reports published on 31 August 2016, there was a total of 1,303,618 active duty military personnel serving in the Department of Defense (DMDC, 2016). That 1.3 million number aggregates the total of both enlisted and commissioned active duty uniformed service members in the U.S. Army, Navy, Marine Corps, and Air Force (DMDC, 2016). However, that number does not reflect the DoD civilian members nor the uniformed members of the various Reserve and National Guard services throughout the DoD.

As of June 2016, there was a total of 2,883,578 DoD civilians, but only 470,284 worked for the Active Army, 346,479 worked within the Army National Guard, and

199,312 civilians worked in the Army Reserves (DMDC, 2016). Those civilian numbers do not reflect a substantial quantity of contractors who work side by side DoD members both domestically and abroad.

Specific to the U.S. Army, the total number of uniformed service members in all three Army components was over 1 million Soldiers (exactly 1,017, 913) (DMDC, 2016). As of August 2016, the following were the total number of enlisted Soldiers on Active duty from the ranks of Private (E-1) to Sergeant Major (E-9): E-1 = 20,095, E-2 = 27,39, E-3 = 46,892, E4 = 114,624, E-5 = 65,267, E-6 = 54,287, E-7 = 35,264, E-8 = 10,968, E-9 = 3,406 (DMDC, 2016). The total number of Active Duty enlisted U.S. Army Soldiers was 378,193. The five levels of warrant officer ranks combined to total 14,687 (DMDC, 2016). For the commissioned officer ranks from 2nd Lieutenant (O-1) to Four Star General (O-10), the following were the exact numbers in August 2016: 8,064 2nd Lieutenants (O-1), 11,506 1st Lieutenants (O-2), 29,094 Captains (O-3), 15,643 Majors (O-4), 9,127 Lieutenant Colonels (O-5), 4,192 Colonels (O-6), 132 Brigadier Generals (O-7), 125 Major Generals (O-8), 46 Lieutenant Generals (O-9), and 11 four-star Generals (O-10) (DMDC, 2016). The total number of Active Duty commissioned officers was 92,627.

The U.S. Army National Guard (ARNG) had a total of 343,709 uniformed Soldiers in August 2016 (DMDC, 2016). The ARNG had 298,425 enlisted members and 45,284 commissioned officers. The total number of Majors (O-4) in the ARNG was 6,499. The Army Reserves (AR) had 198,871 uniformed Soldiers, with 161,537 being enlisted and 37,334 being commissioned officers or warrant officers (DMDC, 2016). The total number of Majors (O-4) in the AR was 7,236. Adding up the 15,643 Active

Duty Majors with the 6,499 ARNG Majors, and the 7,236 AR Majors, the total number of Majors in the U.S. Army was exactly 29,378.

Population Estimates

Narrowing the US military population from millions of uniformed service members and civilians, from the four military branches of Army, Air Force, Navy, and Marines and from the various different enlisted, warrant, cadet, and commissioned ranks, this study centered on a much smaller and more homogeneous population. This study defined the population as only the 29,378 mid-career commissioned officer in the rank of Major currently serving in the Active Army, Army National Guard, and Army Reserves. As of 31 August 2016, the following were the exact number of Majors by component in the U.S. Army: (n = 15,643) in Active Army, (n = 6,499) in the Army National Guard, and (n = 7,236) in the Army Reserves. Of the (N = 29,378) Majors in the U.S. Army, (n = 2,900) are female (DMDC, 2016).

Target Sample

Based on the parameters, timeline, and goals of this study, the Command and General Staff College (CGSC) students attending the 2017 Intermediate Level Education (ILE) resident course represented an ideal sample. These students started the 10-month long resident ILE course during August 2016 and graduated in June 2017. The residence ILE course for CGSOC is taught at Fort Leavenworth, Kansas; and the program of instruction (POI) for ILE is specifically designed to prepare mid-career commissioned Army officers for the next phase of their military career. Most of the students attending resident ILE are in the rank of Major (or O4), but a few are in the rank of Captain Promotable. Captain Promotable means that the individual has met all the requirements

and prerequisites for promotion to Major. In order to be labeled as promotable, these individuals have already been selected for promotion, are on the official promotion rolls approved by the US Legislative and Executive Branches of Federal Government, and will typically be promoted within the next few months. Based on the 2016 CGSOC-ILE class numbers, the target sample size was approximately ($N = 1300$), and the majority of the students were US Active Duty Army ($n = 879$). However, the target sample also had students that represented the U.S. Army National Guard ($n = 50$) and the U.S. Army Reserves ($n = 98$). In addition, there was a substantial number of students from the US Air Force ($n = 89$), US Navy ($n = 45$), and US Marine Corps ($n = 28$). Like the 2016 ILE student sample, the 2017 student target sample should be reflective of the approximately 30,000 current U.S. Army Majors serving in the ARNG, USAR, and Active Army.

Procedures Used to Collect Data

The response rate was a primary concern when collecting the data required for the present study. A meta-analysis conducted by Manfreda, Bosnjak, Berzelak, Haas, and Vehovar (2006) indicated that Web surveys have an 11% lower response rate than surveys conducted by other methods. Shih and Fan (2008), reported that response rates for all electronic survey methods were about 10% lower than traditional mail surveys. When determining the type of survey delivery method for the present study, the key consideration variable was the population being targeted because of the scope of the study (Bonaminio, Gibson, Partridge, & Kallail, 2000; Cobanoglu, Warde, & Moreo, 2001; Gregory, 2011; Marshall & Rossman, 2011; Shin & Fin, 2008; Spatz, 2011). The email notification and Web-based survey technique was chosen for the present study because all surveyed participants were students of the CGSC. The only authorized

surveying technique at CGSC is via a web-based platform that is owned by the U.S. Army. One positive to the self-reporting web-based surveying option was the fact that all CGSC students had valid and working email addresses. Although self-reporting does have limitations, especially in objectivity, the use of self-reporting to collect data has been supported by research (Goffin & Gellatly, 2001; Sills & Song, 2002). Self-report was viewed as the appropriate means of collecting the data required to meet the purpose and scope of the present study.

The name of the survey software program used for this study is VERINT Professional, and the U.S. Army has a licensed copy of VERINT Professional provided through the Combined Armed Center (CAC)/Army University. Like most other web-based surveying software, VERINT Professional is designed to minimize the workload on participants. The CGSC Quality Assurance Office provided the researcher access and use of the VERINT Professional software free of charge. The use of VERINT Professional allowed the surveying instrument of the present study to be administered to a large population rapidly and securely. The VERINT Professional platform secured all generated data and allowed the researcher to meet human subjects protections required by the researcher's civilian university IRB (see Appendixes E and F). The survey platform also ensured that the present study complied with the Department of Defense's and the U.S. Army's guidelines and requirements related to using U.S. Army members as research participants (see Appendix I).

The web-based survey instrument was designed to minimize the workload on participants, and the "point and click" format allowed for quick responses. This survey took each voluntary participant approximately 12-15 minutes to complete. The web-

based survey was intentionally designed to be easy to read, with clear instructions and minimal use of graphics (Sills & Song, 2002). Every page had a similar layout and was designed to use consistent fonts, colors, and formatting styles. The reduced use of graphics, small page sizes, and caching allowed pages to load quickly over the Internet. The use of an unsupervised web-based survey instrument allowed for participation in this study to be completely anonymous which helped to mitigate social desirability bias (Bar-On, 2006; Bonaminio et al., 2000; Cobanoglu et al., 2001; Gregory, 2011; Marshall & Rossman, 2011; Shin & Fin, 2008; Slavin, 2007). Social desirability bias is "a tendency of individuals responding to a questionnaire… to say what they think the researcher wants to hear" (Slavin, 2007, p. 111).

Email Invitation and Reminder

An email invitation was sent to approximately 1300 students attending the resident CGSOC Intermediate Leaders Education (ILE) class 2017 (see Appendix J). Access to an accurate ILE student email distribution list was provided by CGSOC leadership. The email invitation outlined the fact that participation in this study was anonymous, voluntary, and confidential. The email invitation provided the link to the survey within VERINT Professional, and the first page of the survey outlined required informed consent information (see Appendix G). Each survey participant provided consent by reading the initial email invitation to participate in the study, by reading the informed consent information provided on the first page of the web-based survey instrument, and by clicking the tab to go to the second page of the survey. In addition to other information related to the study in the email invitation, the first page of the web-based survey instrument defined in detail the following six topics for participants: Nature

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and Purpose of the Project, Explanation of Procedures, Discomfort and Risks, Benefits, Confidentiality, and refusal/Withdrawal (see Appendix G and Appendix I).

Participants had two weeks to complete the survey. No incentives were offered for completing the survey instrument for the present study. Survey follow-ups have been shown to increase response rates (Kanuk & BeErenson, 1975). Seven days after initial contact, a follow-up email was sent to all members of the target sample (CGSC students) to thank those who had participated and to remind those who had not to promptly complete the web-based survey if they wanted to voluntarily participate in the study.

Completion Status

For the 50-item web-based survey questionnaire to be considered complete, the respondent needed to answer every question on the survey except for the last (optional) open-response question (see Appendix D). In order to help calculate completion status, only one question was designed to allow the respondent to select multiple responses (Question 4 in Section III), and the only way to go to the next question or survey page was to answer every question on each survey screen. These automated survey parameters were designed to help mitigate incomplete survey and data results. As previously mentioned, participation rate was one of the primary research concerns. The second major concern was survey completion, so extra attention was given to how to make the survey as user friendly and short as possible.

Data Cleaning

Following the close of the survey window, and prior to data analysis, data cleaning procedures were conducted to ensure that only completed, eligible surveys were included in the final data set, and that all demographic information was complete. The

data were also screened for errors like values falling outside the range of possible values

for variables, because "scores that fall outside the possible range can distort statistical

analyses" (Pallant, 2013, p. 45). A log book of recorded errors that were detected and

any changes that were made to the data file was maintained (p. 45). Reports were

downloaded from VERINT Professional into Microsoft Excel. Prior to loading data files

into SPSS software and conducting data analysis, all initial data cleaning was conducted

using Microsoft Excel software. Within SPSS, minimum and maximum values, the

number of valid and missing cases, and frequencies procedures were run to get the

correct values (p. 47).

The e-mail addresses and names of invitees did not appear in any reports, as they

were automatically removed from the data leaving only a code with no way to identify

any individuals who provided a particular response. This concept provided the highest

level of confidentiality and anonymity for all survey participants. All original survey

data remained in the VERINT Professional platform and will be stored under the

supervision of CGSC's Quality Assurance professionals for a minimum of three years.

All data downloads and reports from VERINT Professional were coded and properly

labeled. Any computers used to conduct data cleaning, data storage, and statistical

analyses were password protected. Any data that were e-mailed from CGSC to the

researcher were encrypted, and only federal government email accounts and computers

that required government CAC card access were used to share data electronically. Plus,

the data generated during this study will not be stored on removable hard drives.

Survey Variables and Coding

As previously outlined in this chapter, the dependent variable for this study was

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the trait emotional intelligence scores of the mid-career commissioned U.S. Army officers using the Trait Emotional Intelligence Questionnaire-Short Form (TEIQ-SF). The TEIQ-SF measures 15 facets, of which all but two fit within the factors of Well-being, Self-control, Emotionality, and Sociability. The two independent facets that do not fit within the four factors are adaptability and self-motivation. The key independent variables of this study were gender, military specialty, and personality types. The key variables of interest directly influenced the data coding system for this study. For example, the 30-item TEIQ-SF data was coded using the organizing label of "EI," and then broken down to actual TEIQ-SF question number and a factor or facet measured by that question. For example, the first question on the TEIQ-SF addressed the factor of Emotionality, and the coding system for this question was EIQ1EM. The details for data coding for all aspects of the survey instrument are provided in Appendix L.

Data Analysis

The data collected during this study were survey generated and analyzed using IBM's Statistical Package for the Social Sciences (SPSS) version 23.0 software. After ensuring a clean data file, the responses to the 15 TEIQ-SF and 5 TIPI items that were reverse scored were recoded. Next, procedures required to obtain descriptive statistics for both categorical and continuous variables were implemented. According to Pallant (2013), descriptive statistics include the mean, standard deviation, range of scores, skewness, and kurtosis. The skewness value provides an indication of the symmetry of the distribution (p. 59). Kurtosis, "on the other hand, provides information about the peakedness of the distribution" (Pallant, 2013, p. 59). The descriptive statistics procedures produced boxplots, line graphs, bar graphs, and histograms.

After completing descriptive statistics procedures and analyzes, statistical techniques to explore relationships among variables were utilized. "Multivariate analysis of variance (MANOVA) is an extension of analysis of variance for use when you have more than one dependent variable" (Pallant, 2013, p. 293). MANOVA procedures were used to determine if there was a significant difference between groups (based on gender, warfighting function) on the composite dependent variable (global trait EI score). In addition, *t*-tests were used to test for differences between males and females and warfighting function on each of the four factors measured by the TEIQ-SF. When interested in comparing the mean scores of more than two groups, an analysis of variance (ANOVA) was used. The researcher ran a Pearson product-moment correlation between total trait emotional intelligence scores and scores on the Big Five personality dimensions.

Ethical Considerations

There were no known risks to participants or conflicts of interest related to this study. It took the average participant approximately 12 minutes to complete the study's web-based survey. This research protected the rights of human research subjects and complied with the following: the Belmont Report, 32 CFR 219; 10 USC 980; DoDI 3216.02; where applicable 45 CFR 160 and 164; where applicable 45 CFR 46 (Subparts B, C, and D) under the authority of the DoD; and other Federal, State, and local laws as they may relate to proposed human subjects research. This research also complied with the Joint Ethics Regulation, DoDI 5500.7-R, specifically areas addressing investigator relationships with sponsoring companies, including monies received for research protocols.

Participation in all aspects of this study was 100% voluntary and anonymous. An email invitation (see Appendix J) was sent only to the current (2017) Command and General Staff College students (approximate $N = 1300$). As previously outlined, the email invitation outlined the parameters of informed consent specific to this study, and the email provided the link to the actual survey. In addition, the informed consent information in the email was also defined in the first page of the actual survey and outlined the following six informed consent issues: Nature and Purpose of the Project, Explanation of Procedures, Discomfort and Risks, Benefits, Confidentiality, and refusal/Withdrawal (see attached Informed Consent Document). No one, including the researcher, was able to associate responses with identity. All individual survey responses were confidential. No personally identifiable information (PII) like name, social security number, and address was collected from survey participants. All participants had to be at least 18 years of age to contribute to this study. Data generated during this study will be protected and stored for a minimum of three years.

Summary

The present study primarily took a quantitative approach and focused on determining the trait emotional intelligence (EI) scores of current mid-career U.S. Army leaders by using an established (valid and reliable) trait EI measuring instrument called the Trait Emotional Intelligence Questionnaire-Short Form (TEIQ-SF). The TEIQ-SF measures 15 facets (or traits). After factor analysis, 13 facets measured by the TEIQ-SF fit into the four primary factors of well-being, self-control, emotionality, and sociability. In addition to the four primary factors, the TEIQ-SF also measures the two independent facets of adaptability and self-motivation. Of the 15 facets measured by the TEIQ-SF,

the facet of "adaptability" was of primary interest in the present study due to the U.S. Army's need for leadership development instruments that measure growth in adaptability while facilitating self-awareness. The 30-item TEIQ-SF was nested within a web-based self-report survey designed to address this study's central research question and three additional empirical research questions.

Instead of trying to focus on the entire US military or the U.S. Army as a population, the limited and defined population of focus for this study was the approximately 30,000 U.S. Army Majors currently serving in the U.S. Army in the three components of Army National Guard, Army Reserves, and Active Army. The majority of the nearly 1300 students annually attending the Command and General Staff Officer Course (CGSOC) Intermediate Leaders Education (ILE) were mid-career commissioned Army officers primarily in the rank of Major. These resident CGSOC ILE students represented an ideal sample for the goals of this study, because the target sample was reflective of over 10 years of U.S. Army training, education, and experience. This target sample and isolated population provide insights on the U.S. Army's leader development effectiveness at enhancing trait emotional intelligence scores via the organization's current leader development strategy, program, and instruments.

The U.S. Army may be successfully teaching and fostering adaptiveness in leaders throughout the organization, but without an instrument that assesses adaptability, the organization is unable to measure effectiveness. The present study is an attempt to quantitatively measure the U.S. Army effectiveness at developing adaptive, mentally agile, and self-aware leaders for a complex world.

CHAPTER IV: RESULTS

Introduction

The United States (US) Army is focused on developing adaptive leaders for a

complex and unpredictable world (DA, 2014f). The primary purpose of this study was to

help organizations such as the U.S. Army measure whether each individual leader is truly

becoming more adaptive and open to change. Details about each research question, and

the evidence that influenced this study's predicted outcomes, were outlined within

Chapter III. In addition, Chapter III provided details about the survey instrument used to

collect data for the present study, and the targeted sample based on the goal to measure

the Trait Emotional Intelligence scores of seasoned and experienced U.S. Army

commissioned leaders. However, the present study's research questions and a brief

description of hypotheses are repeated here for the convenience of the reader. The

central research question for this study was the following: What are the trait emotional

intelligence scores of mid-career commissioned U.S. Army officers? To address the

primary goals of this study, the following three additional research questions (RQ) were

explored using either a null hypothesis (H1), or a directional hypothesis to predict and

test statistical outcomes. RQ1: Is there a difference in the trait emotional intelligence

scores of mid-career U.S. Army commissioned officers based on gender? RQ2: To what

extent do trait emotional intelligence scores of mid-career U.S. Army commissioned

officers differ based on military specialty or Warfighting Function? RQ3: Do the trait

emotional intelligence scores of mid-career U.S. Army commissioned officers differ

based on personality differences identified by the Big Five personality dimensions?

The exploratory direction of the present study was appropriate, because there are

no known previous studies that have measured the trait emotional intelligence (EI) scores using the TEIQ within a U.S. Army sample. This study's three hypotheses were based on peer-reviewed empirical studies using either the TEIQ or the TEIQ-SF (short form) to measure trait EI scores from populations outside the U.S. Army (Andrei et al., 2016; Petrides & Furnham, 2006; Petrides et al., 2006; Petrides et al., 2004; Sanchez-Ruiz et al., 2010; Siegling et al., 2015). The null hypothesis or original hypothesis for the present study was that the independent variables of gender (RQ1) and military specialty (RQ2) would not have a significant effect on dependent variable of trait EI scores of U.S. Army commissioned officers (in the rank of Major), whereas the Big Five personality traits (RQ3) would have a directional relationship with the trait EI scores of mid-career U.S. Army commissioned officers.

The U.S. Army's Quality Assurance Office within the Command and General Staff College (CGSC) emailed the survey invitation to 235 Intermediate Level Education (ILE) students on 5 June 2017. The 235 ILE students were a random sample chosen by the CGSC Quality Assurance Office, and represented a quarter of the entire ILE student body. By 8 June 2017, a total of 14 participants opened the email invitation, read, and concurred with the informed consent document on the first page of the web-based survey instrument, and started the survey. Only 13 of the initial 14 participants completed all sections of the survey by 8 June 2017. The first email reminder was sent on 9 June 2017, and a second reminder was sent on 19 June 2017. By 19 June, 22 of the 235 selected participants provided consent and completed all sections of the survey. Due to the reality that the selected participants of this study graduated ILE on 8 June and most were in transition to a new duty assignment during most of the initial two-week survey window,

the CGSC Quality Assurance Office decided to keep the survey open until 12 July 2017.

Usable Sample

When the survey was closed, a total of 31 participants provided consent and initiated a survey, but only 11.9% of 235 selected participants completed all sections of the survey. All survey participants had at least 11-12 years of military experience, and exactly half ($n = 14$) had more than 15 years of military experience. All the survey participants were Majors in one of the three components of the U.S. Army (Active Duty, Army Reserves, or National Guard).

<p align="center">**Descriptive Statistics**</p>

Of this study's usable sample ($N = 28$), exactly one quarter were female ($n = 7$), with 75% ($n = 21$) male. Of the 29,378 Majors in the U.S. Army, approximately 2,900 are female (DMDC, 2016). Hence, this study's sample consisting of 25% female Majors was not reflective of the population that is approximately 10% female. The majority (86%) of this study's participants were Active Duty. The usable sample was Active Duty ($n = 24$), with a few members of the U.S. Army Reserves ($n = 3$) and only one National Guard member ($n = 1$). The commissioning sources for the usable sample were the following: ROTC ($n = 15$), Officer Candidate School ($n = 7$), Direct Commission ($n = 4$), and West Point ($n = 2$). Within the usable sample, a few participants ($n = 4$) had more than 36 months of command time. However, two of Majors within the usable sample had not yet gained command time experience due to the nature of their military specialties being with the medical community. The usable sample did capture all six of the U.S. Army's Warfighter functions (WFF) as follows: Sustainment ($n = 7$), Movement and Maneuver ($n = 6$), Mission Command ($n = 5$), Protection ($n = 4$), Intelligence ($n = 4$),

Fires ($n = 2$). Exactly half (50%) of this study's participating commissioned U.S. Army officers in the rank of Majors had experience serving as an enlisted Soldier.

The survey data were provided to the researcher on 14 July 2017 by the CGSC Quality Assurance office via an encrypted email. There was no PII associated with participants within the data file provided to the researcher, and the data provided to the researcher were in excel format. The researcher coded the survey data in the excel document in accordance with APPENDIX L titled *Variable Coding and Values in SPSS*. The three participants who did not complete all sections of the survey (P4, P26, P31) were omitted from the excel file prior to loading into SPSS. A total of 15 items on the Trait Emotional Intelligence Questionnaire Short Form (TEIQ-SF) and five items on the Ten-Item Personality Inventory (TIPI) were reversed scored in accordance with instructions provided by the developers of those instruments (Gosling et al., 2003; Petrides, 2009). Since both the TEIQ-SF and TIPI items were on a 1-7 Likert scale, the researcher was able to recode them together. The researcher also converted the demographic and categorical variables into numerical variables as outlined in Appendix L. Appendix K provides the definitions for the variables within the TIPI and TEIQ-SF.

Research Questions

RQ1: Is there a difference in the trait emotional intelligence scores of mid-career U.S. Army commissioned officers based on gender? *Null Hypothesis*: There is no significant difference in trait emotional intelligence scores of mid-career U.S. Army commissioned officers based on gender. The *Null Hypothesis* was based on previous studies that used either the TEIQ or the TEIQ-SF (Freudenthalaer, Neubauer, cabler, & Scherl, 2008; Gokeen, et al., 2014; Mavroveli et al., 2007; Mikolajezak et al., 2009; Nelis

et al., 2011; Petrides & Furnham, 2000; Siegling, et al., 2015).

The researcher used multiple independent samples *t* tests to test for differences between the genders on each of the measures of trait emotional intelligence. The measures of trait emotional intelligence are the four primary factors of Well-being, Self-control, Emotionality, Sociability, and the independent facet of Adaptability. To adjust and account for Type I error, the researcher used a Bonferroni adjustment when assessing the significance of the tests. The Bonferroni adjustment requires the researcher to divide the standard level of significance ($p < .05$) by the number of tests (e.g., in this case five) conducted by the researcher. The adjusted level of significance was $p < .01$.

The mean values for females and males for each measure are provided in Table 16. An initial examination of the means indicated that there were no noticeable differences in mean scores on traits of emotional intelligence between Females and Males within the sample of U.S. Army mid-career commissioned officers.

Table 16

Mean Values – Female vs. Male – Measures of Trait Emotional Intelligence

	Female ($n = 7$)		Male ($n = 21$)	
	M	SD	M	SD
Well-Being	5.69	0.70	5.90	0.93
Self-Control	5.48	0.85	5.42	0.68
Emotionality	5.59	0.56	5.11	0.86
Sociability	5.17	0.70	5.05	0.72
Adaptability	6.36	0.75	5.95	0.85

The researcher ran a series of independent samples *t*-tests to assess for differences between Females and Males on measures of Trait Emotional Intelligence. The results of the analyses, presented in Table 17, indicate that there are no significant differences between Females and Males on measures of trait emotional intelligence. As mentioned

earlier, there are little to no differences in means scores on measures of trait emotional

intelligence between Females and Males. As such, none of the *t*-tests reached levels of

standard significance or the adjusted level of significant adopted as a part of the

Bonferroni adjustment. Sample size is one consideration, or in this case limitation, that

must be considered when interpreting these results. Another consideration is the reality

that this study used the shorter (30-item) TEIQ-SF, instead of the more comprehensive

and longer (154-item) TEIQue. However, these results suggest that trait emotional

intelligence is not significantly different between the Females and Males within the

sample of U.S. Army mid-career commissioned officers.

Table 17

Independent Samples t-tests – Gender by Measure of Trait Emotional Intelligence

	t	*df*	*p*	*M* difference
Well-being	-0.53	26	0.60	-0.21
Self-Control	0.18	26	0.86	0.06
Emotionality	1.37	26	0.18	0.48
Sociability	0.38	26	0.71	0.12
Adaptability	1.12	26	0.27	0.40

RQ2: To what extent do trait emotional intelligence scores of mid-career U.S.

Army commissioned officers differ based on military specialty or Warfighting Function?

Null Hypothesis: There is no significant difference in trait emotional intelligence scores

of mid-career U.S. Army commissioned officers based on military specialty (Branch) or

Warfighting Function. This question was exploratory because there are no known studies

related to trait EI and job-related experiences, education, and training. The researcher's

default assumption was that the six Warfighting Function categories or six different

career trajectories most likely would not have a significant relationship with individual

trait EI scores (Afzal, Atta, & Shujja, 2013; Mavrolveli et al., Morris, 2013; Brouwer, 1964; Caruso & Salovey, 2004; Di Fabio & Palazzeschi, 2009; Nelis et al., 2009; Petrides, Furnham, & Martin, 2004; Petrides, Perez-Gonzalez, & Furnham, 2007; Petrides, Vernon, Aitken, & Veselka, 2011; Pulakos et al., 2000; Schein, 1992; Sanchez, Hernandez-Torrano, Perez-Gonzalez, Batey, & Petrides, 2011).

The researcher converted the Warfighter Function (WFF) variable into a dichotomous variable due to sample limitations within several of the categories. The following are the six WFF categories: Sustainment ($n = 7$), Movement and Maneuver ($n = 6$), Mission Command ($n = 5$), Protection ($n = 4$), Intelligence ($n = 4$), Fires ($n = 2$). The two WFF categories of Movement and Maneuver and Sustainment were combined and labeled *Combat* ($n = 13$). The categories of Mission Command, Protection, Intelligence, and Fires were combined and labeled *Combat Support* ($n = 15$).

The researcher conducted multiple independent samples *t*-tests to test for differences between combat and combat support on each of the measures of trait emotional intelligence. To adjust and account for Type I error, the researcher used a Bonferroni adjustment when assessing the significance of the tests. The Bonferroni adjustment required the researcher to divide the standard level of significance ($p < .05$) by the number of tests (e.g., in this case five) conducted by the researcher. The adjusted level of significance was $p < .01$.

The mean values for combat and combat support for each measure are provided in Table 18. An initial examination of the means indicated that there were no noticeable differences in mean scores on traits of emotional intelligence between the two groups within the sample of mid-career U.S. Army Majors.

Table 18

Mean Values – Warfighter Function – Measures of Trait Emotional Intelligence

	Combat (*n* = 13)		Combat Support (*n* = 15)	
	M	*SD*	*M*	*SD*
Well-Being	6.08	0.94	5.64	0.79
Self-Control	5.55	0.47	5.33	0.86
Emotionality	5.28	0.88	5.18	0.79
Sociability	5.17	0.82	5.00	0.59
Adaptability	6.08	0.61	6.03	1.01

The researcher ran a series of independent samples *t*-tests to assess for differences between warfighter function groups on measures of Trait Emotional Intelligence. The results of the analyses, presented below in Table 19, indicated that there are no significant differences between the Warfighter functions on measures of trait emotional intelligence.

Table 19

Independent Samples t-tests – Warfighter Function by Measure of Trait Emotional Intelligence

	t	*df*	*p*	*M* difference
Well-being	1.32	26	0.20	0.43
Self-Control	0.81	26	0.43	0.22
Emotionality	0.30	26	0.76	0.10
Sociability	0.62	26	0.54	0.17
Adaptability	0.14	26	0.89	0.04

As mentioned earlier, there were little to no differences in means scores on measures of trait emotional intelligence. As such, none of the *t*-tests reached levels of standard significance or the adjusted level of significance adopted as a part of the Bonferroni adjustment. Sample size is one consideration, or in this case limitation, that must be considered when interpreting these results. However, these results suggest that

trait emotional intelligence is not significantly different between respondents in the respective warfighter functions within the sample.

RQ3: Do the trait emotional intelligence scores of mid-career U.S. Army commissioned officers differ based on personality differences identified by the Big Five personality dimensions? *Hypothesis*: Extraversion, Openness to Experience, Agreeableness, Conscientiousness, and Emotional Stability have a positive influence on trait EI scores; i.e., higher TIPI scores will result in higher trait emotional intelligence scores. The hypothesis for this question was based on widespread empirical research that used both the TEIQ and TEIQ-SF in relation to the Big Five personality inventory (Atta et al., 2013; Dehghanan et al., 2014; Petrides et al., 2010; Petrides & Furnham, 2001; Siegling et al., 2015). The Ten-Item Personality Inventory (TIPI) is like other Five-Factor Models of personality, but uses the label of Conscientiousness instead of Dependable, and Emotionally Stable instead of Neuroticism (Gosling et al., 2003; Siegling et al., 2015). It is important to note that Emotionally Stable is the opposite end of the spectrum from Neuroticism. Hence, Emotionally Stable is defined "as relaxed and self-confident, and *not* anxious, moody, easily upset, or stressed" (Gosling et al., 2003, p. 508). Whereas, Neuroticism is not relaxed or self-confident, and anxious, moody, easily upset, or stressed (Siegling et al., 2015). The label difference of Conscientiousness in the TIPI compared to other Five-Factor Models of personality that typically use Dependable does not create a definition conflict, because both labels are on the same end of the spectrum for that personality trait (Gosling et al., 2003; Siegling et al., 2015). Variable definitions for all the facets measured by the TEIQ-SF and the TIPI are in Appendix K. An outline of exactly which facets fit within the four primary factors measured by the

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TEIQ-SF is also in Appendix K.

The researcher slightly modified RQ3 to the following: Is there a relationship between emotional intelligence scores of mid-career U.S. Army commissioned officers and personality scores identified by the Big Five personality dimensions?

The analyst ran a Pearson product-moment correlation between total trait emotional intelligence scores and scores on the Big Five personality dimensions. There are some significant correlations between the measures of emotional intelligence and personality. The researcher discussed these correlations as follows and in Table 20. Well-being was significantly and positively correlated with Emotionality, $r = 0.51$, $n = 28$, $p < .01$. The coefficient of determination indicated that 26% of the variance in Emotionality is explained by Well Being.

There were two significant correlations for Self Control. Self-Control was significantly correlated with Adaptability, $r = 0.53$, $n = 28$, $p < .01$. The coefficient of determination indicated that 28% of the variance in adaptability is explained by Self Control. Additionally, there was a positive and significant correlation between Self Control and Emotional Stability (personality), $r = 0.69$, $n = 28$, $p < .01$. The coefficient of determination indicated that 48% of the variance in Emotional Stability is explained by Self Control.

There were three significant and positive correlations for Emotionality. Emotionality was significantly correlated with Adaptability, $r = 0.49$, $n = 28$, $p < .05$. The coefficient of determination indicated that 24% of the variance in adaptability is explained by Emotionality. Emotionality was significantly correlated with Agreeableness, $r = 0.41$, $n = 28$, $p < .05$. The coefficient of determination indicated that

17% of the variance in Agreeableness is explained by Emotionality. Emotionality was

significantly correlated with Emotional Stability, $r = 0.47$, $n = 28$, $p < .05$. The

coefficient of determination indicated that 22% of the variance in Emotional Stability is

explained by Emotionality.

Table 20

Correlations between Emotional Intelligence and Personality

	WB	SC	EMO	SOC	ADAP	EX	AGR	CON	EMS
WB	-								
SC	0.27	-							
EMO	0.51**	0.36	-						
SOC	0.36	0.13	0.44*	-					
ADAP	0.36	0.53**	0.49*	0.21	-				
EX	0.13	-0.02	0.17	-0.14	0.08	-			
AGR	0.27	0.43*	0.41*	0.08	0.28	-0.04	-		
CON	-0.09	0.29	0.01	0.32	0.39*	-0.13	-0.06	-	
EMS	0.34	0.69**	0.47*	0.24	0.55**	0.08	0.57**	0.33	-
OPEN	0.19	0.14	0.32	0.02	0.32	0.25	-0.03	-0.12	0.31

Note. WB = Well-Being, SC = Self Control, EMO = Emotionality, SOC = Sociability, ADAP = Adaptability, EX = Extraversion, AGR = Agreeableness, CON = Conscientiousness, EMS = Emotional Stability, OPEN = Openness.
** $p < .01$, * $p < .05$.

There were two significant correlations for Adaptability. Adaptability was

significantly correlated with Conscientiousness, $r = 0.39$, $n = 28$, $p < .05$. The coefficient

of determination indicated that 15% of the variance in Conscientiousness is explained by

Adaptability. Adaptability was significantly correlated with Emotional Stability, $r = 0.55$,

$n = 28$, $p < .01$. The coefficient of determination indicated that 30% of the variance in

Emotional Stability is explained by Adaptability.

Agreeableness was significantly correlated with Emotional Stability, $r = 0.57$,

$n = 28$, $p < .01$. The coefficient of determination indicated that 32% of the variance in

Emotional Stability is explained by Agreeableness.

Open-Response Feedback from Survey Participants

One open-response (or open-ended) question was added to the end of the web-based survey instrument used for this study. The parameter (word limit) for the answer box was set at a max of 500 words. The following was the open-response prompt: *The purpose of this survey is to help the researcher determine the trait emotional intelligence scores of current leaders in the military. The overarching goal of this research is to help the U.S. Army address Army Warfighter Challenge #10 Develop Agile and Adaptive Leaders. Can emotional intelligence instruments help the U.S. Army develop adaptive leaders by providing individualized feedback that informs self-awareness? Your perspective on this topic is absolutely appreciated, and thank you for taking the time to participate in this research project.*

This section of the survey was optional. Of the usable sample ($N = 28$), half of the survey participants ($n = 14$) provided written responses. However, the open responses for the following three participants were very brief and not relevant comments: Participant #4 stated "yes," Participant #20 stated "I like turtles," and Participant #22 stated "Good luck." The following are the responses of the other 11 participants who provided consent, completed all aspects of the survey, and answered the optional open-response discussion question:

Participant #2: *Emotional Intelligence can absolutely develop adaptive leaders. Leadership is an intangible quality that requires the right amount of technical knowledge, experience, and networking relationships with other people. I have met a lot of Army leaders who are smart or capable, but cannot communicate their ideas to others effectively or cannot work with others. The Army must keep leaders who are emotionally*

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savvy and can work in a complex environment. People are the U.S. Army's main resource.

Participant #7: *From my understanding, Emotional Intelligence is linked to success, team building, and leadership - so yes, it's important for the U.S. Army to study Emotional Intelligence and determine how to best develop this skill in our Soldiers. The Army is a people organization and for leaders to become adaptive leaders, a strong Emotional Intelligence is required.*

Participant #8: *Yes, EQ can get to the really important things in life and get past the superficial; active listening, clarifying questions, and only giving advice if asked.*

Participant #13: *Emotional Intelligence is a critical component of both leadership and followership. As I have observed, many persons in leadership roles, fail to recognize this fact. In my opinion, the army should place a stronger emphasis on emotional intelligence.*

Participant #14: *Yes - I believe that the Army should continue to promote the importance of self-awareness and self-regulation to build leaders who can better control their own emotions and influence/understand others.*

Participant #17: *Yes. By demonstrating a personal baseline assessment, the individual can identify deficits and choose to improve them.*

Participant #19: *Yes. I believe EI Instruments can help find strengths and weaknesses in leaders and identify how they can improve themselves.*

Participant #21: *One of the top TWO most perspective-changing and professional developing classes I took this year at CGSC was "Emotional Intelligence." Empathy is incredibly important in all we do, and I don't feel our leaders are entirely grasping this*

concept. Not just internal to our units, but its importance with negotiations, relationship

building, and other engagements externally as well. Thanks for dedicating time to this

matter.

Participant #23: *Absolutely. I think creating awareness that not all soldiers are*

predisposed to operate the same way influences how leaders should lead. The "old days"

of uniformity are over. Advances in technology, such as fMRI, demonstrate that how the

brain develops is very individualized and a cookie-cutter approach won't work as

effectively as embracing individualism can. Aspects of talent management and training

would greatly benefit from increased emotional intelligence awareness.

Participant #27: *Emotional intelligence is a topic like any other. Our experiences*

can help us grow by reverting back to them as a baseline. We must be careful that we

don't push people above one's individual learning curve to much as it could have a

negative effect. Those negative experiences could be emotional scars for life. Those scars

can also save lives if managed well.

Participant #29: *It would be interesting to see the changes to this over time. Can*

people really change their leadership style or is it just a part of who they are?

Curriculum in leadership courses would say yes it can, but I have not seen any studies

showing this to be the truth.

Summary

This study is limited by the small sample size ($N = 28$). However, the quantitative

outcomes of this study suggest that the U.S. Army may be achieving the goal of

developing adaptive leaders. Comparing the mean trait EI scores of the U.S. Army

Majors sampled for this study outlined in Table 16, with the mean scores of other

samples that have taken either the TEIQue or TEIQ-SF as depicted in Table 15, could

provide quantitative evidence that either supports or refutes the claim that the U.S. Army

is successfully developing adaptive leaders. For example, comparing the mean

Adaptability scores of a sample from the United Kingdom (*Table 15*) with the mean

Adaptability score of this study's sample of U.S. Army mid-career commissioned officers

with at least 10 years of military experience, may provide insight. The fact that both the

TEIQ-SF and TEIQue use a 7-point scale ranging between 1 (the lowest possible score)

to 7 (the highest possible score) allows the question: How do the U.S. Army Majors

tested in this study compare to other samples that have taken the TEIQ or the TEIQ-SF as

participants in other studies?

Relative to the United Kingdom (UK) sample of females in (*Table 15*), the mean

Adaptability score for this study's female sample (*Table 16*) was 25.7% higher. The

compared sample sizes are drastically different, with the female U.S. Army Major sample

(*n* = 7) being less than 1% the size of the UK female sample (*n* = 863). Yet, regardless of

sample size difference, a mean Adaptability score 1.8 points higher on a scale that

measures 1 to 7 could be an indicator of success for the U.S. Army at the task of fostering

the trait or independent trait emotional intelligence facet of Adaptability. The male U.S.

Army Major sample (*n* = 21) in Table 16 is only 2.8% the size of the male UK sample (*n*

= 729) in Table 15. However, like the U.S. Army females, the male U.S. Army

participants in this study had a higher mean Adaptability score than the male sample.

The mean score on the trait EI facet of Adaptability for the U.S. Army males was 17%

higher than the mean Adaptability score of the much larger UK male sample.

The results of this study suggest that there may not be significant differences of

trait EI scores due to gender within the mid-career commissioned officer ranks of the

U.S. Army. The results also suggest that there may not be significant differences in trait

EI scores of U.S. Army Majors based on currently assigned military specialty or

Warfighter function. However, there is a relationship between some of the factors of

emotional intelligence and personality. Specifically, the starkest relationships emerged

between the trait EI factor of Emotionality related to the personality traits of Emotional

Stability and Agreeableness. The trait EI factor of Emotionality consists of the following

four facets: Emotion perception, Emotion expression, Relationships, and Trait empathy.

The definitions for each facet are in Appendix K. The results of this study also indicate

that there may be a connection between Adaptability and the personality traits of

Conscientiousness and Emotional Stability within a sample of U.S. Army mid-career

commissioned officers in the rank of Major.

CHAPTER V: DISCUSSION AND CONCLUSIONS

Introduction

Akin to leaders in other organizations, leaders throughout all levels of the U.S. Army are required to serve in complex roles and environments, within diverse partnerships and coalitions, against conventional and unconventional threats, while mastering complicated technology within ambiguous systems, all while operating in the multifaceted and densely populated land domain of the modern world (DA, 2012m, 2014f, 2014g, 2014h; Kotter, 2012). Hence, the U.S. Army's most recent operating concept titled *Win in a Complex World*, and the strategic need to develop adaptive, mentally agile, and self-aware leaders (DA, 2014b, 2014f). The U.S. Army defines organizational first-order problems as Army Warfighting Challenges (AWFCs). This study primarily focused on AWFC #10 titled *Develop Agile and Adaptive Leader.* AWFC #10 seeks solutions to the following problem statement: "how to develop agile, adaptive, and innovative leaders who thrive in conditions of uncertainty and chaos and are capable of visualizing, describing, directing, leading, and assessing operations in complex environments and against adaptive enemies" (DA, 2015a, p. 1).

Between 2012 and 2018, senior U.S. Army leaders actively acknowledged the strategic need for adaptive leaders by implementing changes to most of the organization's published doctrine, transforming the U.S. Army's training methodology from task-conditions-standards to an outcomes-based concept, and redesigning professional military educational (PME) programs (DA, 2012n, 2013, 2014a, 2015b; Hall & Hord, 2006; Leskiw & Singh, 2007; Straus et.al., 2014). Yet, without instruments or tools that purposefully measure adaptability within each individual leader, it is challenging to

determine the effectiveness of the U.S. Army's recent changes (Hannah, Baltharzard, Walkman, Jennings, & Thatcher, 2013; Hall & Hord, 2006). This study was an attempt to understand, implement, and capitalize on advances in the following fields of study: psychometrics, behavioral and cognitive psychology, leadership, and emotional intelligence.

The U.S. Army has an established lineage of successfully developing leaders for America, and there are no known indicators that the U.S. Army's current leader development strategy is broken (DA 2015b; Donnelly, 2007; Riley et al., 2014). However, recent advances in various social sciences could help the U.S. Army continue to improve leader development practices (Ways) and instruments (Means) for the next generation, while ensuring that initiatives to foster and enable adaptability within leaders achieves the desired end-state (Ends).

Leadership is the process of influencing humans (DA, 2012L, 2015b; Maxwell, 1993; Northouse, 2012). This study centered on the biological and psychological reality that thoughts and emotions are the two key variables influenced by other humans regardless of role (leader, peer, subordinate, the opposition); and that irrespective of title or organizational affiliation, leaders who are intelligent about emotions have a greater likelihood of leading their team to success (Bunker et al., 2010; Cherniss & Goleman, 2000; Goleman, 2005; Goleman et al., 2013; McKee et al., 2008). Leadership influence happens consciously via direct and deliberate actions such as verbal communication, while simultaneously, leadership influence happens subconsciously via perceptions, nonverbal communication, and intuition (Cangemi et al., 2005; Goleman et al., 2013; Maxwell, 1993; McKee et al., 2008).

Growth in human characteristics (or traits) such as adaptability and openness to change requires both "cognitive and affective complexity to facilitate effectiveness across a wide domain of roles" (Baltharzard et al., 2010, p. 2). The key concepts being "there is no thinking without emotion" (Dorner, 1996, p. 8), and there is very little leadership influence without emotion (Goleman, 1995). Thus, comprehensive adaptive leader development programs require both a cognitive (thinking) and affective (emotional) approach (Cherniss & Goleman, 2000; Heifetz et al., 2009). Within the U.S. Army's leader development strategy and program, the organization does not currently use a feedback tool (i.e., psychometric instrument) that purposefully measures the affective and cognitive aspects of any of the leader attributes (what a leader is) or leadership competencies (what a leader does) outlined and defined within the most recent version of the U.S. Army's Leadership doctrine (DA, 2012L, 2015). Specific to the scope of this study, the U.S. Army's leader development strategy and program does not currently use psychometric instruments to objectively or subjectively measure individualized levels (scores) in the leadership trait of adaptability.

The Study in Brief

The overarching purpose of this quantitative study was to assess the U.S. Army's effectiveness at developing adaptive and self-aware leaders by measuring adaptability as a trait emotional intelligence facet. The central research question for this study was the following: What are the trait emotional intelligence scores of mid-career commissioned U.S. Army officers? Selecting a sample of Soldiers currently in the U.S. Army who had at least 10 years of military experience, training, and education was an essential task directly connected to this study's overarching purpose. Thus, the target sample for this

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study was mid-career commissioned officers attending Intermediate Level Education

(ILE) at the Command and General Staff College (CGSC). Measuring the trait emotional

intelligence (EI) scores of mid-career leaders could help organizations such as the U.S.

Army determine which individuals are evolving into leaders who are more adaptive,

mentally agile, and open to change. Of equal importance, trait EI scores via self-report

(self-efficacy) questionnaires such as the Trait Emotional Intelligence Questionnaire

(TEIQ) could provide individualized feedback that allows leaders to assess themselves

(self-development) and evaluate the development of others. Fundamentally, self-report

instruments (or self-efficacy tools) could be used by the U.S. Army as a means to develop

and shape leader identity (Bar-On, 2006; Petrides, 2017). This study begins the process

of determining empirically if a trait EI instrument (or a battery of psychometric

instruments) could measure, facilitate, enable, and inspire the development of adaptive

and self-aware leaders within leader developing organizations such as the U.S. Army.

The dependent variables of interest for this study are the trait emotional

intelligence scores of commissioned U.S. Army leaders who have at least 10 years of

military experience. This quantitative survey-based study sampled ($N = 28$) mid-career

U.S. Army Majors using a credible and dependable self-report trait emotional intelligence

instrument called the Trait Emotional Intelligence Questionnaire-Short Form (TEIQ-SF).

The 30-item TEIQ-SF measures 15 facets (including adaptability) that nest within the

Army's Leadership Requirements Model (ALRM) and current leadership doctrine. The

mean scores on the TEIQ-SF's four primary factors (Emotionality, Self-control,

Sociability, and Well-being), and the mean scores on the independent facet of

Adaptability, may provide insight into the U.S. Army's effectiveness at developing

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adaptive, agile, and self-aware leaders for a complex world. The independent variables

of focus within this study were gender, military specialty, and the Big Five personality

traits of Extraversion, Agreeableness, Conscientiousness, Emotional Stability, and

Openness to Experiences as measured by the Ten-Item Personality Inventory (TIPI).

Definitions for all dependent and independent variables of interest for this study are in

Appendix K and Appendix L.

The results of this study suggested that trait emotional intelligence (EI) does not

differ significantly between females and males within the sample of U.S. Army Majors.

The results also suggested that trait EI does not differ significantly based on the

independent variable of military specialty (currently assigned Warfighter function).

Adaptability was positively and significantly correlated with two personality traits.

Adaptability was significantly correlated with Conscientiousness, $r = 0.39$, $n = 28$, $p <$

.05. The coefficient of determination indicated that 15% of the variance in

Conscientiousness is explained by Adaptability. Adaptability was also significantly

correlated with Emotional Stability, $r = 0.55$, $n = 28$, $p < .01$. The coefficient of

determination indicated that 30% of the variance in Emotional Stability is explained by

Adaptability. Additionally, the trait EI factor of Self-Control was significantly correlated

with the personality trait of Emotional Stability, $r = 0.69$, $n = 28$, $p < .01$. The coefficient

of determination indicated that 48% of the variance in Emotional Stability is explained by

Self Control. Comparing the mean adaptability TEIQ-SF scores of the sample of U.S.

Army Majors used for this study with the mean adaptability scores of other samples from

previous study's that used the TEIQ, suggest that the U.S. Army may be achieving

success at the challenging mission of developing adaptive and self-aware leaders.

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Discussion

"Good ideas are not adopted automatically…. They must be driven into practice with courageous patience" (Bennis & Nanus, 2007, p. 41). Relative to America's corporate sector and compared to other US military branches, the U.S. Army has been slow to embrace and to help advance the emotional intelligence field of study. The US Air Force and US Navy have conducted studies related to emotional intelligence since the 1990s (Handley, 1997; Hoffman, 1999). For example, since 1996, the US Air Force has used the Bar-On Emotional Quotient Inventory (EQ-i) as a tool to help select recruiters (Druskat et al., 2006; Handley, 1997). Table 12 outlines the details about the Bar-On EQ-i, which is fundamentally a trait emotional intelligence measurement similar to the trait EI instrument used for this study. The US Air Force is saving nearly $3 million a year mitigating personality and talent mismatches while selecting recruiters via the use of a trait (EI) measurement as a prediction tool (Bar-On, 2006), whereas the U.S. Army is still primarily selecting recruiters using the General Technical (GT) scores on the Armed Services Vocational Aptitude Battery (ASVAB) (DA, 2017). Details about the ASVAB are provided in Table 10. The three categories of the ASVAB that make up the GT score are Word Knowledge, Paragraph Comprehension, and Arithmetic Reasoning. The three GT score categories have proven to be important skills for military service regardless of military specialty (DA, 2017; DD, 2017). However, GT scores specifically measure only verbal-linguistic and mathematical intelligence, and GT scores might not be the best predictors of success in certain mission requirements that demand people skills i.e., social and emotional intelligence (DA, 2017; Goleman, 2005). Specific to a study centered on adaptive leader development, GT scores and other traditional measures of human

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intelligence may not be the best predictors of adaptive leadership success (Cherniss, 2000; Cherniss & Goleman, 2001; Gardner, 2005; Goleman, 1995; Goleman, 2000; Goleman et al., 2013).

An emotional bias "is a distortion in cognition and decision making due to emotional factors" (Angie et al., 2011, p. 1393). Relative to the US Air Force's success contributing to the emotional intelligence field of study, the U.S. Army seemingly has an institutionalized emotional bias that maintains the importance of traditional human intelligence measurement while overlooking the reality that emotional intelligence may be equally important to the organization's success (Sewell, 2014). This entrenched emotional bias is also reflected in the U.S. Army's financially incentivized programs designed to attract and retain Soldiers with science, technology, engineering, or mathematical (STEM) backgrounds (DA, 2017). Yet, there are few known incentivized U.S. Army programs that seek to attract or retain Soldiers with demonstrated exceptional leadership skills, people skills, counseling skills, teaching skills; i.e., demonstrated exceptional emotional intelligence talents (Woody, 2018).

Based on the history of traditional human intelligence and personality measurements, the U.S. Army's sustained resistance to emotional intelligence science is entirely out of character. Since 1917, the U.S. Army has been a key player in the development and evolution of traditional measurements of verbal-linguistic and mathematical intelligence (namely IQ test) such as the creation of the U.S. Army's Alpha and Beta intelligence tests and the Wechsler Adult Intelligence Scale (Caramazza & Coltheart, 2006; Kaufman, 2013). Also during WWI, the U.S. Army helped with the development of the Woodworth Personality Data Sheet, which became the model for

subsequent personality assessments (Kaufman, 2013). The U.S. Army's success in psychological testing during WWI "was the impetus for the earliest recognition of psychology as a respected field" (Kennedy & McNeil, 2006, p. 6) in America. Furthermore, some of the most notable pioneers in the field of intelligence theory such as Karl Pearson, Charles Spearman, Edward Thorndike, David Wechsler, and Robert Yerkes worked together as commissioned officers in the British and American Armies during WWI (Fancher, 1985).

A century after WWI, the U.S. Army maintains its enduring tradition with human intelligence measurements as reflected in the ASVAB (DA, 2017; DD, 2017). Plus, within the organization's Resiliency program (also called the ARMYFIT program), the U.S. Army has been using a psychometric instrument called the Global Assessment Tool (GAT) since 2009. As of 2018, the U.S. Army's GAT 2.0 is used to assess and provide individualized feedback to Soldiers on the following five dimensions of human strength: emotional, social, spiritual, family, and physical (Reed & Love, 2009; Reivich et al., 2014). Thus, the U.S. Army's Resiliency program may be capitalizing on modern advancements of emotional intelligence science and psychometrics. However, even though *resilience* is one of the U.S. Army's core leader attributes within the Presence category on the Army's Leadership Requirements Model, the ARMYFIT (or Resiliency) program is separate from the U.S. Army's leader development strategy and program (DA, 2013, 2014i, 2015b; Reivich et al, 2014).

The key point is the fact that for over 100 years, the U.S. Army has been a key player in the development, implementation, and advancement of psychometric measurements of both personality traits and human intelligence (Caramazza & Coltheart,

2006; Fancher, 1985; Kaufman, 2013; Kennedy & McNeil, 2006); and most recently, the U.S. Army is spear-heading advancements in human strengths psychometric measurement (Reivich et al., 2014). Yet, during the decades of advancements within the emotional intelligence field of study, the senior leaders responsible for the U.S. Army's leader development strategy and program have chosen not to embrace EI science or the various EI psychometric instruments currently used throughout corporate America as a means to select leaders and to make predictions about leadership success (DA, 2013, 2015b; Goleman, 2010; Sewel, 2014). More importantly because of the scope of this study, key stakeholders throughout the U.S. Army have not yet embraced the reality that EI science could be used to teach, measure, and develop the human capital of leader attributes and social capital of leadership competencies (Day, 2014; Goleman, 2005; Sewell, 2014).

While seeking to mitigate the thinking traps of anchoring bias, diagnosis bias, confirmation bias, emotional bias, and status que bias, this study attempted to analyze emotional intelligence science as a possible opportunity for the U.S. Army, specifically an opportunity for the U.S. Army to use EI science and advancements in EI psychometric measurements as tools to measure leadership traits, and as developmental feedback instruments that help hone self-awareness. Critics of emotional intelligence science have called EI "old wine in new bottles" (Matthews et al., 2002, p. 515), which is true in the context that emotions are nothing new to the human condition or nothing new to group dynamics (Forsyth, 2010). The following statement from Aristotle helps to confirm the biological fact that emotions (*old wine*) have been marinating within human minds (*bottles*) since antiquity: "Anyone can become angry—that is easy. But to be angry with

the right person, to the right degree, at the right time, for the right purpose, and in the

right way—that is not easy" (DA, 1999, p. 2-17). The authors of the U.S. Army's

Be/Know/Do leadership doctrine established in 1999 recognized Goleman's 1995

Emotional Intelligence: Why it can matter more than IQ as one of the influencing

sources. The Aristotle statement about the inherent challenges pertaining to being

intelligent about emotions can be found in both the U.S. Army's 1999 Leadership manual

and in Goleman's initial book about EI (DA, 1999, p. 2-17; Goleman, 1995, p. x).

However, as of 2018, the U.S. Army does not use the phrase *emotional intelligence*

within the organization's lexicon throughout published doctrine or within the common

vernacular of operational, institutional, or self-development domains (DA, 2013; Sewell,

2014).

The barriers of diffusion related to emotional intelligence's entry into the norms,

beliefs, and practices of the U.S. Army are slowly being removed (Abrahams, 2007;

Sewell, 2014; Rogers, 1995; Vergun, 2016; Woody, 2018; Yukl, 2010; Zacharakis &

Polson, 2012). Thus far, acceptance of emotional intelligence has primarily been within

pockets of the U.S. Army's Institutional (educational) domain. For the past few years, an

elective course has been offered by the U.S. Army's Command and General Staff College

titled *Emotional Intelligence for Leaders* (Sewell, 2014). In 2016, an emotional

intelligence course was started by the U.S. Army's University of Foreign Military and

Cultural Studies (UFMCS). Plus, starting in the fall semester of 2017, the U.S. Army's

Cadet Command began the process of implementing a lesson on emotional intelligence.

Thus, some segments of the U.S. Army are finally starting to be exposed to the emotional

intelligence field of study.

Recommendations

The most important recommendation to the U.S. Army and to any other values-based organizations that develop leaders using a trait model: Figure out a standardized method for teaching and assessing the values and leadership traits that are essential to the organization's success. Regardless of *what* is being taught or *who* is teaching, there needs to be a means (or a *way*) to accurately measure *what* is being learned. Development is learning and growing. Thus, organizations, institutions, or individuals that don't specifically assess or measure whatever is being taught and theoretically being developed may not be developing or teaching anything. It is self-evident that the U.S. Army needs to build a psychometric instrument (or possibly a battery of instruments) that are designed to deliberately measure the seven Army Values and the other 12 core leader attributes outlined within the Army Leadership Requirements Model (ALRM). There are several credible and dependable trait emotional intelligence questionnaires that specifically measure many of the attributes that the U.S. Army requires in all leaders. Some of the more popular trait EI models and instruments are discussed and outlined within the literature review of this study, but there are numerous others throughout the EI field of study. It is also recommended that the U.S. Army not out-source or contract out the tasks of building, operationalizing, and improving a values and attributes centric psychometric program, just as the U.S. Army not out-source the responsibility of developing and implementing doctrine. Within the current U.S. Army formation of Junior Enlisted Soldiers, Non-commissioned Officers, Commissioned Officers, Warrant Officers, and DA Civilians, there is more than enough talent to handle the mission of accurately measuring the effectiveness of the organization's character and leader

development program.

For simplicity, a psychometric measurement of values and leader attributes could be called the Leader Measurement of Attributes Program (Leader MAP). Leader MAP could be used in all three domains of the U.S. Army's leader development strategy (Operational, Institutional, and Self-development). Of equal importance, a Leader MAP concept could standardize how values and leader attributes are taught throughout the U.S. Army. There is a drastic difference between how junior enlisted Soldiers are taught to embody the Army Values during initial entry training relative to how cadets (future commissioned officers) are introduced to the core values of the organization. A Leader MAP concept would allow a standardized assessment of the core values and leader attributes throughout the U.S. Army regardless of context, setting, rank, or role. Plus, implemented as a pretest-posttest concept, a Leader MAP tool could provide feedback on individualized growth during training, education, or after a given period of experience. Since, the leadership competency of *Developing Others* has been a sustained weakness for the U.S. Army throughout a decade of CASAL surveys, a Leader MAP tool could also help the organization improve in that arena (Riley et al., 2014).

Without question, a Leader MAP concept would help organizations such as the U.S. Army create opportunities for individuals to enhance self-awareness. After the adoption of Leader MAP, the next phase would be to implement a 360-degree Leader MAP concept, thus helping leaders throughout the U.S. Army identify the biggest gaps relative to how individuals rate themselves (self-efficacy or leadership identity) compared to the rated perspectives of others on the same traits (Bradberry & Greaves, 2012). Specifically, it would include the adaptive leadership trait of self-awareness, in that most

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leaders rank that skill as their biggest strength, whereas feedback from direct reports, peers, and bosses universally assessed the adaptive leadership skill of self-awareness as the leader's biggest weakness (Bradberry & Greaves, 2012).

Other recommendations include the following: Help leaders understand the two domains of trust (character and competency) as outlined by Covey (1989). Also help leaders identify and understand their personalized mental heuristic (shortcuts based on subconscious likes and dislikes and limited information) that hinder their ability to give trust, create accurate perceptions, and make leadership decisions (Gigerenzer, 199). Assist all team members in the lifelong endeavor to become better receivers (pull) of feedback and help them gain awareness of their trust, identity, and truth triggers that hinder effective communication (Stone & Heen, 2014). Yet, continue to teach and work on a leader's ability to send (push) feedback via counseling, mentoring, coaching, and evaluation (DA, 2015b). End the paradox throughout the U.S. Army that places a negative connotation on emotions. It is recommended that the U.S. Army work toward mitigating the myth that Soldiers don't have emotions, and end the false dilemma that humans are either logical or emotional. Humans are inherently both logical and emotional based on discoveries in behavioral and cognitive psychology (Kahneman, 2011).

Future Studies

This research works to enhance understanding for all organizations that share the U.S. Army's goal of producing adaptive, agile, and self-aware leaders. Replicating this study with other samples within the U.S. Army could create the opportunity to gain both academic and practical application knowledge that may be transferable to the corporate

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and private sectors, to nonprofit organizations, and to other governmental institutions outside the U.S. Army.

Conclusions

The sustained success of the U.S. Army's efforts in adaptive leader development, and the long-term realization of the U.S. Army's decentralized concept of *mission command,* both fundamentally hinge on the organization's propensity to grow emotionally intelligent warriors. "Psychologists and other social scientists have been reluctant throughout history to admit that emotions might actually function to sharpen cognitive activities and to motivate adaptive behavior" (Salovey et al., 2003, p. 251). Via the ARMYFIT program's implementation of the Global Assessment Tool (GAT 2.0), the U.S. Army is already using aspects of psychometrics and emotional intelligence science to measure the five human strength dimensions. However, in the spirit of the U.S. Army's most recent operating concept, the U.S. Army's key stakeholders have not yet *seized, retained, or exploited the initiative* by capitalizing on the opportunities that psychometric measurements (like the trait EI instrument used for this study) could bring to the organization's leader development strategy and program. "Strategy explains how an organization, faced with competition, will achieve superior performance" (Magretta, 2012, p. 8). The bottom line is the reality that nesting psychometric instruments into the organization's leader development strategy will help ensure the U.S. Army's superior performance, while preparing the formation for an unknown and unknowable future.

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Trait EI Questionnaire-Short Form (TEIQue-SF)

Instructions: Please answer each statement below by putting a circle around the number that best reflects your degree of agreement or disagreement with that statement. Do not think too long about the exact meaning of the statements. Work quickly and try to answer as accurately as possible. There are no right or wrong answers. There are seven possible responses to each statement ranging from 'Completely Disagree' (number 1) to 'Completely Agree' (number 7).

1 . . . . 2 . . . . 3 . . . . 4 . . . . 5 . . . . 6 7

Completely Disagree   **Completely Agree**

Statement							
1. Expressing my emotions with words is not a problem for me.	1	2	3	4	5	6	7
2. I often find it difficult to see things from another person's viewpoint.	1	2	3	4	5	6	7
3. On the whole, I'm a highly motivated person.	1	2	3	4	5	6	7
4. I usually find it difficult to regulate my emotions.	1	2	3	4	5	6	7
5. I generally don't find life enjoyable	1	2	3	4	5	6	7
6. I can deal effectively with people.	1	2	3	4	5	6	7
7. I tend to change my mind frequently.	1	2	3	4	5	6	7
8. Many times, I can't figure out what emotion I'm feeling.	1	2	3	4	5	6	7
9. I feel that I have a number of good qualities.	1	2	3	4	5	6	7
10. I often find it difficult to stand up for my rights.	1	2	3	4	5	6	7
11. I'm usually able to influence the way other people feel.	1	2	3	4	5	6	7
12. On the whole, I have a gloomy perspective on most things.	1	2	3	4	5	6	7
13. Those close to me often complain that I don't treat them right.	1	2	3	4	5	6	7
14. I often find it difficult to adjust my life according to the circumstances.	1	2	3	4	5	6	7
15. On the whole, I'm able to deal with stress.	1	2	3	4	5	6	7
16. I often find it difficult to show my affection to those close to me.	1	2	3	4	5	6	7
17. I'm normally able to "get into someone's shoes" and experience their emotions.	1	2	3	4	5	6	7
18. I normally find it difficult to keep myself motivated.	1	2	3	4	5	6	7
19. I'm usually able to find ways to control my emotions when I want to.	1	2	3	4	5	6	7
20. On the whole, I'm pleased with my life.	1	2	3	4	5	6	7
21. I would describe myself as a good negotiator.	1	2	3	4	5	6	7
22. I tend to get involved in things I later wish I could get out of.	1	2	3	4	5	6	7

23. I often pause and think about my feelings.	1	2	3	4	5	6	7
24. I believe I'm full of personal strengths.	1	2	3	4	5	6	7
25. I tend to "back down" even if I know I'm right.	1	2	3	4	5	6	7
26. I don't seem to have any power at all over other people's feelings.	1	2	3	4	5	6	7
27. I generally believe that things will work out fine in my life.	1	2	3	4	5	6	7
28. I find it difficult to bond well even with those close to me.	1	2	3	4	5	6	7
29. Generally, I'm able to adapt to new environments.	1	2	3	4	5	6	7
30. Others admire me for being relaxed.	1	2	3	4	5	6	7

Trait Emotional Intelligence Questionnaire – Short Form (TEIQue-SF). This 30-item form includes two items from each of the 15 facets of the TEIQue. Items were selected primarily on the basis of their correlations with the corresponding total facet scores, which ensured broad coverage of the sampling domain of the construct. The –SF can be used in research designs with limited experimental time or wherein trait EI is a peripheral variable. Although it is possible to derive from it scores on the four trait EI factors, in addition to the global score, these tend to have somewhat lower internal consistencies than in the full form of the inventory. The –SF does not yield scores on the 15 trait EI facets.

The scoring key for the TEIQue-SF is available at: http://www.psychometriclab.com/Default.aspx?Content=Page&id=14 Please note that we cannot provide any advice on how to run this syntax in SPSS or other statistical software.

Please make sure you read the FAQ section at http://www.psychometriclab.com/Default.aspx?Content=Page&id=18. In particular, note that we do not provide free information regarding norms or free feedback reports. Norms and reports are available for a fee (email admin@teique.com for quotes). **Reference for the TEIQue-SF:** Petrides, K. V. (2009). Psychometric properties of the Trait Emotional Intelligence Questionnaire. In C. Stough, D. H. Saklofske, and J. D. Parker, Advances in the assessment of emotional intelligence. New York: Springer. DOI: 10.1007/978-0-387-88370-0_5

For more information about the trait emotional intelligence research program go to: www.psychometriclab.com

Please note that any commercial use of this instrument is strictly prohibited.

APPENDIX B: Permission to use Trait EI Instrument for research project

From: Walters, Stephan [mailto:Stephan.Walters@wku.edu]
Sent: 16 August 2015 22:53
To: Petrides, Dino
Subject: U.S. Army Leader Development Dissertation

Dr. Petrides,

The purpose of this message is to officially request using the TEIQue-SF as a key aspect of a doctoral dissertation focused on the topics of trait Emotional Intelligence and Army leader development.

I am U.S. Army Major Stephan Walters, and I'm currently a doctoral student (recently earned ABD status) in the Organizational Leadership program at Western Kentucky University (WKU). For the next year, I will be attending the Command and General Staff College (CGSC) in Fort Leavenworth, Kansas. Hence, I have a unique opportunity to access over 900 mid-career Army officers (my peers) to sample, and that reality is strongly shaping my dissertation research topic. At this point in time, my central research question is fundamentally simple: Who scores higher on trait EI---- Army ROTC college students (at WKU), or mid-career Army Officers attending CGSC?

I recently completed a 3-year Army assignment teaching Military Leadership at WKU, and feel that self-awareness is one of the most challenging and rewarding aspects of helping develop future (and current) Army leaders. Plus, I'm confident that trait EI is more relevant to leader development than ability or mixed ideology. My dissertation chair and committee at WKU really like my dissertation topic choices. However, official permission to use your trait EI short form is fundamentally the start point to my dissertation adventure.

Hope all is going well in your part of the world. I appreciate you taking the time to read this message and responding whenever you get the opportunity.

Thanks,
MAJ Stephan Walters
U.S. Army, Cavalry, CGSC Student
(502) 762-6872
stephan.walters@wku.edu
stephan.l.walters.mil@mail.mil

APPENDIX B: Permission to use Trait EI Instrument for research project

Dear Stephan,

Thank you for your email. You do not need special permission to use any TEIQue instrument, provided it is for academic research purposes. You can download the instruments directly from www.psychometriclab.com Please make sure you read the FAQ section at http://www.psychometriclab.com/Default.aspx?Content=Page&id=18. In particular, note that we do not provide free information regarding norms or free feedback reports. Norms information and reports are available for a fee. You will find additional relevant information in the links below.

http://www.psychometriclab.com/Default.aspx?Content=Page&id=14

http://www.psychometriclab.com/Default.aspx?Content=Page&id=15

http://www.psychometriclab.com/Default.aspx?Content=Links&id=19
If you plan to use the TEIQue-SF, the scoring key can be found below.
 TEIQue-SF
♦ Download the TEIQue-SF, along with the scoring key and a brief description of the instrument, from here in pdf and here in Microsoft WORD. Download the full SPSS syntax for scoring the TEIQue-SF from here. Please note that we cannot provide any advice on how to run this syntax in SPSS or other statistical software.
Good luck with your project and let me know if I can help with anything else,
Dino

London Psychometric Laboratory (UCL)
www.psychometriclab.com

Ten-Item Personality Inventory-(TIPI)

Here are a number of personality traits that may or may not apply to you. Please write a number next to each statement to indicate the extent to which you agree or disagree with that statement. You should rate the extent to which the pair of traits applies to you, even if one characteristic applies more strongly than the other.

1 = Disagree strongly
2 = Disagree moderately
3 = Disagree a little
4 = Neither agree nor disagree
5 = Agree a little
6 = Agree moderately
7 = Agree strongly

I see myself as:

1. _____ Extraverted, enthusiastic.

2. _____ Critical, quarrelsome.

3. _____ Dependable, self-disciplined.

4. _____ Anxious, easily upset.

5. _____ Open to new experiences, complex.

6. _____ Reserved, quiet.

7. _____ Sympathetic, warm.

8. _____ Disorganized, careless.

9. _____ Calm, emotionally stable.

10. _____ Conventional, uncreative.

TIPI scale scoring ("R" denotes reverse-scored items):

Extraversion: 1, 6R; Agreeableness: 2R, 7; Conscientiousness; 3, 8R; Emotional Stability: 4R, 9; Openness to Experiences: 5, 10R.

APPENDIX C: Ten-Item Personality Inventory (TIPI)

Scoring the TIPI

1. Recode the reverse-scored items (i.e., recode a 7 with a 1, a 6 with a 2, a 5 with a 3, etc.). The reverse scored items are 2, 4, 6, 8, & 10.

2. Take the AVERAGE of the two items (the standard item and the recoded reverse-scored item) that make up each scale.

Example using the Extraversion scale: A participant has scores of 5 on item 1 (Extraverted, enthusiastic) and 2 on item 6 (Reserved, quiet). First, recode the reverse-scored item (i.e., item 6), replacing the 2 with a 6. Second, take the average of the score for item 1 and the (recoded) score for item 6. So the TIPI Extraversion scale score would be: $(5 + 6)/2 = 5.5$

http://gosling.psy.utexas.edu/scales-weve-developed/ten-item-personality-measure-tipi/

TITLE: Emotional Intelligence and Personality Survey

Thank you for choosing to participate in this study!

There are four parts to this survey:

Part I. Trait Emotional Intelligence Questionnaire-Short Form (30 questions)

Part II. Ten-Item Personality Inventory (TIPI) (10 questions)

Part III. Demographic Information (9 questions)

Part IV. Optional Feedback (1 question)

This survey should take approximately 12 minutes to complete. Click "Next" to begin. Thanks!

PART I: TRAIT EMOTIONAL INTELLIGENCE QUESTIONNAIRE SHORT FORM

INSTRUCTIONS: PLEASE ANSWER EACH STATEMENT BELOW BY CLICKING ON THE NUMBER THAT BEST REFLECTS YOUR DEGREE OF AGREEMENT OR DISAGREEMENT WITH THAT STATEMENT. DO NOT THINK TOO LONG ABOUT THE EXACT MEANING OF THE STATEMENT. WORK QUICKLY AND TRY TO ANSWER AS ACCURATELY AS POSSIBLE. THERE ARE NO RIGHT OR WRONG ANSWERS. THERE ARE SEVEN POSSIBLE RESPONSES TO EACH STATEMENT RANGING FROM 'Completely Disagree (number 1) to 'Completely Agree' (number 7).

1 . . . . 2 . . . . 3 . . . . 4 . . . . 5 . . . . 6 7
Completely   **Completely**
Disagree   **Agree**

1. Expressing my emotions with words is not a problem for me.	1	2	3	4	5	6	7
2. I often find it difficult to see things from another person's viewpoint.	1	2	3	4	5	6	7
3. On the whole, I'm a highly motivated person.	1	2	3	4	5	6	7
4. I usually find it difficult to regulate my emotions.	1	2	3	4	5	6	7
5. I generally don't find life enjoyable	1	2	3	4	5	6	7
6. I can deal effectively with people.	1	2	3	4	5	6	7
7. I tend to change my mind frequently.	1	2	3	4	5	6	7
8. Many times, I can't figure out what emotion I'm feeling.	1	2	3	4	5	6	7

9. I feel that I have a number of good qualities.	1	2	3	4	5	6	7
10. I often find it difficult to stand up for my rights.	1	2	3	4	5	6	7
11. I'm usually able to influence the way other people feel.	1	2	3	4	5	6	7
12. On the whole, I have a gloomy perspective on most things.	1	2	3	4	5	6	7
13. Those close to me often complain that I don't treat them right.	1	2	3	4	5	6	7
14. I often find it difficult to adjust my life according to the circumstances.	1	2	3	4	5	6	7
15. On the whole, I'm able to deal with stress.	1	2	3	4	5	6	7
16. I often find it difficult to show my affection to those close to me.	1	2	3	4	5	6	7
17. I'm normally able to "get into someone's shoes" and experience their emotions.	1	2	3	4	5	6	7
18. I normally find it difficult to keep myself motivated.	1	2	3	4	5	6	7
19. I'm usually able to find ways to control my emotions when I want to.	1	2	3	4	5	6	7
20. On the whole, I'm pleased with my life.	1	2	3	4	5	6	7
21. I would describe myself as a good negotiator.	1	2	3	4	5	6	7
22. I tend to get involved in things I later wish I could get out of.	1	2	3	4	5	6	7
23. I often pause and think about my feelings.	1	2	3	4	5	6	7
24. I believe I'm full of personal strengths.	1	2	3	4	5	6	7
25. I tend to "back down" even if I know I'm right.	1	2	3	4	5	6	7
26. I don't seem to have any power at all over other people's feelings.	1	2	3	4	5	6	7
27. I generally believe that things will work out fine in my life.	1	2	3	4	5	6	7
28. I find it difficult to bond well even with those close to me.	1	2	3	4	5	6	7
29. Generally, I'm able to adapt to new environments.	1	2	3	4	5	6	7
30. Others admire me for being relaxed.	1	2	3	4	5	6	7

PART II: TEN-ITEM PERSONALITY INVENTORY – (TIPI)

INSTRUCTIONS: HERE ARE A NUMBER OF PERSONALITY TRAITS THAT MAY OR MAY NOT APPLY TO YOU. PLEASE SELECT A NUMBER NEXT TO EACH STATEMENT TO INDICATE THE EXTENT TO WHICH YOU AGREE OR DISAGREE WITH THAT STATEMENT. YOU SHOULD RATE THE EXTENT TO WHICH THE PAIR OF TRAITS APPLIES TO YOU, EVEN IF ONE CHARACTERISTIC APPLIES MORE STRONGLY THAN THE OTHER.

1 = Completely Disagree   2 = Disagree moderately   3 = Disagree a little
4 = Neither agree nor disagree 5 = Agree a little 6 = Agree moderately 7 = Completely Agree

APPENDIX D: Web-based Survey Instrument

	1 = Completely Disagree	2 = Disagree moderately	3 = Disagree a little	4 = Neither agree nor disagree	5 = Agree a little	6 = Agree moderately	7 = Completely Agree
I see myself as…							
1. Extraverted, enthusiastic.	1	2	3	4	5	6	7
2. Critical, quarrelsome.	1	2	3	4	5	6	7
3. Dependable, self-disciplined.	1	2	3	4	5	6	7
4. Anxious, easily upset.	1	2	3	4	5	6	7
5. Open to new experiences, complex.	1	2	3	4	5	6	7
6. Reserved, quiet.	1	2	3	4	5	6	7
7. Sympathetic, warm.	1	2	3	4	5	6	7
8. Disorganized, careless.	1	2	3	4	5	6	7
9. Calm, emotionally stable.	1	2	3	4	5	6	7
10. Conventional uncreative.	1	2	3	4	5	6	7

PART III: DEMOGRAPHIC INFORMATION

1. What is your gender?

   Please choose……

   a. Male
   b. Female

2. Which service category do you represent?
    a. US Active Army
    b. US National Guard
    c. U.S. Army Reserve
    d. US Air Force
    e. US Navy
    f. US Marines
    g. US Coast Guard or Interagency
    h. International Military

3. How many years have you served in the military? (including time as a Cadet)
    a. Less than 10 years
    b. 11-12 years
    c. 13-14 years
    d. 15-16 years
    e. 17-18 years
    f. 19-20 years
    g. More than 20 years

4. Have you ever been enlisted?
    a. Yes
    b. No

    4a. (Note: this question is only asked to those who answer yes to #4)

    How many enlisted years did you serve?

    a. 1 year
    b. 2 years
    c. 3 years
    d. 4 years
    e. 5 years
    f. More than 5 years

5. What was your commissioning source?
    a. ROTC
    b. OCS (Federal, State, or Accelerated OCS)
    c. USMA
    d. Direct Commission
    e. Other

6. What year were you commissioned as an officer?

a. Prior to 1996
b. 1996
c. 1997
d. 1998
e. 1999
f. 2000
g. 2001
h. 2002
i. 2003
j. 2004
k. 2005
l. 2006
m. After 2006

7. What was your initial branch upon commissioning?
    a. AD - Air Defense Artillery
    b. AG - Adjutant General
    c. AR - Armor
    d. ANC – Army Nurse Corps
    e. AV - Aviation
    f. CM - Chemical
    g. CY - Cyber Warfare
    h. EN - Engineer
    i. FA - Field Artillery
    j. FI - Finance
    k. IN - Infantry
    l. JAG - Judge Advocate General
    m. MI - Military Intelligence
    n. MP - Military Police
    o. MS - Medical Service
    p. OD - Ordnance
    q. QM - Quartermaster
    r. SC - Signal
    s. TC - Transportation
    t. My initial Branch not listed

8. Which Warfighting Function does your current branch or functional area fit into best?
    a. Movement and Maneuver
    b. Intelligence
    c. Fires

    d. Sustainment

    e. Protection

    f. Mission Command

9. How many months of Command time have you completed during your military career? (Company level or higher)

    a. Zero

    b. 1-6 months

    c. 7-12 months

    d. 13-18 months

    e. 19-24 months

    f. 25-30 months

    g. 31-36 months

    h. More than 36 months

PART IV: OPTIONAL FEEDBACK

INSTRUCTIONS:

The purpose of this survey is to help the researcher determine the trait emotional intelligence scores of current leaders in the military. The overarching goal of this research is to help the U.S. Army address Army Warfighter Challenge #10 *Develop Agile and Adaptive Leaders*. Can Emotional Intelligence instruments help the U.S. Army develop adaptive leaders by providing individualized feedback that informs self-awareness? Your perspective on this topic is absolutely appreciated, and thank you for taking the time to participate in this research project.

In the space provided below, please share your thoughts, viewpoints, or opinions.

> *Need a 500 word count parameter open response box.

Institutional Review Board
Office of Research Integrity
104 Tate Page Hall
270-745-2129; Fax 270-745-4221

The human subjects application must stand alone. This form is documentation of the formal design or plan of research activity submitted to the Western Kentucky University Institutional Review Board. Failure to provide all required information will result correction. Informed consent document(s), survey instrument, and site approval / cooperation letter(s), should be attached to the application and referred to in your write up of the appropriate sections so that reviewers may read them as they read your application. Thesis proposals or other documents that are meant to substitute for completing the sections of the application will not be read and should not be attached. All documents must be submitted through IRBNet.org for review.
   Do not convert any portion of this document to .pdf format and **consolidate** files when possible to expedite the review process of a submission. As of 11/20/2015, Unauthorized use of the WKU IRB approval stamp by any other than a WKU IRB Compliance Officer will be just cause for suspension of ALL new WKU IRB approvals for a period of up to 2 years for the offending researcher(s).

1.   Principal Investigator's Name: Stephan Walters
      Email Address: stephan.walters@wku.edu_____
      Mailing Address: 3912 Landherr Drive, Louisville, KY 40299_____
      Department: EDD Student   Phone: (502) 762-6872
            Completion of the Citi Program Training?   ☒ *Yes*   ☐ *No(double click on box)*
            Found at www.citiprogram.org   Date refresher 22 July 2016

      Co-Investigator:
      _____
      Email Address:
      _____
      Mailing Address:
      _____
      Department: _____ Phone: _____
            Completion of the Citi Program Training?   ☐ *Yes*   ☐ *No*
            Found at www.citiprogram.org   Date _____

2.   If you are a **student**, provide the following information:

      Faculty Sponsor: Dr. Randy Capps Department: EDD program Phone: (270) 745 4160
      Faculty Mailing Address: 1906 College Heights Blvd.#91030, Bowling Green, KY 42101
            Completion of the Citi Program Training?   ☒ *Yes*   ☐ *No*
            Found at www.citiprogram.org   Date 5/18/16_____

APPENDIX E: WKU IRB Application

Student Permanent Address (where you can be reached 12 months from now): 3912 Landherr Drive, Louisville, KY, 40299_____

Is this your capstone, thesis, or dissertation research? ☒ *Yes* ☐ *No*

Co- Principal Investigator. In those cases when a student holds the title of Principal Investigator, the Faculty Sponsor (Advisor, Supervisor, Administrator, or general managing Council) will conduct oversight of the research project and share in the accountability to assure the responsible conduct of research. Researchers outside of the Western Kentucky University campus system are required to provide proof of training to obtain approval for WKU Human Subjects protocols. This proof must be presented by the Compliance Official at the researcher's institution to the WKU Compliance official. When no training requirement exists at the researcher's host institution, training must be conducted through affiliation of Western Kentucky University CITI Program.org requirements. WKU faculty, staff, and students are required to complete the CITI Program Training modules outlined by the WKU IRB.

3. Project Period: Start   __upon IRB approval__   End _12/01/2016_
                                                            month, day, year
    Note: *Your project period may not start until __after__ the IRB has given final approval.*

4. Has this project previously been considered by the IRB?   ☐ *Yes* ☒ *No*
    If yes, give approximate date of review:

5. Do you or any other person responsible for the design, conduct, or reporting of this research have an economic interest in, or act as an officer or a director of, any outside entity whose financial interests would reasonably appear to be affected by the research?
    ☐ *Yes* ☒ *No*

    If "yes," please include a statement below that may be considered by the Institutional Conflict of Interest Committee:

6. Is a proposal for **financial support** being submitted? ☐ *Yes* ☒ *No*
    If yes, you must submit a reference number or acknowledgment any funding proposal(s) as soon as it is available and complete the following:
    a.   Is notification of Human Subject approval required?   ☐ *Yes* ☐ *No*
    b.   Is this a renewal application?   ☐ *Yes* ☐ *No*
    c.   Sponsor's Name:
    d.   Project Period: From: To:

7. Does this project SOLELY involve analysis of an existing database? ☐ *Yes* ☒ *No*

    If yes, please provide the complete URLs for all databases that are relevant to this application, then complete Section A and the signature portion of the application and forward the application to the Office of Research Integrity through IRBNet.org.

If the database is not available in an electronic format readily available on the internet, please provide evidence that the data were collected using procedures that were reviewed and approved by an Institutional Review Board, then complete Section A and the signature portion of the application and forward the application to the Office of Research Integrity through IRBNet.org.

8.   Is there a plan to publish or present the findings from the research outside the department or university?   ☐ *Yes*   ☒ *No*

9.   Any **changes to the protocol** after the approval process will **require the use of the Continuing Review Form**. This document is found in IRBNet.org Forms & Templates.

In the space below, please provide complete answers to the following questions. Add additional space between items as needed.
You must include copies of all pertinent information such as, a copy of the questionnaire you will be using or other survey instruments, informed consent documents, letters of approval from cooperating institutions (e.g., schools, hospitals or other medical facilities and/or clinics, human services agencies, individuals such as physicians or other specialists in different fields, etc.), copy of external support proposals, etc. *(to be placed at the end of the application document)* **The WKU IRB requires research that will occur through the cooperation of an outside organization to first have a verifiable letter of cooperation (or a complete email correspondence printed to .pdf that shows means that will allow verification - such as email addresses still attached/screen print) showing the organization will be cooperative or willing to let the research team approach clients, patrons, employees, or passersby. The research activities may bother some organizations by irritating clients, or aggravating customers. The organization must show a prior awareness of the research activity and be willing to express their cooperation to allow the research to occur on or through their organization.**

I.   **PROPOSED RESEARCH PROJECT**

A.   Provide a brief summary of the proposed research. Include major hypotheses and research design. *(Describe in layman's terms in order to allow interdisciplinary review)*

The research design of this non-experimental quantitative study is exploratory. This study is centered on answering the following central research question: What are the trait emotional intelligence scores of mid-career commissioned U.S. Army officers?

Three additional research questions to this exploratory study are the following: 1) Is there a difference in the trait emotional intelligence scores of mid-career U.S. Army commissioned officers based on gender? 2) To what extent do trait emotional

intelligence scores of mid-career U.S. Army commissioned officers differ based on military specialty (Commissioned Officer Branch) or Warfighting Function? 3) Do the trait emotional intelligence scores of mid-career U.S. Army commissioned officers differ based on personality differences identified by the Big Five personality

The four exploratory questions are rooted in the applied reality that all mid-career Army officers (in the rank of Major) have a minimum of eleven years training and experience serving as a commissioned officer, have a Bachelor's degree as a minimum civilian educational background, and have successfully completed all professional military education prerequisites while earning promotions to the rank of Major. Other preconditions that help define the majority of mid-career U.S. Army Majors are the successful completion of at least one Company level command, numerous developmental positions at various echelons within the organization, and the all-encompassing fact that the United States of America has been a nation at war for the preponderance of a U.S. Army Major's military career. Thus, most current U.S. Army Majors in the National Guard (ARNG), Army Reserves (USAR), and on Active Duty have at least one deployment to a combat theater of operations. In addition, almost all U.S. Army Majors have at least a decade of professional military experience assuring the universal responsibility to evaluate, counsel, develop, train, and mentor fellow members of a seasoned but consistently changing land combat force.

The study uses a 30 item trait emotional intelligence questionnaire, a 10 item personality questionnaire, and a demographic background questionnaire as a web-based survey instrument
(total of 50 questions). The survey is designed to generate primarily quantitative data and some
feedback (see Survey Questions attachment).

The target sample for this survey based research project are students attending the Command and General Staff Officer Course (CGSOC) Intermediate Leaders Education (ILE) class 2017. These students start the 10 month long course during September 2016, and they will graduate in June 2017. The residence ILE course for CGSOC is taught at Fort Leavenworth, Kansas. Based on the 2016 CGSOC-ILE class numbers, the target sample size is approximately (N = 1300), and the majority of the students are US Active duty Army (n = 879). However, the target sample also has students that represent the U.S. Army National Guard (n = 50) and the U.S. Army Reserves (n = 98). In addition, there are a substantial number of students from the US Air Force (n = 89), US Navy (n = 45), US Marine Corps (n = 28).Hence, the target sample is reflective of the approximately 30 thousand current U.S. Army Majors serving in the ARNG, USAR, and Active Army. Plus, this target sample provides feedback on the U.S. Army's leader development program via training, experience, and education on enhancing trait emotional intelligence scores of mid-career leaders.

B.	Describe the source(s) of subjects and the selection criteria. Specifically, how

will you obtain potential subjects, and how will you contact them? **Further describe any potential conflict of interest or problem of undue influence** that may be encountered through the protocol.

Are the subjects – under 18 years of age, pregnant women, prisoners, or fetus/neonates? ☐ *Yes* ☒ *No*

Are the subjects – cognitively impaired, economically, educationally, medically disadvantaged? ☐ *Yes* ☒ *No*

Are the subjects – unable to speak, read, or understand the English language? ☐ *Yes* ☒ *No*

- **Any "Yes" indication above will require the Faculty Sponsor to submit and upload application documents into IRBNet.org and to the WKU IRB. Applications from students with "Yes" indications will not be accepted.**

C. Informed consent: Describe the consent process and attach all consent documents. (formatted samples are included below)

Participation in all aspects of this study is 100% voluntary and anonymous. An email invitation (see attached email narrative) will be sent only to the current (2017) Command and General Staff College students (approximate N = 1300). The email invitation outlines the parameters of informed consent specific to this study, and the email provides the link to the actual survey. In addition, the informed consent information in the email will also be defined in the first page of the actual survey, and outlines the following 6 informed consent issues: Nature and Purpose of the Project, Explanation of Procedures, Discomfort and Risks, Benefits, Confidentiality, refusal/Withdrawal (see attached Informed Consent Document). No one, including the researcher, will be able to associate responses with identity. All individual survey responses will be held confidentially. No personally identifiable information (PII) like name, social security number, and address will be collected from survey participants.

D. Procedures: Provide a step-by-step description of each procedure, including the frequency, duration, and location of each procedure.

The name of the survey software program used for this study is VERINT Professional, and the U.S. Army has a licensed copy of VERINT Professional through the Combined Armed Center (CAC)/Army University. The web-based survey used in this study is designed to minimize the workload on participants, and the "point and click" format will allow for quick responses. The survey should take approximately 12 minutes to complete.

The CGSC Quality Assurance Office provides access and use of the online survey package called VERINT Professional. This survey package allows the researcher to

build a professional survey and administer it to a large population rapidly and securely. The VERINT software is a platform system for collecting feedback for analysis. The survey for this study will be published and administered using this platform. The platform secures all data to meet human subjects' protections and Army regulatory requirements for collecting data from active duty members. It allows the researcher to upload an e-mail roster that then automatically converts each e-mail address to a code.

The survey is authenticated and a coding system is used during survey administration to determine which invitees have not completed the survey so that a reminder can be sent. After email invitations are sent, participants will have two weeks to complete the survey. After one week, a reminder will be sent to all members of the target sample who have not completed the survey.

E.   How will confidentiality of the data be maintained? (Note: Data must be securely kept for a minimum of three years on campus, and describe how participants will be protected)

Reports will be downloaded from VERINT Professional into Microsoft Word and SPSS. The e-mail addresses and names of invitees will not appear in any reports as they will be automatically removed from the data leaving only a code with no way to identify any individuals who provided a particular response. This concept provides the highest level of confidentiality.

All original survey data will remain in the VERINT Professional platform and will be stored under CGSC's Quality Assurance over watch for a minimum of three years. All data downloads and reports from VERINT Professional will be coded and labeled. Any computers used to conduct statistical analysis of coded data will be password protected. If any coded data has to be e-mailed from CGSC to the researcher, then all e-mail's will be encrypted.

F.   Describe all known and anticipated risks to the subject including side effects, risks of placebo, risks of normal treatment delay, etc. **Describe how any potential conflict of interest or problem of undue influence** that may be encountered through the protocol will be handled.

This is a non-experimental survey based study. Thus, there are no known risks to participants in this study. It will take the average survey participant approximately 12 minutes to complete the studies survey. The researcher will protect the rights of human research subjects and will comply with the following: the Belmont Report, 32 CFR 219; 10 USC 980; DoDI 3216.02; where applicable 45 CFR 160 and 164; where applicable 45 CFR 46 (Subparts B, C, and D) under the authority of the DoD; and other Federal, State and local laws as they may relate

to proposed human subjects research.

The researcher is aware of the Joint Ethics Regulation, DoDI 5500.7-R, specifically areas

addressing investigators relationships with sponsoring companies including monies received for research protocols. The researcher understands that financial and other conflicts of interest must be reported to the CGSC Human Protections Administrator (HPA) and the Collaborative Academic Institutional Review Board (CAIRB).

There are no known conflicts of interest related to this study.

G.   Describe the anticipated benefits/incentives to subjects, and the importance of the knowledge that may reasonably be expected to result. **All Participant incentives MUST be approved prior to data collection and incentive distribution. Changes must be approved prior to participant recruitment into the study. NO EXCEPTIONS.**

The U.S. Army labels enduring organizational first order problems as Army Warfighting Challenges (AWFCs). As of December 2015, the U.S. Army had 20 defined warfighting challenges. This research project addresses AWFC #10 titled "Develop Agile and Adaptive Leaders" (DA, 2015a). AWFC #10 asks the following; "how to develop agile, adaptive, and innovative leaders who thrive in conditions of uncertainty and chaos and are capable of visualizing, describing, directing, leading, and assessing operations in complex environments and against adaptive enemies" (DA, 2015a).

How does an organization develop adaptive leaders? Plus, how do organizations like the U.S. Army measure if each individual leader is truly becoming more adaptive and open to change? In relation to Bloom's taxonomy of learning domains, is adaptive leadership a thinking (cognitive domain) or an emotional (affective domain) psychological phenomenon, or are the human traits related to successful adaptability an applied mixture of both emotions and thinking (Bloom et al., 1956)? The answers to these challenging questions have far-reaching strategic, operational, and tactical importance to the sustained national defense of the United States of America.

At this point in time, the U.S. Army does not have a leader development instrument that purposefully measures the affective (emotional) or thinking (cognitive) traits related to adaptability. Specifically, the U.S. Army does not use an instrument that measures the emotional intelligence scores of leaders within the organization. Thus, the problem defined is the reality that the U.S. Army needs instruments and tools that measure adaptability growth from both a cognitive and affective domain perspective.

The purpose of this exploratory research is to assess the U.S. Army's effectiveness at developing adaptive and self-aware leaders by measuring the trait emotional intelligence (EI) scores of current organizational mid-career leaders. Thus, beginning the process of determining empirically if a self-report trait emotional intelligence instrument could (and should) have a role in the development of agile,

adaptive, and self-aware leaders within the U.S. Army. Measuring the trait EI scores of mid-career commissioned officers allows for an assessment of the U.S. Army's ability to develop the affective (emotional) domains of leadership via training, education, and experience. Specifically, this study focuses on the notion that self-report EI measuring instruments could provide the individualized feedback currently needed in the U.S. Army to assess leader development from an affective perspective on a number of personalized attributes and competencies that are clearly defined within the U.S. Army's most recent leadership requirements model and leadership development doctrine.

Research that measures the trait emotional intelligence scores of current U.S. Army organizational level leaders provides the opportunity to analyze the applicability of trait emotional intelligence science and emotional intelligence measuring instruments in relation to currently used leader development instruments that provide self-awareness and social-awareness enabling feedback. The proven U.S. Army leader development program is not broken, and this research endeavor only attempts to help determine if the U.S. Army's leader development program and instruments should emphasis a focus on emotional and social competence. There are no known quantitative or qualitative studies that have purposefully measured the emotional intelligence scores of any sample from the United States Army. This study will provide a benchmark for determining empirically if the cognitive and affective aspects of an emotional intelligence measuring instrument should be systematically and deliberately added to the U.S. Army's leader development program.

The only known benefit to the individuals that participate in this study is the personal gratification of helping the U.S. Army address Army Warfighter Challenge #10. No incentives or gratuities will be offered to participants of this study.

H.   List of references (if applicable):

Please see attachment titled "References" for list of sources used for this study.

Additions to or changes in procedures involving human subjects, as well as any problems connected with the use of human subjects once the project has begun, must be brought to the attention of the IRB as they occur.

Use the Continuing Review Form to describe changes, requests for additional time to collect data, or adverse events.

Do dot separate Informed Consent forms from this application when uploading submission documents

INFORMED CONSENT DOCUMENT
(First Page of Web-based Survey Instrument)

Project Title: Emotional Intelligence and Leader Development: Measuring Trait Emotional Intelligence scores of mid-career commissioned U.S. Army officers

Investigator: MAJ Stephan Walters, Educational Leadership Doctoral Program, stephan.walters@wku.edu

You are being asked to participate in a project conducted through Western Kentucky University and the Command and General Staff College. The University requires that you give your consent to participate in this project.

Upon request, the researcher will explain in detail the purpose of the project, the procedures to be used, and the potential benefits and possible risks of participation. You may ask any questions you have to help you understand the project. A basic explanation of the project is written below. Please read this explanation and discuss with the researcher any questions you may have.

If you then decide to participate in the project, please sign this form in the presence of the person who explained the project to you. You should be given a copy of this form to keep.

1. **Nature and Purpose of the Project:** The purpose of this exploratory quantitative study is to measure the trait emotional intelligence (EI) scores of current mid-level commissioned leaders in the U.S. Army. Thus, beginning the process of determining if emotional intelligence science should be added to the Army's leader development program.

2. **Explanation of Procedures:** Current CGSC ILE students participate in the survey, and statistical analysis will be conducted to define outcomes.

3. **Discomfort and Risks:** There are no known risks related to this nonexperimental study

4. **Benefits:** The benefit of participating in this study is the intrinsic reward of helping the U.S. Army answer Army Warfighter Challenge (AWFC) #10 titled "Develop Agile and Adaptive Leaders." AWFC #10 asks the following; "how to develop agile,

adaptive, and innovative leaders who thrive in conditions of uncertainty and chaos and are capable of visualizing, describing, directing, leading, and assessing operations in complex environments and against adaptive enemies."

5.   **Confidentiality:** No one, including the researcher, will be able to associate responses with identity. All individual survey responses will be held confidentially. No personally identifiable information (PII) like name, social security number, and address will be collected from survey participants.

6.   **Refusal/Withdrawal:** Refusal to participate in this study will have no effect on any future services you may be entitled to from the Command and General Staff College. Anyone who agrees to participate in this study is free to withdraw from the study at any time with no penalty.

<div align="center">

THE DATED APPROVAL ON THIS CONSENT FORM INDICATES THAT
THIS PROJECT HAS BEEN REVIEWED AND APPROVED BY
THE WESTERN KENTUCKY UNIVERSITY INSTITUTIONAL REVIEW BOARD
Paul Mooney, Human Protections Administrator
TELEPHONE: (270) 745-2129

</div>

WKU *INSTITUTIONAL
REVIEWBOARD
OFFICE OF RESEARCH
INTEGRITY*

DATE: August 25, 2016

TO: Stephan Walters

FROM: Western Kentucky University (WKU) IRB

PROJECT TITLE: [947003-1] EMOTIONAL INTELLIGENCE AND LEADER DEVELOPMENT:
         MEASURING TRAIT EMOTIONAL INTELLIGENCE SCORES OF MID-
         CAREER COMMISSIONED U.S. ARMY OFFICERS

REFERENCE #:   IRB 17-043

SUBMISSION TYPE: New Project

ACTION: APPROVED

APPROVAL DATE: August 25, 2016

REVIEW TYPE: Exempt from Full Board Review

Thank you for your submission of New Project materials for this project. The Western
Kentucky University (WKU) IRB has APPROVED your submission with the express
cooperation with the Department of Defense. This approval is based on an appropriate
risk/benefit ratio and a project design wherein the risks have been minimized. All
research must be conducted in accordance with this approved submission.

This submission has received Exempt Review based on the applicable federal regulation.

Please remember that informed consent is a process beginning with a description of the
project and insurance of participant understanding followed by an *implied* consent
form. Informed consent must continue throughout the project via a dialogue between
the researcher and research participant. Federal regulations require each participant
receive a copy of the consent document.

Please note that any revision to previously approved materials must be approved by this
office prior to initiation. Please use the appropriate revision forms for this procedure.

APPENDIX F: WKU IRB Approval Letter

All UNANTICIPATED PROBLEMS involving risks to subjects or others and SERIOUS and UNEXPECTED adverse events must be reported promptly to this office. Please use the appropriate reporting forms for this procedure. All FDA and sponsor reporting requirements should also be followed.

All NON-COMPLIANCE issues or COMPLAINTS regarding this project must be reported promptly to this office.

This project has been determined to be a Minimal Risk project.

Please note that all research records must be retained for a minimum of three years after the completion of the project.

If you have any questions, please contact Paul Mooney at (270) 745-2129 or irb@wku.edu. Please include your project title and reference number in all correspondence with this committee.

This letter has been electronically signed in accordance with all applicable regulations, and a copy is retained within Western Kentucky University (WKU) IRB's records.

APPENDIX G: Informed Consent Document

INFORMED CONSENT DOCUMENT

Project Title: Emotional Intelligence and Leader Development: Measuring Trait Emotional Intelligence scores of mid-career commissioned U.S. Army officers

Investigator: MAJ Stephan Walters, Educational Leadership Doctoral Program, stephan.walters@wku.edu

You are being asked to participate in a project conducted through Western Kentucky University. The University requires that you give your consent to participate in this project.
You must be 18 years old or older to participate in this research study.

Upon request, the researcher will explain in detail the purpose of the project, the procedures to be used, and the potential benefits and possible risks of participation. You may ask any questions you have to help you understand the project. A basic explanation of the project is written below. Please read this explanation and discuss with the researcher any questions you may have. You should be given a copy of this form to keep.

1.**Nature and Purpose of the Project:** The purpose of this exploratory quantitative study is to measure the trait emotional intelligence (EI) scores of current mid-level commissioned leaders in the U.S. Army. Thus, beginning the process of determining if emotional intelligence science should be added to the Army's leader development program.

2.**Explanation of Procedures:** Current CGSC ILE students participate in the survey, and statistical analysis will be conducted to define outcomes.

3.**Discomfort and Risks:** There are no known risks related to this nonexperimental study.

4.**Benefits:** The benefit of participating in this study is the intrinsic reward of helping the U.S. Army answer Army Warfighter Challenge (AWFC) #10 titled "Develop Agile and Adaptive Leaders." AWFC #10 asks the following; "how to develop agile, adaptive, and innovative leaders who thrive in conditions of uncertainty and chaos and are capable of visualizing, describing, directing, leading, and assessing operations in complex environments and against adaptive enemies."

5.**Confidentiality:** No one, including the researcher, will be able to associate responses with identity. All individual survey responses will be held confidentially. No personally identifiable information (PII) like name, social security number, and address will be collected from survey participants.

6.**Refusal/Withdrawal:** Refusal to participate in this study will have no effect on any future services you may be entitled to from the University. Anyone who agrees to participate in this study is free to withdraw from the study at any time with no penalty.

You understand also that it is not possible to identify all potential risks in an experimental procedure, and you believe that reasonable safeguards have been taken to minimize both the known and potential but unknown risks.

Your continued cooperation with the following research implies your consent.
THIS PROJECT HAS BEEN REVIEWED AND APPROVED BY
THE WESTERN KENTUCKY UNIVERSITY INSTITUTIONAL REVIEW BOARD
Paul Mooney, Human Protections Administrator
TELEPHONE: (270) 745-2129

APPENDIX H: CGSC Letter of Support

DEPARTMENT OF THE ARMY
U.S. ARMY COMMAND AND GENERAL STAFF COLLEGE
OFFICE OF THE HUMAN PROTECTIONS ADMINISTRATOR
100 STIMSON AVENUE
FORT LEAVENWORTH, KANSAS 66027-2301

REPLY TO
ATTENTION OF

ATZL-LSA-HPA   17 August 2016

MEMORANDUM FOR Stephan L. Walters, Western Kentucky University, 1906 College
Heights Blvd., Bowling Green, KY 42101

SUBJECT: Letter of Support

1. The United States Army Command and General Staff College (CGSC) supports your
   request for research however, final approval for research will not be possible without
   your IRB's approval followed by an approved administrative review from the CGSC
   Human Protections Administrator. Your protocol must meet the requirements of
   DoDI 3216.02.

2. This letter is not an authorization to begin data collection.

3. Additionally, your IRB will need to complete the Institutional Agreement and you will
   need to complete the individual researcher agreement.

4. If you have questions or concerns please feel free to contact me at
   bobbie.j.murray6.civ@mail.mil or 913.684.7311.

                                    Bobbie J. Murray
                                    Human Protections Administrator,
                                    IRB Manager, EDO Official
                                    U.S. Army Command and General
                                    Staff College

APPENDIX I: CGSC Researcher Responsibilities

Command and General Staff College (CGSC) Researcher Responsibilities

The Office of the Under Secretary of Defense for Personnel and Readiness requires that all research investigators (principal investigators as well as associate investigators) engaged in research with one of its institutions explicitly acknowledge and accept responsibility for protecting the rights and welfare of human research subjects as stated therein.

1. I understand that the rights of the subjects take precedence over the needs of the research and I will protect the rights of human research subjects and will comply with the following: the Belmont Report, 32 CFR 219; 10 USC 980; DoDI 3216.02; where applicable 45 CFR 160 and 164; where applicable 45 CFR 46 (Subparts B, C, and D) under the authority of the DoD; and other Federal, State and local laws as they may relate to proposed human subjects research.

2. I am aware of the Joint Ethics Regulation, DoDI 5500.7-R, specifically areas addressing investigators relationships with sponsoring companies including monies received for research protocols. I understand that financial and other conflicts of interest must be reported to the CGSC Human Protections Administrator (HPA) and the Collaborative Academic Institutional Review Board (CAIRB).

3. I understand that I must have either (a) a written exemption determination from my Exemption Determination Official (EDO) (b) an approval letter from a DoD IRB, or (c) written DoD concurrence with a nonfederal IRB review prior to initiating research.

4. I shall promptly report to my approving authority (EDO or IRB) proposed changes in a research activity and shall ensure that such changes in approved research, during the period for which approval has already been given, are not initiated without proper authority review and approval except when necessary to eliminate apparent immediate hazards to the subject. Such changes will also be reported immediately to the CGSC Human Protections Administrator (HPA) and the Collaborative Academic Institutional Review Board (CAIRB) when the approving IRB is a non-DoD institution.

5. I will ensure that all subjects, or their representatives, are fully informed of the nature of the research to include potential risks to subjects and I will obtain informed consent from each as required.

APPENDIX I: CGSC Researcher Responsibilities

6. I will maintain study records for 3 years after the study is closed or for 6 years if the study is regulated by the Health Insurance Portability and Accountability Act.

7. I will respect the privacy of subjects.   I shall protect confidential information given to me and advise subjects in advance of any limits upon my ability to ensure that the
    information will remain confidential.

8. I am aware and will complete the training required by the CGSC HRPP prior to initiating research.

9. I will report immediately to the approving authority (exempt determination official or IRB) any unanticipated problems involving risks to subjects or others in research.

    With my signature, I acknowledge that I have read and understand the responsibilities stated above and will comply with them. I understand that if I fail to comply with any of these responsibilities, all protocols for which I am an investigator may be suspended.

_____   _____
Investigator Signature   *Date*

_____
Print   (First Name)   (Middle Initial)   (Last Name)

_____
Mailing Address

_____
(City)   (State/Province)   (Zip/Country)

_____   _____
Phone Number

APPENDIX J: Email Message to Survey Participants

Hello fellow CGSC ILE students,

I am asking you to participate in a survey research project that will measure your trait emotional intelligence. This study is being conducted by MAJ Stephan Walters, a former ILE student. This survey is anonymous. No one, including the researcher, will be able to associate your responses with your identity.

Your decision to join this study in voluntary. You may refuse to join, or you may withdraw your consent to be in this study, for any reason, without penalty. If you participate in the survey, I can promise your responses will be held confidentially. I am NOT asking for PII (personally identifiable information) and you can rest assured that the results will NOT be reported at a level that facilitates personal identification. You must be at least 18 years of age to participate in this study, and this data will be protected and stored for a minimum of three years.

The survey is designed to minimize your workload, and the "point and click" format will allow for quick responses. This survey should take approximately 12 minutes to complete.

Clicking on the link below signifies your consent to participate in the survey. Click on the link to participate. Please email me directly if there are any questions/concerns. Thank you!

LINK: https://

Very Respectfully,
MAJ Stephan Walters

MAJ Stephan L. Walters

U.S. Army

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APPENDIX J: Email Message to Survey Participants

<u>Credentials for Survey</u>:

Western Kentucky University Consent to Participate in a Research Study Adult

Participants—Command and General Staff College IRB Study: # 17-043

Title of Study: Emotional Intelligence and Leader Development: Measuring Trait

Emotional Intelligence Scores of Mid-Career Commissioned U.S. Army Officers.

Principal Investigator: MAJ Stephan Walters

Principal Investigator Department: Educational Leadership Doctoral Program

Principal Investigator Phone number: (502) 762-6872

Principal Investigator Email Address: Stephan.l.walters.mil@mail.mil or

Stephan.walters102@topper.wku.edu

Faculty Advisor: Dr. Randall Capps

Faculty Advisor Contact Information: (270) 745-4160

Survey Approval Authority: DoD Institutional Administrative Review

Control Number: 17=04-060

Expires: 24 August 2017

Sponsor: Bobbie Murray

APPENDIX K: Variable Definitions and Logic Model

Independent Variables	Dependent Variables

Demographic Variables	Ten Item Personality Inventory	TEIQ-SF
Gender Service Category Military Experience Enlisted Experience Commissioning Source Commissioning Year Initial Branch Warfighting Function Command Time	Big Five Openness to Experience Extraversion Conscientiousness Agreeableness Emotional Stability	Primary Factors Well-being Self-control Emotionality Sociability Independent Factors Adaptability Self-motivation

Ten Item Personality Inventory (TIPI)

Openness to Experience: Being curious, original, intellectual, creative, and open to new ideas

Conscientiousness: Being organized, systematic, achievement-oriented, and dependable.

Extraversion: Being outgoing, talkative, sociable, and enjoying social situations.

Agreeableness: Being affable, tolerant, sensitive, trusting, kind, and warm.

Neuroticism: Being anxious, irritable, temperamental, stressed, and moody.

Note: TIPI uses the variable of *Emotional Stability* instead of *Neuroticism*, and emotional stability

is defined as: "not" anxious, moody, temperamental, irritable, or stressed.

Reference: (Gosling, Rentfrow, & Swann, 2003)

Trait Emotional Intelligence Questionnaire (TEIQ-SF)

Well-being: self-esteem, trait happiness, and trait optimism (6 items, 2 for each facet)

Self-control: emotion regulation, stress management, low impulsiveness (6 items)

Emotionality: emotion perception, trait empathy, emotion expression, and relationships (8 items)

Sociability: assertiveness, emotion management, and social awareness (6 items)

APPENDIX K: Variable Definitions and Logic Model

Reference: (Siegling, Vesely, Petrides, & Saklofske, 2015; Petrides, 2009

The Sampling Domain of Trait Emotional Intelligence in Adults

Facets	**High scorers perceive themselves as…**
Adaptability (2 items)	…flexible and willing to adapt to new conditions.
Assertiveness	…forthright, frank, and willing to stand up for their rights.
Emotion perception (self and others)	…clear about their own and other people's feelings.
Emotion expression	…capable of communicating their feelings to others.
Emotion management (others)	…capable of influencing other people's feelings.
Emotion regulation	…capable of controlling their emotions.
Impulsiveness (low)	…reflective and less likely to give in to their urges.
Relationships	…capable of having full-filling personal relationships.
Self-esteem	…successful and self-confident.
Self-motivation (2 items)	…driven and unlikely to give up in the face of adversity.
Social awareness	…accomplished networkers with excellent social skills.
Stress management	…capable of withstanding pressure and regulating stress.
Trait empathy	…capable of taking someone else's perspective.
Trait happiness	…cheerful and satisfied with their lives.
Trait optimism	…confident and likely to "look on the bright side" of life

References: (Cooper & Petrides, 2010; Petrides, 2009; Petrides & Furnham, 2006)

Four Primary Factors of the Trait Emotional Intelligence Questionnaire

High scorers view themselves as…	
Well-being	
Self-esteem	…Successful and self-confident.
Trait happiness	…Cheerful and satisfied with their lives.
Trait optimism	…Confident and likely to "look on the bright side" of life.
Self-Control	
Emotion control	…Capable of controlling their emotions.
Stress management	…Capable of withstanding pressure and regulating stress.
Impulse control	…Reflective and less likely to give into their urges.
Emotionality	
Emotion perception	…Clear about their own and other people's feelings
Emotion expression	…Capable of communicating their feelings to others.
Relationships	…Capable of having fulfilling personal relationships.
Trait empathy	…Capable of taking someone else's perspective
Sociability	
Social awareness	…Accomplished networkers with excellent social skills.
Emotion management	…Capable of influencing other people's feelings
Assertiveness	…Forthright, frank, and willing to stand up for their rights
Independent facets	
Adaptability	…Flexible and willing to adapt to new conditions.
Self-motivation	…Driven and unlikely to give up in the face of adversity.

Reference: Andrei et al., 2016

APPENDIX L: Variable Coding in SPSS

The first section of this study's survey instrument (Part 1) is the Trait Emotional Intelligence Questionnaire Short Form (TEIQ-SF). Using the *Variable View* in SPSS, the Data Code for each TEIQ-SF item is the Variable *Name* (in name column in SPSS), and the TEI Factor is the Variable Label (in the label column in SPSS). In SPSS, the data *Type* for all of this section is *Numeric*, the *Values* for all 30 items in this section are 1 thru 7 (note 15 items are reverse scored), the *Decimals* column is 2, and the *Measure* column is set at *Scale* which refers to continuous data measured at interval or ratio level of measurement.

Coding: The following is the 6 to 7 character coding concept (Variable Name) for the data generated from this section of the survey: the first two digit for all of this section is EI to symbolize Emotional Intelligence, the next set of characters represent the (TEIQ-SF) question number, and the final two characters identify the trait EI factor measured by the question (EM = Emotionality, WB = Well-being, SO = Sociability, SC = Self-control, AD = Adaptability, SM = Self-motivated).

Values: Rated on a 7-point Likert scale from 1 = Completely Disagree to 7 = Completely Agree. The TEIQ-SF has a total of 15 items on the TEIQ-SF have to be reverse scored (7=1), (6=2), (5=3), (3=5), (2=6), (1=7). The responses to the following TEIQ-SF questions must be recoded in the Values column in SPSS: 2, 4, 5, 7, 8, 10, 12, 13, 14, 16, 18, 22, 25, 26, and 28. The items that are not reversed scored (1=1), (2=2), (3=3), (4=4), (5=5), (6=6), (7=7).

APPENDIX L: Variable Coding in SPSS

1. Expressing my emotions with words is not a problem for me.

    a. TEI Factor (SPSS Variable Label) = Emotionality

    b. Data Code (SPSS Variable Name) = EIQ1EM

2. I often find it difficult to see things from another person's viewpoint.

    a. TEI Factor = Emotionality

    b. Data Code = EIQ2EM (note: reverse scored)

3. On the whole, I'm a highly motivated person.

    a. TEI Factor = Self-motivated

    b. Data Code = EIQ3SM

4. I usually find it difficult to regulate my emotions.

    a. TEI Factor = Self-control

    b. Data Code = EIQ4SC (note: reverse scored)

5. I generally don't find life enjoyable.

    a. TEI Factor = Well-being

    b. Data Code = EIQ5WB (note: reverse scored)

6. I can deal effectively with people.

    a. TEI Factor = Sociability

    b. Data Code = EIQ6SO

7. I tend to change my mind frequently.

    a. TEI Factor = Self-Control

    b. Data Code = EIQ7SC (note: reverse scored)

APPENDIX L: Variable Coding in SPSS

8. Many times, I can't figure out what emotion I'm feeling.

   a. TEI Factor = Emotionality

   b. Data Code = EIQ8EM (note: reverse scored)

9. I feel that I have a number of good qualities.

   a. TEI Factor = Well-being

   b. Data Code = EIQ9WB

10. I often find it difficult to stand up for my rights.

    a. TEI Factor = Sociability

    b. Data Code = EIQ10SO (note: reverse scored)

11. I'm usually able to influence the way other people feel.

    a. TEI Factor = Sociability

    b. Data Code = EIQ11SO

12. On the whole, I have a gloomy perspective on most things.

    a. TEI Factor = Well-being

    b. Data Code = EIQ12WB (note: reverse scored)

13. Those close to me often complain that I don't treat them right.

    a. TEI Factor = Emotionality

    b. Data Code = EIQ13EM (note: reverse scored)

14. I often find it difficult to adjust my life according to the circumstances.

    a. TEI Factor = Adaptability

    b. Data Code = EIQ14AD (note: reverse scored)

APPENDIX L: Variable Coding in SPSS

15. On the whole, I'm able to deal with stress.

    a. TEI Factor = Self-control

    b. Data Code = EIQ15SC

16. I often find it difficult to show my affection to those close to me.

    a. TEI Factor = Emotionality

    b. Data Code = EIQ16EM (note: reverse scored)

17. I'm normally able to "get into someone's shoes" and experience their emotions.

    a. TEI Factor = Emotionality

    b. Data Code = EIQ17EM

18. I normally find it difficult to keep myself motivated.

    a. TEI Factor = Self-motivated

    b. Data Code = EIQ18SM (note: reverse scored)

19. I'm usually able to find ways to control my emotions when I want to.

    a. TEI Factor = Self-control

    b. Data Code = EIQ18SC

20. On the whole, I'm pleased with my life.

    a. TEI Factor = Well-being

    b. Data Code = EIQ20WB

21. I would describe myself as a good negotiator.

    a. TEI Factor = Sociability

    b. Data Code = EIQ21SO

APPENDIX L: Variable Coding in SPSS

22. I tend to get involved in things I later wish I could get out of.

    a. TEI Factor = Self-control

    b. Data Code = EIQ22SC (note: reverse scored)

23. I often pause and think about my feelings.

    a. TEI Factor = Emotionality

    b. Data Code = EIQ23EM

24. I believe I'm full of personal strengths.

    a. TEI Factor = Well-being

    b. Data Code = EIQ24WB

25. I tend to "back down" even if I know I'm right.

    a. TEI Factor = Sociability

    b. Data Code = EIQ25SO (note: reverse scored)

26. I don't seem to have any power at all over other people's feelings.

    a. TEI Factor = Sociability

    b. Data Code = EIQ26SO (note: reverse scored)

27. I generally believe that things will work out fine in my life.

    a. TEI Factor = Well-being

    b. Data Code = EIQ27WB

28. I find it difficult to bond well even with those close to me.

    a. TEI Factor = Emotionality

    b. Data Code = EIQ28EM (note: reverse scored)

29. Generally, I'm able to adapt to new environments.

    a. TEI Factor = Adaptability

    b. Data Code = EIQ29AD

30. Others admire me for being relaxed.

    a. TEI Factor = Self-control

    b. Data Code = EIQ30SC

Part 2 (TIPI)

The second section of this study's survey instrument (Part 2) is the Ten-Item Personality Inventory (TIPI). Using the *Variable View* in SPSS, the Data Code for each TIPI item is the Variable *Name* (in name column in SPSS), and the PI Factor is the Variable Label (in the label column in SPSS). In SPSS, the data *Type* for all of this section is *Numeric*, the *Values* are all 1= 1 thru 7=7 (note 15 items are reverse scored), the *Decimals* column is 2, and the *Measure* column is set at *Scale* which refers to continuous data measured at interval or ratio level of measurement.

Coding: The 6 to 7 character coding concept (Variable Name) for the data generated from this section of the survey is the following: the first two digit for all of this section is PI to symbolize Personality Inventory, the next set of characters represent the (TIPI) question number, and the final two characters identify the personality trait (factor) measured by the question (EX = Extraversion, AG = Agreeableness, CO = Conscientiousness, ES = Emotional Stability, OE = Openness to Experiences).

APPENDIX L: Variable Coding in SPSS

Values: Rated on a 7-point Likert scale from 1 = *Completely Disagree* to 7 = *Completely Agree*. A total of 5 of the items on the TIPI have to be reverse scored (7=1), (6=2), (5=3), (3=5), (2=6), (1=7). Responses to the following TIPI questions must be recoded: 2, 4, 6, 8, 10 (the five even numbered questions). The items that are not reversed scored (1=1), (2=2), (3=3), (4=4), (5=5), (6=6), (7=7).

1. I see myself as: extraverted, enthusiastic.

    a. PI Factor (SPSS Variable Label) = Extraversion

    b. Data Code (SPSS Variable Name) = PIQ1EX

2. I see myself as: critical, quarrelsome.

    a. PI Factor = Agreeableness

    b. Data Code = PIQ2AG (note: reverse scored)

3. I see myself as: dependable, self-disciplined.

    a. PI Factor = Conscientiousness

    b. Data Code = PIQ3CO

4. I see myself as: Anxious, easily upset.

    a. PI Factor = Emotional Stability

    b. Data Code = PIQ4ES (note: reverse scored)

5. I see myself as: open to new experiences, complex.

    a. PI Factor = Openness to Experiences

    b. Data Code = PIQ5OE

APPENDIX L: Variable Coding in SPSS

6. I see myself as: reserved, quiet.

    a. PI Factor = Extraversion

    b. Data Code = PIQ6EX (note: reverse scored)

7. I see myself as: sympathetic, warm.

    a. PI Factor = Agreeableness

    b. Data Code = PIQ7AG

8. I see myself as: disorganized, careless

    a. PI Factor = Conscientiousness

    b. Data Code = PIQ8CO (note: reverse scored)

9. I see myself as: calm, emotionally stable.

    a. PI Factor = Emotionally Stability

    b. Data Code = PIQ9ES

10. I see myself as: conventional, uncreative

    a. PI Factor = Openness to Experiences

    b. Data Code = PIQ10OE (note: reverse scored)

Part 3 (Demographic)

The third section of this study's survey instrument (Part 3) is demographic

information. Using the *Variable View* in SPSS, the Variable *Name* and the Variable *Label*

for each item within this section are the same and no coding system was developed. For

example, the name and label for the first item was gender.   In SPSS, the data *Type* for

APPENDIX L: Variable Coding in SPSS

all of this section is *Numeric*. The *Values* and *Measure* columns are different for each item. Nothing is reverse scored in this section. The *Decimals* column is zero throughout this section. The *Measure* column has some items that are *Scale* (interval or ratio levels), and others that are either *Nominal* or *Ordinal*. Nothing is reverse scored in this section, and responses to the nominal level items in this section are dummy coded. For example: in the first demographic question about gender, male is given a dummy code value of 1 in SPSS, and female is given a dummy code value of 2.

1. What is your gender? (Nominal level, SPSS Variable Name is (GEN) for gender)

    a. Male   = 1

    b. Female   = 2

2. Which service category do you represent? (Nominal Level, SPSS Variable Name is (SVC) for service category)

    a. US Active Army   = 1

    b. US National Guard   = 2

    c. U.S. Army Reserve   = 3

    d. US Air Force   = 4

    e. US Navy   = 5

    f. US Marines   = 6

    g. US Coast Guard or Interagency   = 7

    h. International Military   = 8

APPENDIX L: Variable Coding in SPSS

3. How many years have you served in the military? (Interval Level (or Scale in SPSS), SPSS Variable Name is (YRSSV) for years of service)

    a. Less than 10 years   = 1

    b. 11-12 years   = 2

    c. 13-14 years   = 3

    d. 15-16 years   = 4

    e. 17-18 years   = 5

    f. 19-20 years   = 6

    g. More than 20 years   = 7

4. Have you ever been enlisted? (Nominal Level, SPSS Name is (ENL) for enlisted)

    a. Yes   = 1

    b. No   = 2

    4a. (Note: this question is only asked to those who answer yes to #4)
How many enlisted years did you serve? Ordinal Level (or Scale in SPSS), SPSS Variable Name is (YRSENL) for enlisted years)

    a. 1 year   = 1

    b. 2 years   = 2

    c. 3 years   = 3

    d. 4 years   = 4

    e. 5 years   = 5

    f. More than 5 years   = 6

APPENDIX L: Variable Coding in SPSS

5. What was your commissioning source? (Nominal Level, SPSS Variable Name is COMSOR for commissioning source)

    a. ROTC   = 1

    b. OCS (Federal, State)   = 2

    c. USMA   = 3

    d. Direct Commission   = 4

    e. Other   = 5

6. What year were you commissioned as an officer? (Interval Level, SPSS Variable Name is YRCOM for year commissioned)

    a. Prior to 1996   = 1

    b. 1996   = 2

    c. 1997   = 3

    d. 1998   = 4

    e. 1999   = 5

    f. 2000   = 6

    g. 2001   = 7

    h. 2002   = 8

    i. 2003   = 9

    j. 2004   = 10

    k. 2005   = 11

    l. 2006   = 12

    m. After 2006   = 13

APPENDIX L: Variable Coding in SPSS

7.   What was your initial branch upon commissioning? (Nominal Level, SPSS
     Variable Name (INBR) for initial branch)

    a. AD - Air Defense Artillery   = 1

    b. AG - Adjutant General   = 2

    c. AR - Armor   = 3

    d. ANC – Army Nurse Corps   = 4

    e. AV – Aviation   = 5

    f. CM – Chemical   = 6

    g. CY - Cyber Warfare   = 7

    h. EN – Engineer   = 8

    i. FA - Field Artillery   = 9

    j. FI - Finance   = 10

    k. IN – Infantry   = 11

    l. JAG - Judge Advocate General   = 12

    m. MI - Military Intelligence   = 13

    n. MP - Military Police   = 14

    o. MS - Medical Service   = 15

    p. OD – Ordnance   = 16

    q. QM – Quartermaster   = 17

    r. SC – Signal   = 18

    s. TC - Transportation   = 19

    t. My initial Branch not listed   = 20

APPENDIX L: Variable Coding in SPSS

10. Which Warfighting Function does your current branch or functional area fit into best? (Nominal Level, SPSS Variable Name is (WFF) for Warfighting Function)

    a. Movement and Maneuver   = 1

    b. Intelligence   = 2

    c. Fires   = 3

    d. Sustainment   = 4

    e. Protection   = 5

    f. Mission Command   = 6

11. How many months of Command time have you completed during your military career? (Ratio Level because it has a true zero (or Scale in SPSS), SPSS Variable Name is CMDTM for command time)

    a. Zero   = 1
    b. 1-6 months   = 2
    c. 7-12 months   = 3
    d. 13-18 months   = 4
    e. 19-24 months   = 5
    f. 25-30 months   = 6
    g. 31-36 months   = 7
    h. More than 36 months   = 8

APPENDIX L: Variable Coding in SPSS

List of demographic variable names in SPSS:

1. Gender (GEN)

2. Service Category (SVC)

3. Years of Service (YRSSV)

4. Enlisted (ENL)

5. Years Enlisted (YRSENL)

6. Commissioning Source (COMSOR)

7. Year Commissioned (YRCOM)

8. Warfighter Function (WFF)

9. Command Time (CMD

APPENDIX L: Variable Coding in SPSS

The following items are reversed scored:

EIQ2EM, EIQ4SC, EIQ5WB, EIQ7SC, EIQ8EM, EIQ10SC, EIQ12WB, EIQ13EM,

EIQ14AD, EIQ16EM, EIQ18SM, EIQ22SC, EIQ25SO, EIQ26SO, EIQ28EM, PIQ2AG,

PIQ4ES, PIQ6EX, PIQ8CO, PIQ10OE.

DEPARTMENT OF THE ARMY
U.S. ARMY COMBINED ARMS CENTER
Office of Human Research Protections and Compliance
100 STIMSON AVENUE
FORT LEAVENWORTH, KANSAS 66027-2301

REPLY TO
ATTENTION OF

ATZL-LDA-HPA   27 March 2017

MEMORANDUM FOR Stephan Walters, Western Kentucky University, 1906 College
　　Heights Blvd, Bowling Green, KY 42101

SUBJECT: DoD Institutional Administrative Review Approval to Conduct Human
Subjects Research

1. Your protocol to research *Emotional intelligence and leader development: Measuring trait emotional intelligence scores of mid-career commissioned U.S. Army officers* was administratively reviewed on *27 March 2017* in accordance with DoDI 3216.02, *Protection of Human Subjects and Adherence to Ethical Standards in DoD-Supported Research.*

2. The *Western Kentucky University* Institutional Review Board (IRB) acting as a federally assured institution under assurance number *FAW 00000375* is the supervising IRB for your research study. This administrative review concurred with the risk determination of the Western Kentucky University as exempt from IRB approval. According to 32CFR216, you study is exempt category two. Your study incorporates all necessary Department of Defense specific protections for your proposed study.

3. Your proposal and permission for data collection is approved with no further modifications to your study.

4. You must submit this administrative review memorandum to the University of Central Florida before you begin data collection. With the final approval of the University of Central Florida and the understanding that informed consent from all research participants is a requirement <u>before</u> data collection, you may begin data collection.

5. **Your approval for this study will expire on 24 August, 2017 in accordance with the Western Kentucky University approval for your study.** In order to maintain approval for this study, you are required to submit a continuing review report to your IRB and the CGSC IRB at least four (4) weeks prior to this expiration.

6. You are expected to comply with all conditions indicated in this memorandum and to follow your approved protocol. You are subject to monitoring by a member of the CGSC IRB to ensure compliance.

7. Any modifications to this study (including, but not limited to changes in recruitment materials or procedures, investigators, inclusion/exclusion criteria, interview/survey questions, or data collection procedures, or increases in the number of participants enrolled) must be submitted as a written amendment for review and approval by your IRB and the CAC-E IRB prior to implementing the change.

ATZL-LDA
SUBJECT: DoD Institutional Administrative Review Approval to Conduct Human Subjects Research

8. Securely maintain all research documents and data collected for at three (3) years. Informed consent documents and code sheets indicating the actual names associated with pseudonyms (or other means used in the final report to provide confidentiality) must be secured separately from data collected from participants.

9. Failure to follow these guidelines could result in the termination of the approval for your research.

10. Submit a study closure report to the CGSC IRB mailbox upon completion of the study.

11. Point of contact for this memorandum is Bobbie Murray at bobbie.j.murray6.civ@mail.mil.
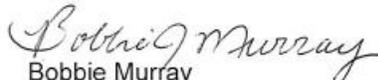
Bobbie Murray
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