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The Exploration of Machiavellianism

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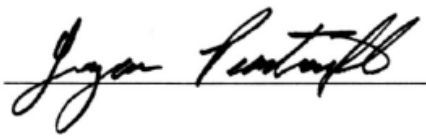
Signature 

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The Exploration of Machiavellianism

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DEDICATION

This thesis is dedicated to my supportive family,
patient significant other, absent friends,
and accommodating colleagues.

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I would like to acknowledge my thesis committee for their willingness to facilitate my growth as both a researcher and young professional in the field of business. My advisor, Dr. Beth Polin, has played an integral role in the development of this thesis and never failed to provide me with both guidance and wisdom. Lastly, I would like to thank my close friends and family for their kind words of support and motivating speeches which helped me persevere through this process.

Abstract

Dyads, whether in an academic or practical setting, are commonplace. Workforces and academic settings alike are often comprised of groups of two or more individuals working together towards a common goal. As these interactions continue to be prevalent and important in the various settings, the context in which these interactions takes place and the people involved, influence the efficiency of these pairings. More specifically, the realm of business harbors more individuals considered high in a personality trait referred to as Machiavellianism (i.e., Mach) than other common professions. To better understand how Machiavellianism influences commonplace dyads in settings applicable to everyday situations commonly found in a practical and academic setting, a more thorough understanding must be developed regarding the relationship between high and low Machs.

This thesis has several objectives. First, previous findings in the literature will try to be replicated regarding the Big Five Personality traits and Emotional Intelligence (EI) as they relate to varying levels of Machiavellianism. Secondly, the impact of high-high, high-low, and low-low Mach pairings have regarding team cohesion, benevolence, trust, integrity, participation, team cohesion, team work preferences is explored. The completion of both objectives will help clarify the role of Machiavellianism in interpersonal relationships in the context of competition in both high and low task interdependency settings.

To investigate the research questions regarding the relationship of Machiavellianism in dyadic settings under the context of competition, data were gathered from upper-level undergraduate students from a large regional university in the Midwest

United States. Following a discussion of the results, strengths and limitations are explored, both academic and practitioner implications are formulated, and future research directions are proposed.

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Chapter 1: The Need for Understanding Machiavellianism in Various Settings

Niccolo Machiavelli, an Italian philosopher and political theorist, supplied sixteenth century leaders with advice on how to achieve power in his classic writing, *The Prince* (1513/1984). Machiavelli proposed the leaders employ amoral, manipulative, and analytical behavior in an attempt to acquire and preserve power. These traits became known as Machiavellianism (i.e., Mach): specifically, Mach is understood in business settings today as a personality trait that is best characterized by the use of manipulative techniques to achieve power. Individuals who possess a high level of Mach are often assumed to possess a superior intelligence, especially in regard to understanding people in social situations (Davies & Stone, 2003). While the link between superior intellect and Mach scores is not widely accepted, some attribute their manipulative abilities to superior impulse regulation (Jones & Paulhus, 2009). High Machs are perceived to be less desirable in most social interactions, but are actually more desirable as debate partners (Wilson, Near, & Miller, 1998) since they are willing to employ manipulative tactics against their competitor, which benefits the team as a whole. Interestingly, several studies have found that leaders are more desirable if they are higher in Mach because they are seen as being more effective, possessing more charisma (Deluga, 2001), and having higher levels of drive and poise (Simonton, 1986). Individuals who are high in Mach are not always manipulating; they are adaptive, and if they perceive that blending in will accelerate their goals and interests, they will engage in pro-social behaviors and appear friendly and cooperative (Sendjaya, Pekerti, Hartel, Hirst, & Butarbutar, 2016). When leaders are high in Machiavellianism, they often engage in unethical intentions and

actions (Sendjaya et al., 2016; Tang & Liu, 2012). Furthermore, the positive benefits often found from ethical leadership on work engagement among employees are suppressed and minimized when the leader is high in Machiavellianism (Den Hartog & Belschak, 2012).

Machiavellianism became a popular research topic in the 70's and 80's but began to wither away in recent years (Dahling, Whitaker, & Levy, 2009). As the exploration of mannerisms, leadership traits (Drory & Glusinkos, 1980), job satisfaction (Gable & Topol, 1987), helping behaviors (Wolfson, 1981), trust (Gunnthorsdottir, McCabe, & Smith, 2002), and influence tactics (Harrell, 1980) were explored heavily, a research void appeared in the literature. Behavioral researchers have been interested in the concept of Machiavellianism over the past 40 years (Kessler, Bandelli, Spector, Borman, Nelson, & Penny, 2010). Recently, Machiavellianism has appeared to lose traction and has fallen outside of the scope of popular organizational behavior literature. While many researchers have successfully explored the many variables and individual differences between low and high Mach individuals, few have attempted to explore the relationship between their interactions. While several research attempts have combined a low and high Mach individual in trust game settings (Gunnthorsdottir et al., 2002; Sakalaki, Richardson, & Thepaut, 2007; Shepperd & Socherman, 1997) few have varied the pairing in the context of intergroup competition. Furthermore, the literature pertaining to Machiavellianism's relationship to team cohesion, general trust, and teamwork preferences in varying levels of task interdependency and pairings of low and high Mach individuals is relatively non-existent. Literature pertaining to the practical applications of Machiavellianism has also dwindled. While some research has focused on the value of

Machiavellian's negotiating skills in the workplace (McGuire & Hutchings, 2006), the large majority of research views Machiavellianism as a detriment to organizational success.

Considering the lack of research pertaining to a practitioner standpoint, how are organizations supposed to manage an employee who is high in Machiavellianism? Furthermore, given the lack of research pertaining to intragroup interactions in various task interdependent settings, how are practitioners supposed to manage these pairings to increase efficiency and teamwork variables? Moreover, how are practitioners supposed to manage individuals who are high and low in Mach in the setting of intergroup competition? These research questions must be fulfilled so that the relationship between high and low Machs may be better understood and controlled in organizational settings. A more complete understanding of high and low Mach interactions is vital to organizations that possess high Mach employees as well as organizations that promote teamwork and task interdependency.

This thesis seeks to fill the void of research pertaining to Machiavellianism. More specifically, this thesis seeks to investigate the relationship between Machiavellianism and team cohesion, general trust, and teamwork preferences. This thesis applies previous research theories relating to Machiavellianism in a new and fresh way by investigating the outcome variables of team cohesion, state trust, and teamwork preferences among different dyadic pairings of high and low Mach individuals. Moreover, the different pairings are also subjected to an either high or low level of task interdependency all within the context of intergroup competition.

In Chapter 2, reviews of the Big Five Personality traits are explored followed by an exploration of the literature pertaining to EI. The Dark Triad is then reviewed followed by a review of teamwork literature, generational differences among Generation Y and X, followed by a review of intergroup trust. Chapter 2 will conclude with a summary of the entire chapter. Chapter 3 offers hypotheses regarding previously found relationships between Machiavellianism and the Big Five Personality traits and EI. Hypotheses regarding Machiavellianism's impact of team cohesion, teamwork preferences, and general trust will be offered as they relate to varying levels of task interdependency and a variation of pairings. Chapter 4 explains the method of this study and Chapter 5 presents the results of a survey/vignette data collection testing the proposed hypotheses. Chapter 6 provides a discussion of the findings and the level of support for each hypothesis. Finally, Chapter 7 will conclude this thesis with a discussion of study limitations and strengths, academic and practical implications, and future research directions that may derive from this work.

Chapter 2: A Review of Machiavellianism and Related Research

Mach has been a popular research topic for the past 40 years and reached its peak of popularity in the 70's and 80's (Dahling et al., 2009; Kessler et al., 2010). This personality trait has been the central focus of many popular research topics as the implications of Mach have been tied to leadership (Deluga, 2001; Drory & Glusinkos, 1980), job satisfaction (Gable & Topol, 1987), helping behaviors (Wolfson, 1981), trust (Gunnthorsdottir et al., 2002), and influence tactics (Harrell, 1980) just to name a few. The increase in research relating to the construct of Mach was propelled by the creation of a valid measurement and assessment tool created by Christie and Geis (1970). The newly formed tool enabled researchers to operationalize the term "Mach" and offered them a chance to finally investigate a personality trait dating back to the 1500's. Christie and Geis (1970) devoted ten years to the construction of the reliable measurement tool for Mach followed by the attempts of many others. As the popularity of this new and blossoming literature gained traction in the academic world, many important findings have been generated and will be discussed. Furthermore, important terms will be operationalized followed by reviews of carefully selected topics. The Big-Five Personality traits, EI, the Dark Triad, teamwork, and intergroup state trust were selected and analyzed in this study because previous research has found strong ties to the topics. More specifically, the relationship between Mach and the Big Five Personality traits has been explored in a majority of studies as well as EI. The Dark Triad encompasses Mach and is therefore reviewed to offer a wider scope of the personality construct. Intergroup trust was explored and reviewed given the methodology of the current research study as

well as the implications intergroup trust has in organizations and the lack of research pertaining and relating to Mach. Finally, this chapter will conclude with a brief summary.

Individual Differences Review

Successful organizations enjoy an employee pool ridden with diversity (Prahalad & Bettis, 1986). Each individual employee contributes to the overall culture comprised within the organization. The culture of the organization is molded by the small contributions of each employee. Each individual value, moral code, belief system, personality, culture, prejudices, and predispositions influence the social and psychological environment of the organization. These individual differences are essential in maintaining fluidity and achieving generalizability to the organization's target market. Individual differences manifest as a result of many independent variables. For the purpose of this study, the Big Five personality traits and EI encompass the main individual differences explored in this study. Given the support from many research studies explained in the following section, the Big Five Personality traits and EI posits the strongest relationships with Mach. As a diverse group of employees interact with each other in the context of teamwork and competition, these variables influence and affect performance outcomes differently.

Big Five Personality Traits

Sir Francis Gatlon may have been among the first scientists to recognize that "the most important individual differences in human transactions will come to be encoded as single terms in some or all of the world's languages" (Goldberg, 1993, p. 26). Galton wanted to estimate the number of personality-descriptive terms in the lexicon and sought

to identify similar meaning trait terms (Goldberg, 1993). Galton's attempt sparked the desire to define the most common, universal personality traits present in each individual. McDougall (1932) wrote that "personality may be to advantage be broadly analyzed into five distinguishable but separate factors, namely intellect, character, temperament, disposition, and temper…" (p. 15).

Throughout the development of the scientific method and technological advancements, several theories were proposed to accomplish this. The earliest models were comprised of 16 primary factors and 8 second-order factors created by Raymond Cattell between the years of 1943-1948 (Barrick & Mount, 1991). After his theory failed to be replicated in laboratory studies, researchers discovered a more condensed and consistent model composed of only five factors (Barrick & Mount, 1991). These five factors were as follows: surgency, emotional stability, agreeableness, dependability, and culture. The new five-factor model was corroborated by many including Warren T. Norman (1963) who uniquely renamed several factors in the model to include extraversion, emotional stability, agreeableness, conscientiousness, and culture. The five factor model was commonly referred to as "Norman's Big Five" until Goldberg (1981) coined the term "The Big Five" and relabeled "dependability" as "conscientiousness" (Barrick & Mount, 1991). The 1980's witnessed a large increase in interest in the five factor model. Goldberg (1981) expressed how any model designed to encompass individual differences will eventually find similar characteristics to the Big Five. Researchers have often sought to add new factors, and some argue the need for more personality factors such as Hogan (1986) who advocated a six dimension model consisting of sociability, ambition, adjustment, likability, prudence, and intelligence

(Barrick & Mount, 1991). Acknowledging the persisting disagreements that took place in the 1980s regarding the precise nature of the traditional five domains, researchers agree that some aspects of language and personality description can be organized hierarchically (Goldberg, 1993). Eventually, the most commonly used five domains were defined as openness to experience, extraversion, neuroticism, conscientiousness, and agreeableness.

The Big Five model has important implications for many fields of both psychology and industrial organizational behavior. In general, the Big Five Personality domains illustrate that personality consists of five relatively independent dimensions which enable meaningful taxonomy for studying individual differences (Barrick & Mount, 1991). The orderly classification of the Big Five provide great opportunities to communicate and accumulate empirical findings. The Big Five provides practical implications in regards to job performance (Barrick & Mount, 1991), counter productive work behaviors (Salgado, 2002), and many more implications. Most importantly, the Big Five enables the various findings of studies to be replicated and based on an agreed upon construct of personality dimensions. The following section will highlight the many implications the Big Five has on various organizational related topics.

Openness to Experience. Openness to experience includes "active imagination, aesthetic sensitivity, attentiveness to inner feelings, a preference for variety, intellectual curiosity and independence of judgement" (Rothmann & Coetzer, 2003, p. 69). Individuals who tend to score low on Openness scales often are defined as conventional and unoriginal in behavior and conservative in their outlook (Rothmann & Coetzer, 2003). On the contrary, individuals who tend to score high on Openness tend to be "unconventional, willing to question authority and prepared to entertain new ethical,

social and political ideas" (Rothmann & Coetzer, 2003, p. 69). Openness to experience is related, among other variables, to success in employee training (Barrick & Mount, 1991; Rothman & Coetzer, 2003) but not a valid predictor of job performance partly due to job differences (Tett, Jackson, & Rothstein, 1991).

Extraversion. Hogan (1986) defines this dimension as consisting of two components: ambition and sociability (Barrick & Mount, 1991). Extraversion also consists of traits such as sociability, assertiveness, activity, and talkativeness (Rothman & Coetzer, 2003). The opposite of an extrovert is an introvert. Introverts are reserved rather than unfriendly, independent, and even-paced rather than sluggish (Rothman & Coetzer, 2003). In jobs that function primarily in socially stimulated environments, extraversion is a valid predictor of job performance (Barrick & Mount, 1991). Johnson (1997) found a positive relationship between extraversion and job performance of police personnel, and explained this relationship in terms of the amount of socialization and interactions the researched police officers engaged in while serving (Rothman & Coetzer, 2003). Barrick and Mount (1991) reported that extraversion was a valid predictor for success in sales and management positions. Judge and Zapata (2015) pursued this same question and found that trait activation theory is more important than situation strength theory in explaining when and how personality is more predictive of job performance. Jobs that required more social skills, such as sales or management, required a high level of extraversion and emotional stability for success (Judge & Zapata, 2015).

Neuroticism. Rothman and Coetzer (2003) define neuroticism as a "dimension of normal personality indicating the general tendency to experience negative effects such as fear, sadness, embarrassment, anger, guilt and disgust" (p. 69). Typically, emotionally

stable individuals report low scores; alternatively, high scores are generally associated with irrational ideas, difficulty with impulse control, and coping poorly with stressors and stressful situations (Rothman & Coetzer, 2003). Hormann and Maschke (1996) questioned 274 pilots and administered the Temperament Structure Scales (TSS) and found that neuroticism is a predictor of performance in many different occupations. Although high levels of neuroticism can be detrimental to one's overall psychological health, many detail-oriented careers demand a higher than average level. Individuals who score high on neuroticism tend to experience negative emotions, such as anxiety and anger (Walumbwa & Schaubroeck, 2009). Highly neurotic individuals in a position of leadership are perceived as uninspiring, untrusting, and unstimulating by their followers (Walumbwa & Schaubroeck, 2009). Alternatively, highly neurotic individuals have been observed exerting greater levels of effort on tasks and are considered better decision makers due to their reluctance to immediately trust others (Smillie, Yeo, Jackson, & Furnham, 2006).

Conscientiousness. Conscientiousness, as defined by Rothman and Coetzer (2003), refers to self-control and the active process of planning, organizing and carrying out tasks. Conscientious individuals are responsible, dependable, persistent, and achievement-oriented people (Barrick & Mount, 1993). Individuals possessing high levels of conscientiousness enjoy positive personality traits such as dependability and orderliness. Alternatively, individuals with rarely high levels of conscientiousness may experience "compulsive neatness or workaholic behavior" (Rothman & Coetzer, 2003, p. 69). A positive correlation between reliability and job performance indicates the importance of conscientiousness. Furthermore, conscientiousness is a positive predictor

of job performance in jobs that require strong innovation/creativity requirements (Judge & Zapata, 2015)

Agreeableness. According to Rothman and Coetzer (2003) "an agreeable person is fundamentally altruistic, sympathetic to others and eager to help them, and in return believes that others will be equally helpful" (p. 69). An individual with a low level of agreeableness becomes egocentric, fueled by competition, and is distrusting. Agreeableness is an important trait to possess when working with others. Tett et al. (1991) found agreeableness to be a significant predictor of job performance. Lee and Ashton (2005) assessed the widely accepted Big Five model and found that only Agreeableness was consistently correlated with all three of the Dark Triad constructs.

Paulhus and Williams (2002) sampled 245 students and measured psychopathy using the SRP III consisting of 20 5-point Likert items, narcissism using the NPI consisting of 40 forced-choice items, Machiavellianism using the Mach-IV consisting of 20 5-point Likert items, and the Big Five personality dimensions using the BFI consisting of a 44 item questionnaire. Paulhus and Williams (2002) found the only common correlate between the dark triad as being disagreeableness. Furthermore, they found the following correlations:

Big Five Inventory

	Narcissism	*Machiavellianism*	*Psychopathy*
Extraversion	**0.42***	-0.05	**0.34***
Agreeableness	**-0.36***	**-0.47***	**-0.25***
Conscientiousness	-0.06	**-0.34***	**-0.24***
Neuroticism	0.02	0.12	**-0.34***
Openness	**0.38***	-0.03	**0.24***

*p<.01 (Source: Paulhus, D. L., & Williams, K. M. (2002). The dark triad of personality: Narcissism, machiavellianism, and psychopathy. *Journal of Research*

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As can be seen in the table from Paulhus and Williams (2002), agreeableness is the only common correlate between the Dark Triad. Lee and Ashton (2005) concluded that the covariation among the Dark Triad traits could not be adequately explained using the Big Five model and employed a new model of personality structure referred to as the HEXACO Model. The HEXACO model incorporates all five factors from the Big Five, justifying their reference in the preceding passages, but adds an additional factor named Honesty-Humility (Lee & Ashton, 2005). The six dimensions are as follows: Honesty–Humility (H), Emotionality (E), eXtraversion (X), Agreeableness (A), Conscientiousness (C), and Openness to Experience (O). Lee and Ashton (2005) explain the similarities between the Big Five model and the HEXACO model: "The Emotionality and Agreeableness factors of this model correspond roughly to rotated variants of the Big Five Agreeableness and Emotional Stability dimensions, and the Extraversion, Conscientiousness, and Openness to Experience factors are very similar to their Five-Factor Model counterparts. Lee and Ashton (2005) explain how "the remaining HEXACO factor, Honesty– Humility, has no clear counterpart among the Big Five factors, and hence constitutes the most salient feature of the newer model" (p. 1573). Lee and Ashton (2005) conclude that there is not one perfect personality dimension that best underlies all three of the constructs of the Dark Triad; however, they do recommend the NEO Personality Inventory-Revised (NEO-PI-R), created by Costa and McCrae (1992). The NEO-PI-R contains two facet scales, Straightforwardness and Modesty, which are strongly related to Honesty-Humility (Lee &Ashton, 2005). The original NEO PI-R consists of 240 items; however, a shorter Neo Five Factor Inventory (NEO-FFI) is

composed of 60 items, 12 per domain. Given the strict time constraint that exists for the procedure to remain valid and credible, an even smaller measurement has been identified. John and Srivastava (1999) created a shorter scale comprised of 44 items known as the BFI-44. Considering the time constraints present in the administration of other pertinent measures in this thesis, the BFI-44 will be implemented.

Emotional Intelligence

Salovey and Mayer (1990), the researchers who coined the term emotional intelligence (EI), define it as "a set of skills hypothesized to contribute to the accurate appraisal and expression of emotion in oneself and in others, the effective regulation of emotion in self and others, and the use of feelings to motivate, plan, and achieve in one's life" (p. 185). Many have researched the validity of such intelligence. Edward L. Thorndike proposed and coined the term social intelligence. Thorndike defined social intelligence as "the ability to understand men and women, boys and girls-to act wisely in human relations" (Thorndike, 1920, p. 227). Traditional views of social intelligence are riddled with negative traits, such as manipulation, because they ignore other people's emotions (Salovey & Mayer, 1990). Salovey and Mayer (1990) assessed how affective information was processed and noted that it was processed differently than other cognitive information. They also assumed that individuals might vary in their ability to process affective information, which lead them to create the term EI. The mental processes that comprise EI include appraising and expressing emotions in the self and others, regulating emotion in the self and others, and using emotions in adaptive ways (Salovey & Mayer, 1990).

Recently, research on EI has become more frequent and has become one of the most popular topics in organizational research (Van Rooy & Viswesvaran, 2004). Three main models have been widely acknowledged regarding the idea of EI. The models are as follows: trait model, ability model, and the mixed model. Mayer, Salovey, Caruso, and Sitarenios (2001) proposed the Ability Model which includes four types of abilities. The Ability Model includes the ability to perceive emotions, facilitate thought with emotion, understand emotion, and manage emotion (Mayer et al., 2001). The first dimension of the Ability Model delves into the *ability to perceive emotion* (Van Rooy & Viswesvaran, 2004). Specifically, the first dimension regards an individual's ability to identify emotions in themselves and others. The second dimension consists of the *ability to use or assimilate emotions to facilitate thought* (Van Rooy & Viswesvaran, 2004). This dimension enables individuals to formulate thoughts based upon their emotions; emotions guide their train of thought. The third dimension *involves how people understand their own emotions* (Van Rooy & Viswesvaran, 2004). If an individual is cognizant and aware of their own emotions, they will learn how their emotions change and develop between different emotional states. The fourth and final dimension involves the management of their own emotions as well as the emotions of others (Van Rooy & Viswesvaran, 2004). Emotional abilities, as described by Mayer, Salovey, and Caruso (2008), "can be thought of as falling along a continuum from those that are relatively lower level, in the sense of carrying out fundamental, discrete psychological functions, to those that are more developmentally complex and operate in the service of personal self-management and goals" (p. 506). Although there are several ability-based scales, the MSCEIT, created by

Mayer, Caruso, and Salovey (1999), is the most widely used. The scale consists of eight tasks, two in each of the four branches.

The Mixed Model, proposed by Daniel Goleman in his book *Working with Emotional Intelligence* (1998), purports five main constructs of EI. The constructs are as follows: self-awareness, self-regulation, social skills, empathy, and motivation. Goleman (1998) distinguishes his model by asserting the idea that EI is both a trait and an ability. He asserts that EI determines an individual's potential for learning practical skills. The third and final model is referred to as the Trait Model which was proposed by Petrides and Furnham (2000). The Trait Model refers to EI as a simple personality trait and not as an ability based model as Goleman proposed. Petrides and Furnham (2000) created a model that comprised of three main abilities: the ability to perceive, appraise, and express emotions. While the ability and mixed models focus more on outward results, the trait model focuses primarily on one's own emotional self-perception. Petrides and Furnham (2001) describe EI as an eclectic mix of traits, many dispositional, such as happiness, self-esteem, optimism, and self-management. The Trait Model of EI views an individual's level of EI as being innate and does not view EI as an ability. For the purpose of this study, the trait model will be the accepted theory and scales measuring EI will simply measure an individual's EI as it pertains to the trait theory.

EI is often related to many different abilities in the workplace. Goldstein, Zedeck, and Goldstein (2002) explain how cognitive ability or general mental ability (GMA) accounts only for approximately 25% of the variance in job performance. The remaining variance must then be attributable to other factors; hence, research seeking to define and validate EI has become more prevalent. EI may add to the predictive power of GMA but

it would be ostensibly argued that EI is more important than GMA (Van Rooy & Viswesvaran, 2004). Van Rooy and Viswesvaran (2004) beautifully explain this relationship in the following quote: "Surgeons may still be successful, and many would argue more skilled since they will be detached, if they have a low level of EI. A person will most likely never even become a surgeon, though, if they have high EI that is not accompanied with high GMA" (p. 73). In other words, EI is an important variable leading to success and positively relates to job performance.

This relationship between job performance and EI was more thoroughly investigated in the work of Van Rooy and Viswesvaran (2004). They conducted a meta-analysis involving 9522 participants and 59 different studies pertaining to EI. A correlation of .23 was found linking EI as a predictor of performance (Van Rooy & Viswesvaran, 2004). They found that EI is a strong predictor of performance which only increases the importance of the EI construct for organizations. Furthermore, they also found a correlation between EI and personality: "…three of the Big Five factors of personality had correlations with EI in excess of .31; the lowest correlation was .23 with agreeableness and openness to experience (Van Rooy & Viswesvaran, 2004, p. 86). Fortunately, Van Rooy and Viswesvaran (2004) once again displayed the importance of the Big Five Personality domains in its ability to communicate and explore empirical findings. They found that EI showed incremental validity over the Big Five and, alternatively, found that the Big Five did not demonstrate incremental validity over EI leading them to propose the idea that EI might be a better predictor of performance over the Big Five. Although they did not investigate this research hypothesis farther, EI is nevertheless strongly related to an individual's overall job performance.

Given the research pertaining to the positive traits associated with high EI levels, it is only fair to acknowledge the ramifications a lower EI has on an individual. Petrides, Perez-Gonalez, and Furnham (2007) hypothesized that extremely low EI scores would be directly related to psychopathological traits and consequences. They hypothesized that an individual's inability to regulate their own emotions and inability to alter the emotions of others would be directly related negative psychological traits. The researchers found that trait EI scores were negatively related to personality disorders, with the relationships holding up after partialing out individual differences in dispositional mood (positive and negative affect), which are known to be linked to psychopathology (Petrides, Vernon, Schermer, & Veselka, 2011). They found that EI was negatively related to overall job performance as well. Given the many benefits found in individuals who possess a high EI, the detriments associated with a low EI are strongly related to those found in personality disorders. The main focus of this thesis investigates the Dark Triad, which will be discussed in the following section. More specifically, the Machiavellian aspect of the Dark Triad is of great interest to the purpose of this thesis. Given the positive traits associated with an individual's high EI scores, it is vitally important to also explore the deficits found within individuals who possess low scores, as individuals high in Mach will commonly display given their inclusion within the Dark Triad. Assessing the Dark Triad by measuring EI has been a difficult task for most researchers. Narcissism, another member of the Dark Triad, is often accompanied with a high sense of self which correlates positively with self-esteem, a key trait EI facet (Petrides et al., 2011). Furthermore, narcissism has been positively associated with other EI facets such as assertiveness, happiness, optimism, achievement motivation, and success in relationships

(Petrides et al., 2011). Petrides et al. (2011) found that EI was positively related to narcissism and negatively related to Machiavellianism and Psychopathy. The negative association to Machiavellianism is understandable considering high trait EI individuals view themselves as empathic and good-natured (Petrides et al., 2011). High Mach individuals score low on trait EI assessment tools (Dahling et al., 2009) and thus lack the benefit of high job performance. The importance of EI is greatly related to an individual's level of Mach and must then be analyzed. This relationship will be discussed more in depth in the following sections. It is expected that high Mach individuals will score low on the EI assessment.

Dark Triad Review

Personality literature has been focused on a group of maladaptive traits. Three traits in particular—Machiavellianism, narcissism and subclinical psychopathy—have been referred to as the 'Dark Triad' and have become popular in the literature. Individuals who score high on these traits tend to exhibit malicious qualities. Much empirical research has been concluded in this realm.

Machiavellianism

Christie and Geis (1970) originally developed the construct of Machiavellianism (Mach) after studying political and religious extremists groups. Their research focused on the leaders and how the leaders manipulated their followers for their own gain. They found that effective manipulators possess a high willingness to "utilize manipulative tactics and act amorally and endorse a cynical, untrustworthy view of human nature" (Dahling et al., 2009, p. 220). According to Christie and Geis (1970) a lack of

psychopathology is necessary for Machiavellian personality types to successfully manipulate others. They distinguished four separate characteristics of an individual who is high in Machiavellianism: 1) A relative lack of affect in interpersonal relationships, 2) a lack of concern with conventional morality, 3) a lack of gross psychopathology, and 4) low ideological commitment. Mach was a popular research topic in the 1970s and 1980s and has since plateaued (Dahling et al., 2009). The importance of ethical management inside of an organization cannot be understated; thus, it is important to understand the varying aspects of Mach and the ramifications of those variables. In sum, the key elements of Machiavellianism appear to be (a) manipulativeness, (b) callous affect, and (c) a strategic-calculating orientation (Jones & Paulhus, 2010).

Since the 1970's, many researchers have investigated the Mach construct. Selected studies will be referenced throughout this section and most studies' findings have been summarized in Table 1. Table 1 highlights the differences between high and low Machs provided the literature pertaining to Mach. Drory and Glusinkos (1980) were interested in the leadership ability of individuals possessing high Mach scores. They created groups and assigned the highest scoring individual as the leader. They concluded that individuals with high Mach scores tend to display flexibility in handling structured and unstructured tasks (Drory & Glusinkos, 1980). The leadership style of high Mach individuals is less personal and directive; they show little consideration for interpersonal concerns, "such as managing tension between followers or showing consideration for followers' feeling (Dahling et al., 2009, p. 221). Interestingly, a study conducted by Deluga in 2001 found that high Machs might be able to appear sympathetic or considering of other's feelings by being charismatic and generally likable (Deluga, 2001).

Table 1
Differences Between Low and High Machs

Low Machs	High Machs
• High in Agreeableness (Lee & Ashton, 2005; Paulhus & Williams, 2002) • High in Conscientiousness (Lee & Ashton, 2005; Paulhus & Williams, 2002) • High in Emotional Intelligence (Petrides et al., 2011) • Higher job satisfaction (Gable & Topol, 1987) • High propensity to trust (Dahling et al., 2009; Mayer et al., 1995) • Empathic and supportive leaders (Drory & Glusinkos, 1980) • Often taken advantage of by high Machs (Geis, 1970; Song, 2009)	• Low in Agreeableness (Lee & Ashton, 2005; Paulhus & Williams, 2002) • Low in Conscientiousness (Lee & Ashton, 2005; Paulhus & Williams, 2002) • Low in Emotional Intelligence (Petrides et al., 2011) • Lower job satisfaction (Gable & Topol, 1987) • Low propensity to trust (Dahling et al., 2009; Mayer et al., 1995) • Directive, adaptable, unsupportive, and inconsiderate leaders (Drory & Glusinkos, 1980) • Amoral leadership tendencies (Deluga, 2001) • Less likely to help others (Wolfson, 1981) • More likely to engage in counter productive work behaviors (Dahling et al., 2009; Salgado, 2002). • Manipulate and deceive low Machs in team tasks (Geis, 1970; Song, 2009)

High Machs commonly engage in counterproductive work behaviors. These behaviors are best defined as "a voluntary action that harms the well-being on an organization" (Dahling et al., 2009, p. 222). Wilson, Near, and Miller (1996) utilized the psychological literature to test evolutionary hypotheses about the adaptive advantages of manipulative behavior in social settings and interpersonal relationships. They discovered that high Machs engage in frequent defection. Wilson et al. (1996) found that high Mach individuals hide their true intentions and nature from their group as long as they can

manage and then leave, or defect, from the group as the other group members begin to understand their intentions. High Machs refrain from acting impulsively and plan ahead, build alliances, and do their best to maintain a positive reputation (Jones & Paulhus, 2014). Wilson et al. (1996) explain how high Machs are likely to have a high turnover rate and are overall concerned with the self. Gunnthorsdottir et al. (2002) applied game theory to Machiavellianism and found that high Machs were extremely selfish and overwhelmingly defect for their own gain while ignoring the option for both parties to prosper. The high Machs exploited the trust shown to them by their anonymous partner and refused to reciprocate. In a similar study conducted by Harrell and Hartnagel (1976), a trust game was implemented and the results were similar. The researchers found that high Mach individuals were equally willing to steal from their supervisor who trusted them versus one that did not trust them.

High Machs are consistently dissatisfied with their jobs (Dahling et al., 2009). Their lack of job satisfaction, as theorized by Dahling et al. (2009), is because "high Machs are likely to desire greater rewards and control over others, and they may therefore be perpetually dissatisfied with their current occupational status" (p. 222). High Machs are more commonly found in careers dealing with management or law (Corzine, 1997). When employed, high Machs are manipulative, economically opportunistic, dissatisfied, highly likely to withdraw from groups, and not considerate of others when in a leadership position (Dahling et al., 2009).

Several studies have investigated the relationship between Mach and various job related abilities and characteristics. Mayer, Davis, and Schoorman (1995) explained how positive job attitudes, enhanced team processes, higher levels of cooperation, better task

performance, leader-member exchange, and organizational justice are all outcomes of trust. Mayer et al. (1995) explained how individuals with a high Mach score report a low propensity to trust and how perceived risk is a key moderator influencing their decision to trust or not to trust others. In other words, high Machs are hesitant to trust others or engage in a risk taking behavior for others if the outcome is not entirely in their favor. Additionally, high Machs are more willing to engage in unethical behavior to achieve a personal goal and place little to no value on ethical behavior (Dahling et al., 2009). Anand, Ashforth, and Joshi (2004) assessed the most famous corporate scandals (Enron, WorldCom…etc.) and created a framework for how ethical people can be influenced by the unethical. In their article, they discuss how opportunistic, unethical behavior becomes socialized, reinforced and ingrained into the organization's culture. This is important when considering the high Machs' ability to manipulate groups and go relatively unnoticed. A charismatic leader high in Mach may easily deceive an organization and its employees into supporting the unethical behavior and could easily gather support (Dahling et al., 2009). In the context of competition, high Machs employ the use of manipulative tactics that are socially acceptable such as bargaining for social influence (Christie & Geis, 1970).

Geis (1970) was one of the first researchers to investigate the interactions between varying levels of Machs. The study generated a plethora of future research directions. Geis (1970) had high, medium, and low Machs play a board game that allowed the formations of teams and alliances. The game allowed for two players to unite to defeat the third player and divide the winnings evenly amongst the two. The players in the alliance would bargain and negotiate to decide how the winning pair would divide the

winnings (e.g., 50-50 or 80-20…etc.). The alliances could be formed throughout the game and could also be broken at any time. For example, one parry could agree to a 50-50 split and then break the alliance towards the end of the game to claim all of the winnings for themselves. High Machs were particularly gifted at this game as they were more likely to prioritize their own self-interests over their newly formed union. Low Machs were more honest and much less likely to defect and lie to their high Mach teammate. Seven low Mach individuals extracted an agreement from high Machs in which neither would betray the other; in four of the seven cases, high Machs betrayed them to ensure winning all of the prizes. This study provides implications regarding the dyad of a high and low Mach individual. In an organizational setting, according to the findings in the study, high Machs are more likely to betray their own teammates for the sake of greater benefit to themselves at the cost of removing all positive benefits from their perceived partner. This relationship has been underwhelming researched in the Mach literature and boasts significant implications to organizations that rely on intergroup cooperation. Low Machs are much more susceptible to manipulation from high Machs; this implication has been overlooked in the literature and is one that can bear important consequences depending on the organizational structure and environment.

Lee and Ashton (2005) applied previous research regarding Machiavellianism to the Big Five personality traits. Utilizing the measure created and used by Christie and Geis (1970), they found that Machiavellianism was negatively related to agreeableness and conscientiousness (Less & Ashton, 2005). Interestingly, they did not find significant relationships among Machiavellianism and extraversion, openness to experience, or emotional stability (i.e., neuroticism) as Christie and Geis (1970) originally hypothesized.

Furthermore, agreeableness was shown to be negatively correlated with each Dark Triad constructs (Lee & Ashton, 2005). The findings once again support the importance of utilizing the BFI to communicate and evaluate empirical findings. This study seeks to replicate these findings to garner more support for the relationships previously observed.

Narcissism

Narcissism is characterized by a positive and inflated view of the self in regards to power, importance, and physical attractiveness (Twenge, Konrath, Foster, Campbell, & Bushman, 2008). Twenge et al. (2008) explain how narcissism is associated with social extraversion and how it "involves a wide range of self-regulation efforts aimed at enhancing the self" (p. 877). Individuals who are high in narcissism tend to engage in many attention-seeking behaviors and are impulsive (Twenge et al., 2008). The prevalence of narcissism has been increasing throughout the different generations due to the American culture emphasizing individualistic principles (Fukuyama, 1999). Teenagers in the 1950s were given the MMPI and the results displayed how only 12% agreed with the statement "I am an important person". The same MMPI was given to teenagers in the 1980s and the results displayed how 80% agreed with the same statement (Newsom, Archer, Trumbetta, & Gottesman, 2003). Furthermore, Foster, Campbell, and Twenge (2003) conducted a cross-sectional study involving 3,445 participants. Foster et al. (2003) administered the Narcissistic Personality Inventory (NPI) to both older and younger individuals and found that younger people were more narcissistic than older people. Twenge et al. (2008) conducted a meta-analysis of 85 samples of American college students and found a significant increase in scores. They found that the average college now endorses two more items on the NPI than college students in the 1980s

(Twenge et al., 2008). Twenge et al. (2008) also discovered females as increasing more in narcissism than males.

The personality traits laden within a narcissistic individual have been investigated in many studies. Narcissism, a fellow Dark Triad construct, has its own consequences and implications in the workplace and interpersonal relationships. Penny and Spector (2002) sought to examine how narcissistic individuals react upon encountering information or situations that challenge their positive self-appraisals in the workplace. Narcissists have an embellished point of view regarding themselves and Penny and Spector (2002) sought to examine the implications and ramifications present when a third party challenges their view. They discovered that "individuals with high narcissism experience anger more frequently and are more likely to express their anger by engaging in counterproductive working behaviors, especially when job constraints are high" (p131). This negative trait can be disruptive to other employees and has also been seen in interactions when the leaders display narcissistic tendencies. There is a strong link between narcissism and leadership. Evidence strongly illuminates the propensity for narcissists to emerge as leaders (Campbell, Hoffman, Campbell, & Marchisio, 2010) due to their already overinflated self-wroth and ability. Narcissistic leaders have strong social skills and charisma (Khoo & Burch, 2008) that they use to influence and impose their will on others similar to those who are high in Mach. They tend to take big risks in pursuit of meeting their goals and facilitate work group creativity (Campbell et al., 2010). Blair, Hoffman, and Hell (2008) sought to examine the relationship between narcissism and leadership and determine the extent to which narcissism is related to managerial effectiveness and integrity. They found that managers that are high in narcissism tend to be more confident

in their decision making processes but are no more efficient than leaders who are not narcissistic. Furthermore, the integrity of the narcissistic leader was well below the level of integrity a leader who was not narcissistic possessed.

Psychopathy

Psychopathy is an integration of motivational dispositions, developmental factors, individual differences, and mental health (Vien & Beech, 2006). In 1941 Cleckley, an American psychiatrist, published *The Mask of Sanity* in which he investigated the personality traits of psychopathy. Cleckley referred to psychopathy as concealed psychosis how it is generally revealed through strong emotions and semantic dementia (Vien & Beech, 2006). Cleckley proposed 16 core personality traits in psychopaths. Those proposed 16 traits (adapted from Vein & Beech, 2006) are as follows:

Cleckley's Core Traits

1) Superficial charm and good intelligence
2) An absence of delusions and other signs of irrational thinking
3) An absence of "nervousness" or other psychopathic manifestations
4) Unreliability
5) Untruthfulness and insincerity
6) A lack of remorse or shame for their behavior
7) Inadequately motivated antisocial behavior
8) Poor judgment and failure to learn from previous experiences
9) Pathologic egocentricity and incapacity for love
10) General poverty in any major affective reactions or emotions
11) A specific loss of insight
12) A general unresponsiveness to interpersonal relationships
13) Fantastic and uninviting behavior with or without alcohol
14) Suicide is rarely carried out because of love of the self
15) Sex life will be impersonal, trivial, and poorly integrated
16) A failure to follow any kind of life plan

Source: Vien, A., & Beech, A. R. (2006). Psychopathy Theory, Measurement, and Treatment. *Trauma, Violence, & Abuse*, *7*(3), 155-174.

Cleckley's 16 traits were accepted until 1980 when Robert D. Hare (1980) developed a Psychopathy checklist-Revised (PCL-R) psychopathic personality checklist. He revised the checklist once more in 1991 and again in 2003. The most recent checklist

is comprised of the following personality traits found in the following excerpt from Vein and Beech (2006).

Researchers have widely accepted Hare's 2003 revised version as the gold standard to assess psychopathy (Decuyper, De Pauw, Fruyt, De Bolle, & Clercq, 2009; Smith & Lilienfeld, 2013). The central personality characteristics comprising psychopathy include high impulsivity and thrill-seeking along with low empathy and anxiety (Decuyper et al., 2009; Paulhus & Williams, 2002). Interpersonally, individuals with psychopathy have been described as being grandiose, egocentric, manipulative, forceful, and coldhearted (Decuyper et al., 2009). Furthermore, psychopaths are shallow in emotions, unable to genuinely keep close relationships, and are unable to feel empathic, anxious, or remorseful (Decuyper et al., 2009).

Given the disparity between the numbers of psychopaths that are in jail compared to the psychopaths who currently walk among regular civilians, it is easy to assume that most psychopaths are in jail. This common misconception regarding psychopathy is widespread as roughly 10-20% of prisoners portray psychopathic tendencies; in other words, psychopathy is not limited to criminals (Cleckley, 1941). Robert Hare, the pioneer

Hare's PCL-R Items

1) Glibness/superficial charm
2) Grandiose sense of self-worth
3) Need for stimulation and/or proneness to boredom
4) Pathological lying
5) Conning and/or manipulative
6) Lack of remorse or guilt
7) Shallow affect
8) Callous and/or lack of empathy
9) Parasitic lifestyle
10) Poor behavioral controls
11) Promiscuous sexual behavior
12) Early behavioral problems
13) Lack of realistic and long-term goals
14) Impulsivity
15) Irresponsibility
16) Failure to accept responsibility for own actions
17) Many short-term marital relationships
18) Juvenile delinquency
19) Revocation of conditional release
20) Criminal versatility

Source: Vien, A., & Beech, A. R. (2006). Psychopathy Theory, Measurement, and Treatment. *Trauma, Violence, & Abuse*, *7*(3), 155-174.

of psychopathy research, stated, in a speech given to the Canadian Police Association, that not all psychopaths are in prison and that some are found in the boardroom (Hare, 2002). Big business fall-outs such as Enron, housing market crash, Ponzi Schemes…etc. are considered to be caused by psychopathic individuals in powerful standing. There is a growing trend in scholarly articles published since 1990; since 2012, there have only been 260 (50 or less in 2012) or fewer articles related to workplace psychopathy (Smith & Lilienfeld, 2013). This deficiency has been decreasing over the past 4 years. In 1995, Babiak published a case study that followed a psychopath in the office and it gained attention from the media and scholars. In his case study, he hypothesized that a chaotic organizational climate that provides stimulation and excitement enables psychopathic individuals to achieve success (Smith & Lilienfeld, 2013). Babiak (1995) hypothesized that psychopathic individuals utilize their ability to manipulate and deceive others to enjoy upward mobility within an organization. Since the publication, research on business psychopathy has increased and several books have been written delving in to the matter. These books, according to Smith and Lilienfeld (2013), often refer to "business psychopaths in extreme or even sensational terms, such as "snakes in suits," "corporate destroyers," or "monsters." Without exception, they have assumed that psychopaths routinely wreak havoc in the workplace, engaging in dishonesty, verbal aggression, crime, and pitting employees against each other" (p. 205). Although business psychopathy has been popularized in the media (Smith & Lilienfeld, 2013) very little research has been conducted.

Boddy, Ladyshewsky, and Galvin (2010) introduced the concept of Corporate Psychopaths as "ruthless employees successfully gain entry to organizations and can then

get promoted within those organizations to reach senior managerial and leadership positions" (p. 121). Boddy et al. (2010) assessed 346 white collar workers using the Psychopathy measure-Management Research Version (PM-MRV) and found that Corporate Psychopaths exist more prevalently in senior level positions. Furthermore, they claimed that 3-4% of individuals in the business setting are psychopaths compared to only 1% in the general population (Smith & Lilienfeld, 2013). In 2005, Board and Fritzon compared personality profiles of 36 senior business managers with 768 mental health patients and 317 incarcerated individuals previously classified as being psychopathic. Board and Fritzon (2005) discovered that senior business managers showed significant elements of personality disorders most associated with the emotional component of psychopathy; their personality disorders included characteristics involving a socially deviant lifestyle and impulsivity.

Teamwork

Teamwork is a vital aspect of any intergenerational, multicultural organization. Teamwork stretches beyond the boardroom and into government, academia, and society as a whole (Shahid & Azhar, 2013). Teams are social entities composed of members with high task interdependency and shared and valued common goals (Dyer, 1984). Teamwork is defined as the interdependent components of performance required to effectively coordinate the performance of multiple individuals (Salas, Cooke, & Rosen, 2008). Teamwork is a platform that improves productivity, facilitates high performance, and in turn creates a competitive organization (Shahid & Azhar, 2013). As Salas et al. (2008) explain, "[teams] are usually organized hierarchically and sometimes dispersed geographically; they must integrate, synthesize, and share information; and they need to

coordinate and cooperate as task demands shift throughout a performance episode to accomplish their mission" (p. 541). Team performance is contingent upon a mixture of interrelated cognitions, attitudes, and behaviors (Salas et al., 2008). Team cognition research, in general, characterizes teams as information-processing units (Hinsz, Tindale, & Vollrath, 1997; Salas et al., 2008). Similar to the way an individual utilizes encoding, storage, and retrieval, groups utilize the same mechanisms. In a group setting, these mechanisms still exist and are utilized individually, however, communication is viewed as a central mechanism of information processing in a team setting (Salas et al., 2008).

Of the many variables that increase the efficiency and success of teamwork, the ability to share information is among the most vital and important. Several studies have been conducted delving in to this idea and have found significant results that boast implications to teamwork and group activities. Salas and Fiore (2004) discovered that shared cognition is a critical driver of team performance in shared mental models, team situation awareness, and understanding communication as a vital component of how information is processed at a team level. Shared cognition is a vital proponent to determining how teams will act under varying circumstances. Challenges impeding upon shared cognition include deficient cooperation and a lack of motivation (Salas et al., 2008). Understanding the lack of EI in high Machs, it is abundantly clear that high Machs will struggle being more open and not facilitative in their shared cognition. As referenced in the previous sentences, shared cognition is vital to teamwork success. Several studies have been conducted that sought to investigate the effects that Mach has on teamwork. For example, Jones and White (1983) gathered 115 graduate business students to participate in a management-simulation game. They were interested in the relationship

between Machiavellianism and task orientation and team effectiveness. Prior research shows individuals with a high Mach score to be task-oriented instead of relationship oriented; this purports that high Mach individuals in a competitive team setting would be more focused on the task itself and not on the relationships with team members. Jones and White (1983) found that high Mach individuals were more effective in the simulation than low Machs but that task orientation was independent of Mach scores. This finding, while not entirely conclusive, provides a perfect example as to why the literature needs to be re-assessed. High Machs, in a competitive setting, were more effective than low Machs. Yet, in several studies that required higher levels of trust in a team member, low Machs were more successful. The context of the interaction seems to have an effect on the success of the team that is formed and must be investigated farther.

Teamwork is a characteristic that must be implemented in the culture of the organization (Shahid & Azhar, 2013). Shahid and Azhar (2013) express 10 Building Blocks of a strong culture that facilitates teamwork: 1) commitment, 2) responsibility, 3) accountability, 4) integrity, 5) respect, 6) trust, 7) leadership, 8) courage/compassion, 9) service, and 10) humility. Positive emotions, such as hope, pleasure, happiness, humor, excitement, joy, pride, and involvement contribute to the overall efficiency of a team (West, 2012). Positive emotions and feelings of comfort have been known to promote flexibility of the mind and enable individuals to accomplish tasks effectively. This is disheartening when considering the personality characteristics of a high Mach individual. A fully functional team will exist in an environment where each individual feels positive (West, 2012). Individuals involved in a team must actively focus on their objectives while also focusing on the needs of each individual member (West, 2012). West (2012)

proposes four specific types of teams: Type A: Resilient team, B: Complacent Team, C: Dysfunctional team, and D: Driven team. A Resilient team is characterized as having high task effectiveness, good team member well-being, high innovation, high inter-team cooperation, and a high social reflexivity (the ways in which it provides support to members, how conflicts are resolved and what is the overall social and emotional climate of the team) (West, 2012). A Complacent team is categorized as having poor task effectiveness, an average member well-being, short term viability, low innovation, and moderate inter-team conflict (West, 2012). A Dysfunctional team displays poor task effectiveness, poor team member well-being, very low team viability, low innovation, and a high inter-team conflict (West, 2012). A Driven team displays high short-term task effectiveness, poor team member well-being, short-term viability, moderate innovation, high inter-team conflict, and low social reflexivity (West, 2012). Given the personality characteristics of individuals with high Mach scores, a Driven team would most likely be the most common in groups possessing an individual with a high Mach score. High Mach's propensity to remove empathy and emotions from situations would leave only task-oriented motivations similar to that of a driven team.

Barrick, Stewart, Neubert, and Mount (1998) studied 652 employees composing 51 work teams and assessed their team composition (ability and personality), team process (team cohesion), and team outcomes (team viability and performance). Barrick et al. (1998) found that conscientious teams and high cognitive ability teams perform better (as rated by the supervisor) than teams that are less conscientious and lower in cognitive ability. Their results also indicated that teams that are more agreeable and more emotionally stable are likely to have higher performance (Barrick et al., 1998).

Furthermore, Barrick et al. (1998) found that teams that do not have any disagreeable or introverted members perform at a higher level. "Teams possessing higher aggregate mean levels of extraversion and emotional stability are more likely to experience positive intragroup interactions and are thereby become more socially cohesive, which in turn enhances the team's capability to maintain itself" (Barrick et al., 1998, p. 388). Another interesting finding from Barrick et al. (1998) is their observation made upon the relationship associated with the minimum score of agreeableness, extraversion, and emotional stability; a group that possess a single team member that who lacks a desirable trait can negatively affect the team's processes and performance. As Barrick et al. (1998) explain, "… [The] inclusion of a single member who is highly disagreeable (reflected in a low minimum score for the team) is associated with lower performance, less cohesion, more conflict, less open communication, and less sharing of the workload" (p. 388).

Intergroup Trust

Trust implies the expectation that others will not exploit one's vulnerability and belief that others will attempt to cooperate (Tam, Hewstone, Kenworthy, & Cairns, 2009). Trust facilitates the achievement of mutually beneficial outcomes (Tam et al., 2009). Trustworthiness is often broken down in to three domains or factors: ability, benevolence, and integrity (Mayer, Davis, & Schoorman, 1995). Those three domains are antecedents which lead to an individual engaging in a trusting behavior or action. Ability is defined as a group of skills, competencies, and characteristics that enable an individual to have influence within some domain (Mayer & Davis, 1995). Benevolence is best described as the extent to which a trustee is believed to want to do good for the trustor (Mayer & Davis, 1995). Leaders in management roles, who are seen as being caring in an

employee's interests, are seen as having benevolence for the employee (Mayer & Davis, 1995). Integrity, as defined by Mayer and Davis (1995), is the trustor's perception that the trustee adheres to a set of principles that the trustor finds acceptable. Confusion often surrounds definitions and terms regarding the literature of trust. Tait trust or trust propensity is a stable individual difference variable that represents an individual's dispositional tendency to trust or distrust other individuals (Rotter, 1980). Trait trust is not dependent on any specific context and is related to temperament and genetic predispositions (Mooradian, Renzl, and Matzler, 2006). State trust, on the other hand, does not encompass the same definition or implications as trait trust. For the purpose of this thesis, trust is synonymous with state trust and refers to an individual's perception of trustworthiness in another person.

Trust has often been explored using trust games among groups. The introduction of competition creates more observable outcomes and is often used in research pertaining to trust. Intergroup relations are significantly more competitive and less cooperative than inter-personal relations (Song, 2009). Interestingly, Song (2009) focused on intergroup interactions and compared the decisions of individual group-representatives, who were to act on behalf of their group, with individuals acting only on their own behalf. She employed a trust game and dictator game and concluded that people trust less, reciprocate less, and are less generous when they are only responsible for a group or organizational decision than when they are deciding solely for themselves. Song (2009) sought to investigate the impact of social influence within and between groups on trust and reciprocity expectations and behavior and found that the trusting behavior of individuals, consensus groups, and group representatives was all driven strongly by the expectation of

reciprocation from the counterpart. The findings also suggested that individual-level trust is mainly affected by whether or not they expect their trust to be reciprocated and honored. Furthermore, the findings suggested that consensual trusting behavior was best predicted by the group members' level of behavioral trust he/she feels towards the other members. People generally have a lower level of trust towards a group of people (three or more) as opposed to another person or a partner (Song, 2009). Given the nature of this thesis, intergroup competition an important variable that influences intergroup trust. As the relationship between Mach and intergroup trust is explored in the context of competition, Song's study (2009) is an important baseline contributing to the hypotheses formed in Chapter 3. Furthermore, Zaheer, McEvily, and Perrone (1998) were interested in exploring the effects of interorganizational and interpersonal trust on performance. They developed two questionnaires and received 205 responses from purchasing managers and second respondents in the purchasing organization. Interorganizational trust, interpersonal trust, negotiation, conflict, asset specificity, uncertainty, and joint action were all variables assessed in the questionnaires. Zaheer et al. (1998) discovered that a high level of interorganizational trust mediates the negative effects of low interpersonal levels of trust. Furthermore, Zaheer et al. (1998) found that interpersonal trust is not as important as interorganizational trust when two individuals are working together. As displayed by Zaheer et al. (1998), high levels of interorganizational trust help counter the lower levels of interpersonal trust. This important remedy is important when considering the lower levels of trust found within certain dyads.

Summary of Chapter 2

Chapter 2 sought to highlight some of the most important and relevant findings that pertain to this thesis. This thesis is greatly focusing on the Dark Triad's first dimension of Mach and is exploring the construct in several ways. The Big Five Personality domains are being used to explore the construct given its popularity and frequency in popular studies. Agreeableness and Conscientiousness, two of the Big Five domains, are frequently found to negatively correlate with Mach. EI is best defined as an individual's ability to appraise and express emotions of the self and of others. Mach is often found to negatively correlate with trait EI. High trait EI scores are positively correlated with job satisfaction and task performance. EI is often analyzed using the Ability model, Trait model, and Mixed model. This thesis analyzes EI using the Trait model theory and scale. The Ability model and Mixed model are popular models but have not been represented in this thesis as the Trait model is this thesis' focus of interest. Teamwork literature is large in scope but surprisingly limited when referencing Mach. In general, teamwork is best facilitated when each member displays positive affect for the other, are high in conscientiousness and agreeableness, and when they are trusting of the other members. Little research has been conducted that has analyzed teamwork in the context of Mach and intergroup competition. State trust refers to an individual's perception of trustworthiness in another person. It is important not to confuse state trust with trait trust as this thesis seeks to explore state trust only. In general, previous research highlights the negative effects high Machs have on an organization and their negative traits. The effect of high Machs in an organization can lead to undesirable outcomes such as lowered employee morale, low job satisfaction, poor performance on tasks, increased

turnover, and higher levels of cynicism (Dahling et al., 2009). The following chapter utilizes information from this chapter to formulate hypotheses.

Chapter 3: Hypothesizing the Effects of Machiavellianism

The aim of this study is to fill the void of research pertaining to Machiavellianism. This thesis also attempts to apply the Big Five Personality dimensions and EI to the construct of Mach to replicate common findings. Furthermore, this thesis seeks to investigate the relationship between Machiavellianism and team cohesion, general trust, and teamwork preferences. This thesis applies previous research theories relating to Machiavellianism in a new and fresh way by investigating the outcome variables of team cohesion, trust, and teamwork preferences among different dyadic pairings of high and low Mach individuals. The lack of supporting or related research is an even greater sign that this research is needed.

Individual Differences of Employees of Mach Levels

Mach has been known to correlate with several individual differences. Correlations between Christie and Geis' (1970) MACH-IV, a scale used to measure an individual's level of Mach, and several other personality constructs have been made over the years. Low Machs, those scoring below 100 on the MACH-IV, negatively correlated (-.47) with the Big Five Personality domain of Agreeableness and negatively correlated (-.34) with the Big Five Personality domain of Conscientiousness (Paulhus & Williams, 2002). Serval other studies have concluded identical correlations (Dahling et al., 2009; Lee & Ashton, 2005; Paulhus & Williams, 2002). Lee and Ashton (2005) assessed Machiavellianism and drew correlations similar to Paulhus and Williams (2002): Agreeableness was negatively correlated (-.44) as well as Conscientiousness (-.34). Lee and Ashton (2005) applied a six-factor HEXACO Model which added the domain of

honesty and found a negative correlation of (-.57) when correlated with high Machs. High Machs are domineering, controlling, anticipating betrayal, and often emerge as leaders in the presence of a small group (Sheppard & Socherman, 1997). Low Machs are inherently opposite of high Machs and are thus expected to be positively correlated in areas where high Machs are negatively correlated. Given the negative correlations between Mach and Agreeableness and Conscientiousness, it is easy to assume that the interactions will be volatile. As previously mentioned, positive emotions, such as hope, pleasure, happiness, humor, excitement, joy, pride, and involvement contribute to the overall efficiency of a team (West, 2012). Given a high Mach's reluctance and inability to be agreeable or conscientious, teamwork is expected to suffer greatly.

> *Hypothesis 1a: The lower an employee's level of Machiavellianism, the higher they will score on the personality domains of Conscientiousness and Agreeableness. The higher an employee's level of Machiavellianism, the lower they will score on the domains of Agreeableness and Conscientiousness.*

Individuals who possess a high level of trait EI are said to have a set of inter- and intra-personal capabilities which are beneficial to the individual (Austin, Farrelly, Black, & Moore, 2007). High levels of EI are often associated with the ability to manage one's emotions; to understand emotions of others and the self; and the ability to use feelings to motivate, plan, and achieve in one's life (Salovey & Mayer, 1990). The relationship between EI and leadership has been popular, and research has proposed many significant findings. George (2000) compiled a list of four main aspects of EI, which enables leaders to motivate and transform team members. The first aspect is that a leader possessing a

high level of emotional intelligence will be able to accurately appraise others' emotions. The second states that the leader must have a thorough knowledge and understanding of emotions and must be able to apply that understanding towards predicting emotional reactions in various settings (George, 2000). Thirdly, the highly emotionally intelligent leader must be able to understand how to use emotions to influence team members' behaviors and thoughts. The fourth and final aspect identified by George (2000) involves the leader being able to manage emotions in general. Low Machs are able to encompass all of those traits and become impressive leaders due to their high EI. Individuals who possess high levels of Machiavellianism exhibit manipulative behaviors towards others in an attempt to promote their own self-interests (Christie & Geis, 1970). High Machs are less emotionally attached or vulnerable when compared to low Machs and ignore individual differences and possess an interpersonal orientation described as cognitive rather than emotional (Christie & Geis, 1970). High levels of Machiavellianism are negatively correlated with levels of empathy as well as an inability to efficiently read and analyze the emotions of others (Wastell & Booth, 2003). Moreover, Austin and colleagues (2007) sought to examine the potential manipulative/dark side of EI and found a statistically significant negative correlation between high Machs and their low scores on the self-report EI measurement tool. Furthermore, they conducted a performance measurement of EI and found another statistically significant correlation between high levels of Machiavellianism and lower levels of EI. Lower Machs, also known as the majority of the population unaffected by Machiavellianism, will display results directly opposite to that of a higher level Mach.

Hypothesis 1b: The lower an employee's level of Machiavellianism, the higher they will score on emotional intelligence. The higher an employee's level of Machiavellianism, the lower they will score on Emotional Intelligence.

Team Cohesion among High and Low Mach

An important aspect explored in this thesis is the relationship between Mach and team cohesion. To clarify, team cohesion is referred to as the tendency of a dyad or group to stick together and remain united in pursuit of its instrumental objectives and/or for the satisfaction of member affective needs (Carron, Brawley, & Widmeyer, 1998). While there are different definitions and contexts widely used in the literature regarding team cohesion, the previous definition is vital to comprehend the intentions of this thesis and for the analysis of its results. The literature is relatively weak in this regard and is clearly in need of more exploration. Several important studies furthering the relationship between Mach and team cohesion do exist and are helpful in formulating strong theories about the interaction. Jay (1968) explored the relationship between Machiavellianism and teamwork in *Management and Machiavelli* and drew parallels between Machiavellian tendencies and political leadership and industrial enterprise strategies. He assumed that individuals possessing high levels of Machiavellianism would fare well as leaders given their tendency to assume control in small groups. Control and power are just a few of the traits commonly found in high Machs. This idea was investigated more in a study conducted by Christie and Geis (1970). They found, through a study of college students, that high Machs were frequently selected as leaders in small groups. It is possible that high Machs were selected to become leaders because of their controlling and

domineering demeanors. To better express the logic behind those findings and to investigate a high Mach leader's ability to efficiently lead a team, Jaffe, Nebenzahi, and Gotesdyner (1989) compiled teams of five to six participants. They then administered a computerized business-game and measured each high Mach led team's success. The high Mach led teams were unsuccessful in their task and were judged as not being task-oriented. Furthermore, the team members of the high Mach leader viewed the leader as unfriendly, negative, and not helpful in advancing the goals of the group (Jaffe, Nebenzahi, & Gotesdyner, 1989). As previously mentioned, commitment, responsibility, accountability, integrity, respect, trust, leadership, courage/compassion, service, and humility work together to form strong team bonds and facilitate team success (Shahid & Azhar, 2013). High Machs are not agreeable, do not trust, and are motivated by their own self-interests. In theory, a successful team will display more cohesion when both parties feel respected, able to trust in their partner, and as though their partner is willing to be open to help contribute to the levels of shared cognition required to be successful. If a high Mach is manipulating a team member and the team member notices, trust will vanish and personal defenses will cause the success of the team to be in jeopardy.

Employees who are high in Machiavellianism are often manipulative, economically opportunistic, dissatisfied with their work, prone to withdraw and defect from groups, and are inconsiderate of those in power (Dahling et al., 2009). Employees displaying those traits are not highly sought in the workplace. Although, in theory, several of those traits might benefit the company as a whole if another company or competitor is the victim of the manipulation, in a team setting, they are not beneficial in the least. Alternatively, high Mach leaders are unsupportive, directive, adaptable,

charismatic, and inconsiderate of employees (Deluga, 2001). Successful teamwork is a platform that improves productivity, facilitates high performance, and in turn creates a competitive organization (Shahid & Azhar, 2013). One way an organization facilitates teamwork is through openness and shared cognition (Salas & Fiore, 2004). A lack of cooperation hinders a team's ability to be successful. Higher levels of Mach negatively correlate to an unwillingness to be employ agreeableness in interactions. The higher a team's inter-conflict becomes, the less productive and efficient they become (West, 2012). Barrick, Stewart, Neubert, and Mount (1998) found that teams experiencing high levels of conscientiousness and shared cognition generate more agreeable and emotionally stable teams capable of succeeding. Given the innately low levels of agreeableness and conscientiousness found in high Machs and the importance of openness and shared cognition to the overall success of a team, high Machs must then deter from the overall team effectiveness and success. The more extraverted and emotionally stable the members within a team are, the more likely that team is to experience positive intragroup interactions and become socially cohesive (Barrick et al., 1998). Individuals who are high in Machiavellianism negatively correlate with the Big Five Personality domain of conscientiousness in general (Dahling et al., 2009). Furthermore, the presence of one highly disagreeable employee, is strongly correlated with lower performance, less team cohesion, more conflict, poor communication, and less sharing of the workload (Barrick et al., 1998). How then, are employees supposed to feel in the presence of a high Mach who boasts all of the negative traits previously mentioned? High Machs are not agreeable, not conscientious, controlling, untrusting, and care more about their own well-being than of the well-being of their partner or company.

Successful teams are often united in their shared goals and confidence each member has in the other. How could a low Mach feel as though they are in a cohesive dyad when they are paired with a high Mach who displays all of those negative traits? Moreover, how is a high Mach going to interpret the level of team cohesion they feel when they are paired with a fellow high Mach? The consequences of pairing two high Machs together has not yet been observed. However, given their negative personality traits that ultimately hinder team cohesion and a high Machs' general cynical view of mankind, it may be possible to assert that a high Mach will display a lower degree of team cohesion regardless of their dyad variation.

Hypothesis 2a: The pairing of an either high or low Mach partner moderates the relationship between lower Mach and team cohesion such that lower Mach employee will experience lower team cohesion when paired with a high Mach employee, and a lower Mach employee will experience higher team cohesion when paired with a low Mach employee.

Hypothesis 2b: The higher an employee's level of Machiavellianism, the lower they will score on team cohesion.

Trust among High and Low Mach

Trust is another vital dimension of teamwork and team cohesion. Trust implies the expectation that others will not exploit one's vulnerability and belief that others will attempt to cooperate (Tam, Hewstone, Kenworthy, & Cairns, 2009). Trust has been traced to positive job attitudes, enhanced team processes, higher levels of cooperation, better task performance, leader-member exchange, and organizational justice (Dahling et al., 2009).

Machiavellianism has important implications regarding how the trust relationship unfolds. High Machs inherently distrust others and overestimate their potential for loss in a trusting relationship implying that they would refrain from taking the risk of trusting someone unless the consequences are heavily in their favor (Mayer et al., 1995). A high Mach manager will inherently lack integrity due to their opportunistic behavior, refrain from delegating control on tasks, would lack openness, and would not consider interpersonal dynamics (Drory & Glusinkos, 1980). Lower levels of trust facilitates lower performance, organizational commitment, job satisfaction, and higher turnover rates within an organization (Dirks & Ferrin, 2002).

Hypothesis 3a: The pairing of an either high or low Mach partner moderates the relationship between lower Mach and trust such that a lower Mach employee will experience lower levels of trust when paired with a high Mach employee, and a lower Mach employee will experience higher levels of trust when paired with a low Mach employee.

Hypothesis 3b: The higher an employee's level of Mach, the lower level of trust they will experience in their partner.

Task Interdependency on Varying High and Low Mach Dyads

Task interdependence, as defined by Wageman and Baker (1997), is the degree to which an individual's task performance depends on the efforts or skills of others. Group cohesion, intragroup trust, and performance are often contingent upon several variables. Tasks such as flying an airline jet, performing surgery, playing a team sport, and directing a military operation require a high level of interaction and are thus likely to depend on communication, coordination, and cooperation for high levels of performance

(Gully, Devine, & Whitney, 1995). Alternatively, more individualized and independent tasks that do not require high levels of interaction with a group, such as sales, will be less strongly related to team cohesion and performance will be based on individual motivational processes (Gully et al., 1995).

Low Mach individuals, as previously mentioned, consistently score high in Agreeableness and Conscientiousness on the Big Five Personality Index making them highly desirable in team settings whereas high Machs score low and are thus disruptive, untrustworthy, and undesirable (Paulhus & Williams, 2002). Individuals scoring lower in Mach are suggested to positively correlate with a higher EI enabling them to implement self-regulation, recognition of others' behaviors, and grants them the ability to use emotions in an adaptive and positive way (Petrides et al., 2011; Van Rooy &Viswesvaran, 2004). The ability to cooperate is strongly related to team or dyad success in an intergroup competitive setting (Guzzo & Shea, 1993). An individuals' attitudes regarding teamwork has been observed as being an influential factor in team effectiveness (Kiffin-Petersen & Cordery, 2003). Many factors have been known to influence an employee's attitudes towards working in teams. Dispositional explanations are common, such as if an employee possesses a low tolerance for change (Kirkman, Jones, & Shapiro 2000), varying cultural values among employees (Kirkman & Shapiro, 1997), situational variables of justice perceptions (Kirkman, Shapiro, Novelli, & Brett, 1996) managerial support for team decision making, workload distribution, and team social support (Jones & Lindley, 1998). Seeing as the workload will vary depending on the level of task interdependency each participant is exposed to, there might be a fluctuation in the teamwork preferences. However, based on the theory and other studies,

it is more likely that the small variation of task interdependency will not alter the teamwork preferences of the employees. Furthermore, given that team social support contributes to an employee's attitude regarding preference to work in teams, high Machs should score lower given their negative views on others, distrust towards other people, and the fact that they will perceive the interaction in a more negative light. Low Machs are more agreeable and supportive in nature and will thus gravitate more towards other people. In group settings, low Machs will seek out others and will have a higher preference for teamwork in general.

Hypothesis 4: The lower an employee's level of Machiavellianism, the more they will prefer to work in teams.

The ability to attribute independent mental states and processes to others is referred to as Theory of Mind (Paal & Bereckei, 2006). Theory of mind facilitates social cooperation and is vital for establishing positive trust variables and team cohesion within a group. Paal and Bereckei (2006) found a strong negative correlation between Machiavellianism and social cooperation skills. Communication, cooperation, and coordinated action are essential to the performance of interdependent tasks (Wageman & Baker, 1997). De Drue (2007) attempted to predict that perceived cooperative outcome interdependence interacts with team-level reflexibility to predict information sharing, learning, and team effectiveness. De Drue (2007) found that the more each team member perceived cooperative outcome interdependence, the better they shared information, the more they learned, and the more effective they were as a team. High Machs' lack of agreeableness, low conscientiousness, dominant and powerful demeanor, disbelieving in group tasks or norms, and unfriendly and disagreeable attitudes cause them to be less

desirable in high interdependent teams (Jaffe, Nebenzahl, & Gotesdyner, 1989). High Machs are not seen as cooperative nor are they agreeable in group situations; following that logic, higher task interdependency situations will require more interaction enabling the high Mach's partner to observe more of their negative traits and disagreeableness. Given the importance of communication, cooperation, and coordinated action, high Machs must then influence a low Mach more negatively when task interdependence is higher.

The dynamics of Machiavellianism in dyads and group situations are complex. In the context of intragroup competition, high Machs are regularly seen manipulating and beating low Machs in competitive tasks (Wilson, Near, & Miller, 1996). However, the same manipulative skills that allow high-Machs to beat low-Machs within group competition may allow groups containing high Machs to beat other low Mach groups (Wilson et al., 1996). High Machs are more focused on short term benefits than long term gain, ignoring long-term costs or consequences (Czibor & Bereczkei, 2012). Since Machiavellian's surge in research from the 70's and 80's (Dahling et al., 2009), many studies have supported high Machs' ability and tendency to manipulate and cheat low Machs in activities that require high levels of interaction (Bochner & Bochner, 1972; Cooper & Peterson, 1980; Durkin, 1967; Nachamie, 1969). In some tasks that require more cooperation, high Machs are out performed by low Machs. Given the high task interdependency and the degree to which success is reliant upon cooperation, low Machs excel and are superior to high Machs. In a setting where a high Mach is alone or given control over a group, they typically win over other groups led by high Machs (Wilson et al., 1996). High Machs often outperform low Machs in most short-term interactions,

especially in settings where face to face interaction is common and the ability to improvise is available (Gunnthorsdottir et al., 2002). Low Machs, due to their higher level of agreeableness and cooperativeness, won more points than the high Machs in the popular Prisoner's Dilemma Game and outperformed high Machs in similar situations that require high levels of trust, agreeableness, and cooperation (Martinez, 1981). Situational factors play an important role in the behaviors of high Machs; in a group of low Machs who appear altruistic, high Machs have often been seen to blend in and change their behaviors to best fit the group norms (Bereczkei & Czibor, 2014). Imagined interactions, similar to the type implemented in the vignette used in this study, "reflect a distinct kind of thinking in which communicators experience or actually work through cognitive representation of conversations" (Edwards, Honeycutt, & Zagacki, 1988, p. 24). Low Machs are more likely to imagine a positive interaction than high Machs as high Machs imagine more unpleasant interactions (Allen, 2000).

Hypothesis 5a: Low Machs will report the lowest level of trust when paired with a high Mach employee on a task requiring high interdependency.

Hypothesis 5b: Low Machs will report the highest level of trust when paired with a low Mach employee on a task requiring high interdependency.

Hypothesis 5c: Low Machs will report the lowest levels of team cohesion when paired with a high Mach employee on a task requiring high interdependency.

Hypothesis 5d: Low Machs will report the highest level of team cohesion when paired with a low Mach on a task requiring high interdependency.

Chapter 4: Method

Data were collected to explore the differences in outcome variables associated with different dyadic levels of interdependency amongst randomized pairs of Machiavellian individuals. Furthermore, the introduction of a competitive task was implemented to explore the differences among outcome variable measurements in different randomized groups. Through the support of the above-mentioned hypotheses, it is hoped that this study will provide pertinent information regarding Machiavellianism's influence on various outcome variables.

Sample

The focus of this study was on the effect of Machiavellianism on several outcome variables in a randomized setting of either high task interdependency or low task interdependency. The target sample for this study was undergraduate students enrolled in a large regional university in the Midwest United States between the ages of 18 and 30. More specifically, this study targeted business students who had previously completed 60 undergraduate credit hours and thus were in junior standing. A total of 240 students were invited to participate in the study, and 153 chose to participate. After cleaning the data set and removing data from participants that failed manipulation checks, missed data, were outside of the age restrictions, and displayed patterned responses, 36 participants were removed from the data set. After the data had been cleaned and erroneous response were removed, data from 117 participants was analyzed. In the sample, 55% were male and mean age was 21.68 years.

Procedure

Undergraduate business students above the age of 18 years, having completed at least 60 credit hours and of junior standing, were initially contacted in their respective upper level Management courses. A brief presentation and overview of the study was provided by the investigator, beginning recruitment of participants for the study. The professors teaching each targeted class were sent an email to share with their students that briefly described the nature of the study, provided the students with a contact email address for pending questions or concerns, and provided the URL link that could be clicked on to begin participation in the study. Once the URL link was clicked, the participant was then directed to an informed consent page, which stated that their participation was voluntary and that he or she must be 18 years of age, and 60 or more undergraduate credit hours completed to be considered a junior or senior level student. Every participant was asked to supply their first name, last name, and their email address which was used to identify those who had completed the survey to distribute the information to the professor of the class. Furthermore, the last name of the professor teaching the course they were enrolled in was attained so the researchers could supply them with information regarding who participated in the study and who would receive the incentive of a bonus point towards their final grade.

Once the students filled in the aforementioned information, they were prompted to click on the 'next' button. Upon doing so, they were randomly assigned to one of four possible surveys and all identifying information was untraceable.

All of the participants had the exact same probability of randomly being assigned to one of the four surveys to complete. The first version of the survey paired the

participant with a low Mach partner and referred to a task requiring low interdependency. The second version of the survey paired the participant with a high Mach and referred to a task requiring low interdependency. The third version of the survey paired the participant with a low Mach and referred to a task that required high interdependency. The fourth and final survey paired the participant with a high Mach and referred to a task that required high interdependency. Each scale that composed the survey was identical. Every participant was asked to complete the BFI-44, MACH-IV, SSEIT, and then complete the outcome variable scales following the vignette. The differences between the four were only present in the phrasing of the vignette. Each participant received the exact same number of questions as well as the exact same scales. Each participant responded to 10 subscales and a section about demographics. The number of questions answered totaled 139 per survey. The number of questions in each scale varied from 4 to 44. The median time spent by participants completing the survey was 18 minutes and 3 seconds.

Measures

Several of the scales used were adapted from previous research and were reworded to change the tense to best fit this study. The scales untouched and directly adopted were the BFI-44, MACH-IV, and the SSEIT. Other scales used had to be altered because they were either a) in the incorrect tense, or b) needed to replace a key word such as "boss" with "partner" to best fit the vignette story setting. Measures that applied to the Big Five Personality Index, Machiavellianism, and Emotional Intelligence were applied prior to the vignette and outcome variable measurements. The vignette was presented next followed by several outcome variable scales. Another small vignette was then added and followed by another outcome variable measurement. Manipulation checks were

added following the last outcome variable measurement to identify participants who were not paying attention during the entire study. Finally, demographic questions were presented last. The measures and vignette may be seen in Appendix F.

Measure Applying to Individual Differences

The Big Five Personality dimensions were measured using the 44-item Big Five Inventory scale (John & Srivastava, 1999). The 44-item scale was used in response to the time constraint participants must face. The Cronbach's alpha levels for the BFI-44 vary from .76 to .88. The BFI-44 investigates the respondents' personality traits in the following personality dimensions: extraversion, agreeableness, conscientiousness, neuroticism, and openness. Each item is scored using a 5-point Likert scale ranging from 1(strongly disagree) to 5(strongly agree). Several items in the BFI-44 are reversed scored for reliability. The present study yielded a Cronbach's alpha of .70.

The MACH-IV (Christie & Geis, 1970) is a scale consisting of 20 items. Responses are given on a 7-point Likert scale ranging from 'strongly disagree' to 'strongly agree'. The reliability of this scale has been questioned (Ray, 1983) but has also been supported with Cronbach's alpha levels averaging .79 (Hansen & Hansen, 1991). The MACH-IV comprises three subscales: Tactics, Morality, and Views. For the purpose of this study, the composite and dichotomous scores were used. The scale was originally created and intended for making group comparisons and for selecting subjects for research rather than for individual diagnosis (Christie & Geis, 1970). Christie and Geis (1970) found the scale was also able to categorize people as being high or low in Mach.

Christie and Geis (1970) admit that a truly high Mach individual may be so clever as to fake low on the scales and even become deliberately conned by their peers or other

laboratory subjects in the experimental setting. They justify this acknowledgement by stating how it is "highly unlikely but it does raise the interesting question that if these super Machs are so busy dissembling, *when* do they manipulate?"(Christie & Geis, 1970, p. 26). A constant of 20 is added to the overall scores to create an even neutral point in the scoring to 100 (20 items X mean of 4.0 + 20 = 100). The highest possible score is 160 based on strong agreement with 10 items worded in the Machiavellian direction and strong disagreement with the 10 reversed items (20 X item mean of 7.0 + 20 = 160) (Christie & Geis, 1970). The lowest possible score is based on e a strong disagreement with the 10 items worded in the Machiavellian direction and a strong agreement with the 10 reversed items (20 X item mean of 1.0 + 20 = 40). Scores higher than 100 indicate tendencies to indiscriminate agreement while scores below 100 suggest a tendency to disagree (Christie & Geis, 1970). Both the composite scores and dichotomous scores were used in the data analyses. The composite scores displayed the degree to which a participant was low or high in Mach while the dichotomous measured only if they qualified as low or high in Mach. The present study yielded a Cronbach's alpha of .75.

Measure Applying to Emotional Intelligence

The Schutte Self-Report Emotional Intelligence Test (SSEIT) (Schutte, Malouff, & Bhullar, 2009) is a self-report measure based on the theoretical model introduced by Salovey and Mayer (1990). Schutte et al. (1998) conceptualized this model as a composite of several emotional skills as perception, appraisal, and expression of emotion. As previously mentioned, this thesis is interested in the trait model and theory of EI; the SSEIT is designed to measure only trait EI and ignores both the Ability Model and Mixed Model of EI. More specifically, the one-factor 33 item scale represents each of the

following categories: emotion perception, utilizing emotions, managing own emotions, and managing others' emotions in solving problems. The SSEIT boasts a Cronbach's alpha of 0.90 and is scored on a Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Scores range from 33 (33 X mean of 1 = 33) to 165 (33 X mean of 5 = 165) (midpoint of 99), with higher scores indicating more characteristics of EI (Schutte et al., 2009). Schutte et al. (1998) also conducted the test-retest method to establish reliability and found, after two weeks in between administration, a test-retest reliability of .78 for the SSEIT. The SSEIT was chosen over other trait EI scales due to its ease of accessibility, validity, and focus on researching competency-based EI. The self-assessment nature of the SSEIT allows for faster completion of the assessment and therefor wider distribution. The present study yielded a Cronbach's alpha of .87.

Measures Applying to Group Characteristics

General Measurement of Trust. This study used Schoorman, Mayer, & Davis' (1996) scale comprised of four items was used to measure the general trust of the participants and was slightly reworded for the purposes of this study. The original scale has an alpha of .60 (Schoorman et al., 1996). Although the alpha is relatively low, the scale is commonly used and legitimizes its use by being direct and concise. The present study yielded a Cronbach's alpha of .81.

Team Work Preferences. This study chose to utilize Campion, Medsker, and Higgs' (1993) scale for analyzing team work preferences. The three-item assessment boasts a Cronbach's alpha of .93 (Campion et al, 1993) and is measured using a Likert scale ranging from one (strongly disagree) to five (strongly agree). Team work preference is similar to cohesiveness but differs in that cohesiveness refers to attraction to and the

desire to remain in a particular group, while preference refers to the general preference one possesses regarding the idea of being in a group (Campion et al., 1993). The present study yielded a Cronbach's alpha of .88.

Team cohesion Measurement. The team cohesion scale was created to extrapolate opinions regarding the perceived team cohesion the participant felt towards their assigned partner prior to the completion of a task. No scale had been found that focused strictly on the perceptions of a dyads cohesion prior to a task; rather, most validated scales focused on team cohesion perception following the completion of a task. This created measurement utilized a six-point Likert scale ranging from 1 (significantly disagree) to 6 (significantly agree). The present study yielded a Cronbach's alpha of .95.

Data was also collected using scales related to benevolence and integrity of trust, participation, willingness to cheat, and task interdependency. Although data was collected using these scales, the current study did not use any of the findings. Rather, the scales were used as reliability measurements comparing results from used scales increasing reliability.

Analytical Approach

Pearson correlations, ANOVAs with LSD mean comparisons, and regression analyses were used to test the hypotheses. Pearson correlations were used when comparing two quantitative variables. The generated correlation explains the relationship between the two variables and provides data regarding whether the relationship is significant or insignificant. ANOVAs are generally used to determine whether there are any statistically significant differences between the means of three or more independent variables. The Post Hoc LSD was used to search for the minimum difference between a

pair of means necessary for statistical significance. The regression analyses were used to predict a continuous dependent variable from a number of independent variables. Following a discussion of each hypothesis, a brief statement regarding the level of support is provided and explored.

Chapter 5: Results

Means, standard deviations, and intercorrelations are among all variables are presented in Table 2. This chapter will begin by explaining what each hypothesis proposed, followed by the statistical method used to explore the data, the results of the analysis, and whether or not the hypothesis is statistically supported.

Hypothesis 1a proposed that the lower an employee's level of Machiavellianism, the higher they will score on the personality domains of Conscientiousness and Agreeableness. Alternatively, hypothesis 1a also proposed that the higher an employee's level of Machiavellianism, the lower they will score on the domains of Agreeableness and Conscientiousness. This was explored using a Pearson correlation coefficient on the average MACH-IV and personality domains of Conscientiousness and Agreeableness on the BFI-44. When correlated, the average Machiavellianism score and average Conscientiousness score created a Pearson correlation of r=-.09, (p=.36). When the average Machiavellianism score was correlated with the average score on the personality domain of Agreeableness on the BFI-44, a correlation of r=-.48, (p<.01) is generated. Thus, hypothesis 1a is partially supported.

Hypothesis 1b proposed the lower an employee's level of Machiavellianism, the higher they will score on emotional intelligence. Alternatively, hypothesis 1b also stated that the higher an employee's level of Machiavellianism, the lower they will score on Emotional Intelligence.

Table 2
Descriptive Statistics and Correlations

Variable	M	SD	1	2	3	4	5	6	7	8	9	10	11	12
1) Extraversion	3.30	.72	1.00											
2) Agreeableness	3.73	.49	.02	1.00										
3) Conscientiousness	3.62	.48	.03	.22*	1.00									
4) Neuroticism	2.83	.71	-.14	-.28**	-.15	1.00								
5) Openness	3.31	.53	.22*	.13	.13	-.16	1.00							
6) Machiavellianism	4.48	.53	-.20*	-.48**	-.09	.22*	-.10	1.00						
7) Emotional Intelligence	3.69	.37	.32**	.27**	.26**	-.24**	.48**	-.45**	1.00					
8) General Trust	2.51	.83	-.04	.00	.03	-.20*	.07	.04	.04	1.00				
9) Benevolence	2.75	1.06	.02	-.03	.08	-.12	.08	.04	.03	.80**	1.00			
10) Integrity	2.88	1.09	.01	-.06	.09	-.14	.08	.07	.03	.78**	.87**	1.00		
11) Team Work Preference	3.11	.91	.21*	.19*	.03	-.18	.23*	-.25**	.20*	.35**	.38**	.29**	1.00	
12) Team Cohesion	3.64	1.45	.08	-.05	.13	-.18	.12	.01	.17	.70**	.79**	.88**	.26**	1.00

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Hypothesis 1b was explored using a Pearson correlation coefficient on the average MACH_IV and average SSEIT. When correlated, the average Machiavellianism score and average SSEIT score for EI generated a Pearson correlation of r=-.45, ($p<.01$). Thus, hypothesis 1b is fully supported.

Hypothesis 2a proposed that the pairing of an either high or low Mach partner moderates the relationship between lower Mach and team cohesion such that lower Mach employee will experience lower team cohesion when paired with a high Mach employee, and a lower Mach employee will experience higher team cohesion when paired with a low Mach employee. Hypothesis 2a was explored using linear regression between low Mach scores and team cohesion. Following the calculation, the results generated a standardized beta coefficient of β=-.35 ($p<.05$) and a ΔR^2=.12, ($p<.05$). Thus, hypothesis 2a was supported.

Hypothesis 2b proposed that the higher an employee's level of Machiavellianism, the lower they will score on team cohesion. Hypothesis 2b was explored using a Pearson correlation coefficient on the average MACH-IV and average Team Cohesion measure. When correlated, the average MACH-IV score and average Team Cohesion measure generated a Pearson correlation of r=.01, (p=.92). Thus, hypothesis 2b was not supported.

Hypothesis 3a proposed that the pairing of an either high or low Mach partner moderates the relationship between lower Mach and trust such that a lower Mach employee will experience lower levels of trust when paired with a high Mach employee, and a lower Mach employee will experience higher levels of trust when paired with a low Mach employee. Hypothesis 3a was explored using linear regression between low Mach

scores and trust. Following the calculation, the results generated a standardized beta coefficient of β =-.12 (p=.22) and a ΔR^2=.02, (p=.22). Thus, hypothesis 3a was not supported.

Hypothesis 3b proposed that the higher an employee's level of Mach, the lower level of trust they will experience in their partner. Hypothesis 3b was explored using a Pearson correlation coefficient on the average MACH-IV and the average General Trust scores. When correlated, the average MACH-IV and average General Trust scores generated a Pearson correlation of r=.04, (p=.71). Thus, hypothesis 3b was not supported.

Hypothesis 4 proposed that the lower an employee's level of Machiavellianism, the more they will prefer to work in teams. Hypothesis 4 was explored using a Pearson Correlation coefficient on average MACH-IV and the average Teamwork Preference ratings. When correlated, the average MACH-IV and Teamwork Preference scale generated a Pearson correlation of r=-.25, (p<.05). Thus, hypothesis 4 was fully supported.

Hypothesis 5a proposed that low Machs will report the lowest level of trust when paired with a high Mach employee on a task requiring high interdependency. Hypothesis 5a was explored using ANOVA with LSD Post Hoc comparison. The ANOVA generated an F=21.26 (p<.01). Following the ANOVA, the LSD Post Hoc comparison generated a significant mean difference of MD=1.14 (p=<.01) between a low Mach's level of trust when paired with a low Mach in a low task interdependent setting when compared to a low Mach's level of trust when paired with a high Mach in a low task interdependent setting. Furthermore, a significant mean difference of MD=.83 (p<.01) was found between a low Mach's level of trust when paired with a low Mach in a low task

interdependent setting when compared to a low Mach's level of trust when paired with a high Mach in a high task interdependent setting. A significant mean difference of MD= -1.17 ($p<.01$) was found between a low Mach's level of trust when paired with a high Mach in a low task interdependent setting when compared to a low Mach's level of trust when paired with a low Mach in a high task interdependent setting. Finally, a significant mean difference of MD= .86 ($p<.01$) was found between a low Mach's level of trust when paired with a low Mach in a high task interdependent setting when compared to a low Mach's level of trust when paired with a high Mach in a high task interdependent setting. The results did not show a significant difference between each level of trust for the low Machs for each possible pairing amongst the different levels of task interdependency. Thus Hypothesis 5a was not supported. The results of the analysis may be seen in Table 3.

Hypothesis 5b proposed that lower Machs will report the highest levels of trust when paired with a low Mach employee on a task requiring high interdependency. Hypothesis 5b was explored using ANOVA with LSD Post Hoc comparison. The ANOVA generated an $F=21.26$ ($p<.01$). Following the ANOVA, the LSD Post Hoc comparison generated a significant mean difference of MD=1.14 ($p=<.01$) between a low Mach's level of trust when paired with a low Mach in a low task interdependent setting when compared to a low Mach's level of trust when paired with a high Mach in a low task interdependent setting. Furthermore, a significant mean difference of MD=.83 ($p<.01$) was found between a low Mach's level of trust when paired with a low Mach in a low task interdependent setting when compared to a low Mach's level of trust when paired with a high Mach in a high task interdependent setting. A significant mean

Table 3
Hypothesis 5a and 5b: Multiple Comparisons

Dependent Variable: Trust

(I) Version	(J) Version	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Low Mach and Low TI	High Mach and Low TI	1.14*	.20	.00	.75	1.53
	Low Mach and High TI	-.03	.19	.88	-.41	.36
	High Mach and High TI	.83*	.19	.00	.44	1.21
High Mach and Low TI	Low Mach and Low TI	-1.14*	.20	.00	-1.53	-.75
	Low Mach and High TI	-1.17*	.17	.00	-1.51	-.83
	High Mach and High TI	-.31	.17	.07	-.66	.03
Low Mach and High TI	Low Mach and Low TI	.03	.19	.88	-.36	.41
	High Mach and Low TI	1.17*	.17	.00	.83	1.51
	High Mach and High TI	.86*	.17	.00	.52	1.20
High Mach and High TI	Low Mach and Low TI	-.83*	.19	.00	-1.21	-.44
	High Mach and Low TI	.31	.17	.07	-.03	.66
	Low Mach and high TI	-.86*	.17	.00	-1.20	-.52

*. The mean difference is significant at the 0.05 level.

difference of MD= -1.17 ($p<.01$) was found between a low Mach's level of trust when paired with a high Mach in a low task interdependent setting when compared to a low Mach's level of trust when paired with a low Mach in a high task interdependent setting. Finally, a significant mean difference of MD= .86 ($p<.01$) was found between a low Mach's level of trust when paired with a low Mach in a high task interdependent setting when compared to a low Mach's level of trust when paired with a high Mach in a high task interdependent setting. The results of the analysis may be seen in Table 3. Similar to the results found in Hypothesis 5a, the results did not show a significant difference between each level of trust for the low Machs for each possible pairing amongst the different levels of task interdependency. Thus, hypothesis 5b is not supported.

Hypothesis 5c proposed that lower Machs will report the lowest levels of team cohesion when paired with a high Mach employee on a task requiring high interdependency. Hypothesis 5c was explored using an ANOVA with LSD Post Hoc comparison. The ANOVA generated an $F=82.14$ ($p<.01$). Following the ANOVA, the LSD Post Hoc Comparison generated a significant mean difference of $MD= 2.69$ ($p<.01$) was found between a low Mach's level of team cohesion when paired with a low Mach in a low task interdependent setting when compared to a low Mach's level of team cohesion when paired with a high Mach in a low task interdependent setting. A significant mean difference of $MD= 2.64$ ($p<.01$) was found between a low Mach's level of team cohesion when paired with a low Mach in a low task interdependent setting when compared to a low Mach's level of team cohesion when paired with a high Mach in a high task interdependent setting. A significant mean difference of $MD=-2.45$ ($p<.01$) was found between a low Mach's level of team cohesion when paired with a high Mach in a low task interdependent setting when compared to a low Mach's level of team cohesion when paired with a low Mach in a high task interdependent setting. Finally, a significant mean difference of $MD=2.40$ ($p<.01$) was found between a low Mach's level of team cohesion when paired with a low Mach in a high task interdependent setting when compared to a low Mach's level of team cohesion when paired with a high Mach in a high task interdependent setting. The results of the comparison can be seen on Table 3. The results did not show a significant difference between each level of team cohesion for the low Machs for each possible pairing amongst the different levels of task interdependency. According to the results in Table 4, hypothesis 5c is not supported.

Hypothesis 5d proposed that lower Machs will report the highest level of team cohesion when paired with a low Mach employee on a task requiring high interdependency. Hypothesis 5d was explored using an ANOVA with LSD Post Hoc comparison. The ANOVA generated an F=82.14 (p<.01). Following the ANOVA, the LSD Post Hoc Comparison generated a significant mean difference of MD= 2.69 (p<.01) was found between a low Mach's level of team cohesion when paired with a low Mach in a low task interdependent setting when compared to a low Mach's level of team cohesion when paired with a high Mach in a low task interdependent setting. A significant mean difference of MD= 2.64 (p<.01) was found between a low Mach's level of team cohesion when paired with a low Mach in a low task interdependent setting when compared to a low Mach's level of team cohesion when paired with a high Mach in a high task

Table 4
Hypotheses 5c and 5d: Multiple Comparisons

Dependent Variable: Team Cohesion

(I) Version	(J) Version	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Low Mach and Low TI	High Mach and Low TI	2.69*	.24	.00	2.20	3.17
	Low Mach and High TI	.24	.24	.32	-.24	.72
	High Mach and High TI	2.64*	.24	.00	2.16	3.12
High Mach and Low TI	Low Mach and Low TI	-2.69*	.24	.00	-3.17	-2.20
	Low Mach and High TI	-2.45*	.22	.00	-2.88	-2.01
	High Mach and High TI	-.05	.22	.83	-.48	.39
Low Mach and High TI	Low Mach and Low TI	-.24	.24	.32	-.72	.24
	High Mach and Low TI	2.45*	.22	.00	2.01	2.88
	High Mach and High TI	2.40*	.22	.00	1.97	2.83
High Mach and High TI	Low Mach and Low TI	-2.64*	.24	.00	-3.12	-2.16
	High Mach and Low TI	.05	.22	.83	-.39	.48
	Low Mach and High TI	-2.40*	.22	.00	-2.83	-1.97

*. The mean difference is significant at the 0.05 level.

interdependent setting. A significant mean difference of MD=-2.45 ($p<.01$) was found between a low Mach's level of team cohesion when paired with a high Mach in a low task interdependent setting when compared to a low Mach's level of team cohesion when paired with a low Mach in a high task interdependent setting. Finally, a significant mean difference of MD=2.40 ($p<.01$) was found between a low Mach's level of team cohesion when paired with a low Mach in a high task interdependent setting when compared to a low Mach's level of team cohesion when paired with a high Mach in a high task interdependent setting. The results of the comparison can be seen on Table 3. The results did not show a significant difference between each level of trust for the low Machs for each possible pairing amongst the different levels of task interdependency. Thus, hypothesis 5d is not supported.

Chapter 6: Discussion

The aim of this study was to help contribute to the shrinking body of literature that has previously been conducted pertaining to Machiavellianism in dyadic settings. The main objectives of this thesis were to a) replicate findings related to individual differences and Machiavellianism, and b) explore the effect the Machiavellianism has on trust, team cohesion, and teamwork preferences amongst dyadic pairs of low and high Machs in varying degrees of task interdependency all within the context of intergroup competition. Hypotheses 1a and 1b attempted to replicate findings related to individual differences and Machiavellianism. Hypotheses 2a and 2b attempted to explore the relationship between Machiavellianism and team cohesion. Hypotheses 3a and 3b attempted to explore the relationship between Machiavellianism and Trust. Hypothesis 4 attempted to investigate the effect Machiavellianism has on teamwork preferences. Hypotheses 5a-5d were all related to exploring both the least optimal and most optimal setting to facilitate dyadic trust and team cohesion for lower Machs. This chapter seeks to explore the findings of this thesis in greater detail and attempts to explore and explain expected and unexpected findings.

Findings Related to Individual Differences

The first set of hypotheses focused on the individual differences related to Mach and attempted to replicate common findings. Paulhus and Williams (2002), along with many other studies, utilized the BFI-44 to find significant correlations in the Mach construct. In general, hypotheses 1a and 1b sought to replicate the common finding regarding individual differences and Mach. Hypothesis 1a proposed the lower an

employee's level of Mach, the higher they will score on the personality domains of Conscientiousness and Agreeableness. Hypothesis 1a also hypothesized that the higher an employee's level of Mach, the lower they will score on the domains of Agreeableness and Conscientiousness. After generating a Pearson correlation, the results supported a significant negative relationship between Mach and the personality domain of Agreeableness but did not support a significant negative relationship between Mach and the personality domain of Conscientiousness. Conscientiousness is commonly found to be significantly negatively correlated with Mach (Lee & Ashton, 2005; Paulhus & Williams, 2002). This conflicting finding could possibly be attributed to several variables. Firstly, the sample size of the study was too small (N=117) to grant statistical power to each condition. The lack of replication could have been due to the small number of participants; the correlation may have been too weak considering the low number of participants. More participants are needed to increase the effect and strength of the relationship and replicate previous research more accurately. The small variation among higher and lower Machs is also a potential contributing factor to the lack of significance in Machiavellianism and the personality domain of Conscientiousness. In typical studies using the MACH-IV scale, a wider range of scores are often reported. In the current study, the scores on the MACH-IV ranged from 68 to 121. The median score was a 90 while the average score was an 89.66. The MACH-IV scale posits that the average score for any given group will be almost entirely centered on 100 (Christie & Geis, 1970). The lack of a dichotomous classification due to an overwhelming one-sided majority greatly limited the significant findings of this study. Of the 15 participants that scored high on the MACH-IV (above 100), the median score was only 105.00 with a standard deviation

of 6.06. Given the range of the scale, 40-160, the higher Machs were relatively low and hardly able to be classified as "high". Pandey and Rastogi (1979) separated high and low Machs and classified high Machs as scoring from 107 to 129. The lowest score they considered to be high in Machiavellianism was greater than the median score of the high Machs in this study. The lack of variation amongst the Mach levels may have significantly contributed to the surprising results found when attempting to correlate Mach and the personality domain of Conscientiousness. Moreover, the low number of participants in general proved to be detrimental to the analysis of the construct of Mach as it related to the Big Five Personality domains of Agreeableness and Conscientiousness. Ultimately, an appropriately larger sample size would provide much clarification on the relationship between Mach and Conscientiousness.

The replicated finding regarding Machiavellianism's relationship with the Big Five Personality domain of Agreeableness was unsurprisingly found. Machiavellianism is most often defined as a high willingness to "utilize manipulative tactics and act amorally and endorse a cynical, untrustworthy view of human nature" (Dahling et al., 2009, p. 220). This amoral and manipulative personality construct negatively correlates (r=-.48, $p<.01$) with the Big Five Personality domain of Agreeableness. An agreeable person is one who is fundamentally altruistic, sympathetic, eager to help another person, and possess the optimistic mindset that other people are just as willing to help them (Coetzer, 2003). Agreeableness has been found to be a significant predictor of job performance (Tett et al., 1991). High Machs lack the ability to be agreeable and do not share the altruistic, sympathetic, and optimistic outlook on other people commonly experienced by lower Machs. Agreeableness facilitates warmth, cooperation, and is the strongest

predictor of interpersonal adjustment across development (Wang, Hartl, Laursen, & Rubin, 2016). Individuals who are low in agreeableness experience more relationship problems and interpersonal difficulties than individuals who display high levels of agreeableness (Wang et al., 2016). In workplace dyads, a high Mach who possesses a low level of agreeableness can hinder workplace performance. Agreeable leaders have a higher propensity to trust, which leads them to place more trust in workplace relationships (Nahrgang, Morgeson, & Ilies, 2009). Employees look for leaders who are pleasant, trusting, and cooperative (Nahrgang et al., 2009); leaders who are high in Mach are considered to be unsupportive (Deluga, 2001) and inconsiderate to followers (Drory & Glusinkos, 1980). High Mach employees who are low in agreeableness will consistently induce negative feelings to their low Mach partners and must take care to display cooperative tendencies while managing manipulation (Nahrgang et al., 2009). So to conclude, Machiavellianism in this study was found to demonstrate a statistically significant negative correlation with Agreeableness, achieving the goal of replicating prior work with these constructs.

Hypothesis 1b sought to explore and replicate the common findings related to EI and Machiavellianism and hypothesized that the lower an employee's level of Machiavellianism, the higher they will score on emotional intelligence. Hypothesis 1b also hypothesized that the higher an employee's level of Machiavellianism, the lower they will score on Emotional Intelligence. In general, individuals scoring higher on the MACH-IV consistently score low in EI (Dahling et al., 2009). For example, Petrides et al. (2011) found that individuals who score high on the Mach scale score lower in Trait EI dimensions and that the negative correlation is significant. The findings in this study

support that hypothesis in that Trait EI is negatively correlated (r=-.45, p<.05) with Mach. EI encompasses traits that allow an individual to identify, assess, manage and control emotions of the self, others, and groups (Ealias & George, 2012). EI in a leader or employee promotes engagement, trust and integrity to build more effective teams, increases retention rates, makes organizations more adaptable to change, and improves customer satisfaction (Ealias & George, 2012). High Machs do not possess the emotional regulation skills proposed in emotional intelligence and the organization, group, or dyad does not benefit from the deficit. The ability to identify emotions and understand others' emotions is vital to interpersonal relationships. Given the results of hypothesis 1b, high Machs do not possess a high level of Trait EI and will thus be inefficient as leaders and teammates considering their propensity to assert power and control over groups. High Machs' inability to regulate emotions in both themselves and other people greatly hinder their ability to lead effectively. For example, anger displayed by a high Mach leader might be perceived by the team members as weakness or lack of control and will not improve intragroup interactions or relationships (Melita Prati, Douglas, Ferris, Ammeter, & Buckley, 2003). So to conclude, Mach in this study was found to demonstrate a statistically significant negative correlation with Emotional Intelligence, achieving the goal of replicating prior work with these constructs.

Findings Related to Team Cohesion

Hypotheses 2a and 2b sought to explore the relationship between Machiavellianism and team cohesion. Prior research illuminates the low propensity to trust found within high Machs (Nahrgang et al., 2009) and how their low levels of agreeableness create issues in dyadic settings in the workplace (Fry, 1985). Hypothesis 2a

proposed that the pairing of an either high or low Mach partner moderates the relationship between lower Mach and team cohesion such that lower Mach employee will experience lower team cohesion when paired with a high Mach employee, and a lower Mach employee will experience higher team cohesion when paired with a low Mach employee. In this context, team cohesion is referred to as the tendency of a dyad or group to stick together and remain united in pursuit of its instrumental objectives and/or for the satisfaction of member affective needs (Carron, Brawley, & Widmeyer, 1998). In general, the findings support the idea that low Machs display lower perceptions of team cohesion when paired with a partner that is higher in Mach. Team cohesion has been a popular topic in research but has not been assessed or analyzed from this perspective. In general, team cohesion is strongly correlated with performance (Evans & Dion, 1991) and is integral to success in dyadic tasks. The construct of Machiavellianism, in this regard, has been negatively associated with team cohesion and could potentially limit dyadic success in organizations. Individuals scoring low in Mach, as previously mentioned, are highly agreeable, conscientious, honest, and have a high EI. Low Mach employees facilitate more positive interactions in teams; when paired with a high Mach, team cohesion is sacrificed. Since team cohesion is strongly correlated with group performance, it could be said that high Machs threaten group performance when paired with a low Mach. High Machs possess many undesirable traits that damage the intragroup relationship in a way that alters performance by altering team cohesion.

Specifically, Hypothesis 2b proposed that the higher an employee's level of Mach, the lower they will score on team cohesion. The results did not support the hypothesis. Low Machs, as previously discussed, report lower levels of team cohesion

when paired with higher Machs. But, that relationship is one-way according to the data. High Machs, while being a contributing reason for the lower Machs' lower levels of perceived team cohesion, do not report any significant changes across the condition in relation to team cohesion scores. In theory, their low propensity to trust in general, was thought to play a role in their hypothesized lower scores of team cohesion. Furthermore, a significant negative correlation was found (r= -.20, p<.05) between Machiavellianism and extraversion reporting higher Machs to be more introverted. Machiavellianism was also negatively correlated with teamwork preferences (r=-.25, p<.05) purporting that higher Machs prefer to work alone. The data does not adequately represent a high Mach population as the number of participants in the study was unacceptably low. The theory behind hypothesis 2b is seemingly adequate and could have been unsupported due to a sampling error. Alternatively, the lack of significant findings could have been related to higher Mach's low trait EI. As previously mentioned, individuals who possess a high trait EI are better able to understand the emotions and feelings of others as well as their own. The lack of a negative correlation could have been due to the fact that high Machs simply lack the ability to perceive their own emotions towards an event such as being paired with another person. Christie and Geis (1970) characterize a high Mach individual as lacking affect in interpersonal relationships; the lack of effect could have possibly come from their apathy towards the interpersonal dyad. Interestingly, the high Machs could potentially report a normal level of team cohesion simply because they view the pairing as an opportunity to employ their manipulative tactics on their partner. Low Machs were referred to using a number of pleasant terms while high Machs were described as being assertive, most concerned with their own self-interests…etc. and several other traits that

resemble a high Mach in the vignette used in the study. If more high Machs had participated in the study, a more accurate conclusion could be drawn investigating their levels of team cohesion when paired with a low and high Mach partner. Unfortunately, the current study does not allow for an analysis of that kind. Hypothesis 2b may have not been supported, but given the variables contributing to the non-significance, it is not entirely possible to responsibly ignore the potential of it being supported in a different sample. Future research needs to re-analyze the hypothesis that 2b attempted to investigate.

Findings Related to Trust

Hypotheses 3a and 3b sought to explore the relationship between Machiavellianism and state trust. Hypothesis 3a proposed that the pairing of an either high or low Mach partner moderates the relationship between lower Mach and trust such that a lower Mach employee will experience lower levels of trust when paired with a high Mach employee, and a lower Mach employee will experience higher levels of trust when paired with a low Mach employee. In other words, hypothesis 3a purported that individuals who scored low in Machiavellianism would be more likely to trust their partner if their partner was also low in Mach as opposed to high in Mach. Hypothesis 3b proposed that the higher an employee's level of Mach, the lower level of trust they will experience in their partner.

High Machs are known for being manipulative, amoral, and are known to "utilize manipulative tactics and act amorally and endorse a cynical, untrustworthy view of human nature" (Dahling et al., 2009, p. 220). Lower Machs scored high on Agreeableness and have a more optimistic view of other people. High Machs are much less likely to

trust others. In theory, the low Machs would have the opportunity to see the true intentions of their high Mach partner prior to the task and realize that the high Mach is more interested in their own well-being and not of their partner's well-being. High Machs are consistently considered to be lacking integrity and benevolence, and their lack of apathy regarding social interactions causes a typical low Mach to not trust them (Drory & Glusinkos, 1980). Surprisingly, the results suggested that lower Machs were rather indifferent regarding their trust levels of both low and high Mach partners. These unexpected results could have been subject to an error resulting from a small sample size. These results could have also been explained by referring to the traits of a low Mach person in general. Low Machs are more likely to positively imagine an interaction than high Machs, as high Machs imagine more unpleasant interactions (Allen, 2000). The overly optimistic viewpoint a low Mach has on the world may have influenced their opinions towards their high Mach partner, dulling the effect and resulting in a non-significant finding. High Machs have been the subjects in several studies related to trust and have consistently prioritized their own self-interests over their partners by betraying their partners trust and defecting (Gunnthorsdottir et al., 2002; Harrell & Hartnagel, 1976; Sakalaki et al., 2007). Perhaps the lower Machs attribute positive qualities to the high Machs. Perhaps low Machs need to be a bit more apprehensive to trust given their constant betrayal by high Mach partners.

Higher Machs were proposed to report lower levels of general trust regardless of the condition. As mentioned previously, high Machs have a low propensity to trust and apply a level of apathy to social interactions (Dahling et al., 2009). In a study conducted by Dahling et al. (2009), the authors found a positive correlation (r=.74, p<.01) between

higher levels of Mach and a general distrust of others. The results did not support the proposed hypothesis and instead suggested that, similar to low Machs, condition does not moderate their trust levels. This insignificant finding could have been victim of the small sample size and lack of a dichotomous high-low Mach subject pool. In theory, Machiavellianism has been seen to strongly negatively correlate with trust between two people (Butler, 1991; Frost, Stimpson, & Maughan, 1978; Heretick, 1984). Possibly, the theory laden within the hypothesis was valid while the methodological variables, such as sample size, hindered a replication of commonly found relationships between trust and Mach. Simply stated, there were not enough high Mach participants to credibly draw a conclusion one way or another; future research inquiries related to trust between high Machs needs to be investigated.

Findings Related to Teamwork Preferences

Hypothesis 4 attempted to investigate the relationship between teamwork preferences and Machiavellianism. More specifically, Hypothesis 4 proposed that the lower an employee's level of Machiavellianism, the more they will prefer to work in teams. When correlated, a significant relationship between the two variables is found (r=-.25, $p<.05$). High Machs, as previously mentioned, seek to manipulate interpersonal situations and often perceive that others may be doing the same thing to them (Christie & Geis, 1970). The implications this negative outlook has on trust has been discussed in the previous section. The implication this negative outlook has on teamwork preferences is shown in the negative correlation. High Machs have a general distrust for others, desire control and status in interpersonal relationships, are more amoral, possess more counterproductive work behaviors, and are positively related to a need for achievement or

competition (Dahling et al., 2009). Perhaps the negative correlation found between the variables of Machiavellianism and teamwork preferences reflects their unwillingness to participate in a dyad and their general distrust towards other people. Mach also negatively correlated (r=-.20, p=<.05) with extraversion which may explain their low teamwork preference. Low Machs are known to apply a more optimistic and group oriented mentality towards other people (Allen, 2000). It is of no surprise that low Machs prefer teamwork as opposed to solo work given the relationship found between Machiavellianism and Extraversion; they seek out other people. Perhaps a relationship exists between Extraversion and teamwork preference? Agreeableness and teamwork preferences positively correlated (r=.21, p<.05). Agreeableness and low Mach are consistently reported to positively correlate and combine to facilitate a positive intragroup experience (Allen, 2000). Low Machs prefer to work in teams whereas high Machs prefer to work alone. However, the dynamic between teamwork preferences and Mach is only explored prior to a pairing; future research should investigate teamwork preferences before, during, and after a task to more accurately explain this relationship. High Machs are capable of manipulation and should then perceive a group pairing as beneficial if they foresee a benefit or some gain from manipulating their partner(s).

Findings Related to Task Interdependency on Varying High and Low Mach Dyads

Hypotheses 5a, 5b, 5c, and 5d attempted to explore the relationship that task interdependency and Machiavellianism has on the pairings of individuals in the context of intergroup competition. Hypothesis 5a postulated that low Machs will report the lowest level of trust in the high Mach and High task interdependency condition. Hypothesis 5b postulated that low Machs will report the highest level of trust in the Low

Mach and high interdependency condition. After calculating an ANOVA with LSD Post Hoc comparison, hypothesis 5a and 5b were not supported. There were, however, significant findings resulting from the calculation that were not hypothesized. Table 5, below, is a replication of Table 3 found on page 58 and it summarizes the significant findings of the analysis. Table 5 explores the relationship between Machiavellianism and task interdependency. Figure 1 highlights the significant relationships found between the variables.

According to Table 5 and Figure 1, lower Machs' levels of trust vary depending on the several variables. Significant findings relate to the differences in trust scores low Machs experience when paired with a varying level of Mach in an either high or low task interdependency setting. For example, there is a significant difference in the level of trust experienced by a low Mach when the low Mach is paired with a low Mach in a low task interdependent setting when compared to a low Mach being paired with a high Mach in a low task interdependent setting (see Line A in Figure 1).

Another significant difference in trust experienced by a low Mach is when the low Mach was paired with a low Mach in a high task interdependent setting when compared to the levels of trust experienced by the low Mach when paired with a high Mach in a low task interdependent setting (see Line B in Figure 1). There is also a significant difference in the trust experienced by the low Mach when paired with a low Mach in a low task interdependent setting when compared to the level of trust experienced by a low Mach when paired with a high Mach partner in a high task interdependent setting (see Line C in Figure 1). The final significant difference in the level of trust experienced by a low Mach was when the low Mach was paired with a low Mach in a high task interdependent setting

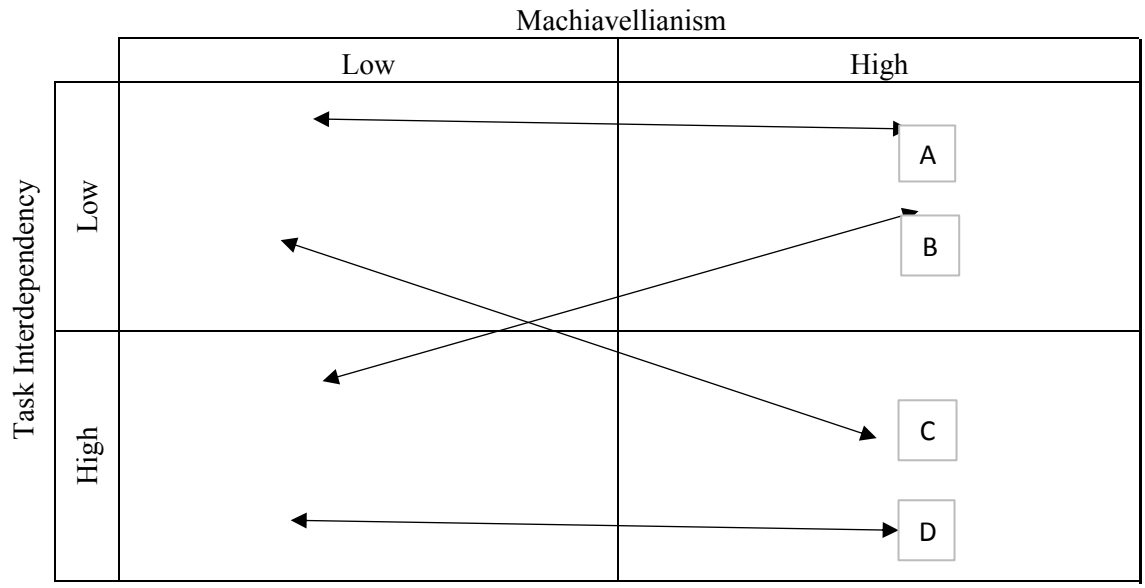
Table 5

Hypothesis 5a and 5b: Multiple Comparisons of Significant Variables

Dependent Variable: Trust

(I) Version	(J) Version	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Low Mach and Low TI	High Mach and Low TI	1.14*	.20	.00	.75	1.53
	High Mach and High TI	.83*	.19	.00	.44	1.21
High Mach and Low TI	Low Mach and Low TI	-1.14*	.20	.00	-1.53	-.75
	Low Mach and high TI	-1.17*	.17	.00	-1.51	-.83
Low Mach and high TI	High Mach and Low TI	1.17*	.17	.00	.83	1.51
	High Mach and High TI	.86*	.17	.00	.52	1.20
High Mach and High TI	Low Mach and Low TI	-.83*	.19	.00	-1.21	-.44
	Low Mach and high TI	-.86*	.17	.00	-1.20	-.52

*. The mean difference is significant at the 0.05 level.



A= Low Mach and Low TI vs. High Mach and Low TI

B= Low Mach and High TI vs. High Mach and Low TI

C= Low Mach and Low TI vs. High Mach and High TI

D= Low Mach and High TI vs. High Mach and High TI

Figure 1: Hypotheses 5a and 5b

compared to when a low Mach was paired with a high Mach in a high task interdependent setting (see Line D in Figure 1). No significant difference was found that offered any significance between the levels of trust low Machs reported when paired with either a high or low Mach across task interdependency. In other words, the results suggest that no difference in trust levels for low Machs existed when a low Mach was paired with a low Mach in either high or low task interdependency conditions. Alternatively, no difference was found between the levels of trust reported by low Machs when paired with high Machs in either high or low task interdependency conditions. This lack of significance could exist because the task interdependency was irrelevant to the low Machs' and that they determined their trust level based upon their partners Machiavellian traits and ignored the level of interaction they would have. Task interdependency seems to have little to no effect t on the levels of trust experienced by lower Machs across different conditions of task interdependency.

Hypotheses 5c proposed that low Machs would report the lowest levels of team cohesion in the high Mach and high task interdependency condition. Hypothesis 5d proposed that low Machs will report the highest level of team cohesion in the low Mach and high interdependent condition. According to the results, both hypothesis 5c and 5d were not supported. Table 6 explains the findings in greater detail.

Table 6 highlights all of the significant findings from the calculation. Figure 2 seeks to visually represent the significant interactions. According to Table 6 and Figure 2, lower Machs' levels of team cohesion vary depending on the several variables Significant findings relate to the differences in team cohesion scores low Machs experience when paired with a varying level of Mach in an either high or low task interdependency setting.

Table 6

Hypothesis 5c and 5d: Multiple Comparisons of Significant Variables

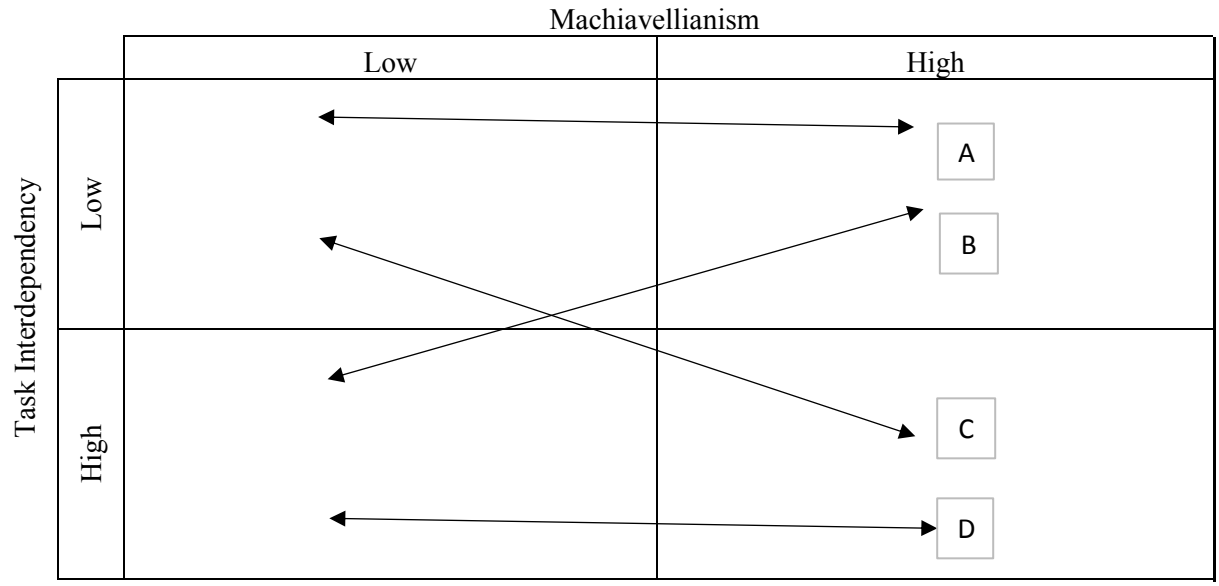
Dependent Variable: Team Cohesion

(I) Version	(J) Version	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Low Mach and Low TI	High Mach and Low TI	2.69*	.24	.00	2.20	3.17
	High Mach and High TI	2.64*	.24	.00	2.16	3.12
High Mach and Low TI	Low Mach and Low TI	-2.69*	.24	.00	-3.17	-2.20
	Low Mach and high TI	-2.45*	.22	.00	-2.88	-2.01
Low Mach and high TI	High Mach and Low TI	2.45*	.22	.00	2.01	2.88
	High Mach and High TI	2.40*	.22	.00	1.97	2.83
High Mach and High TI	Low Mach and Low TI	-2.64*	.24	.00	-3.12	-2.16
	Low Mach and high TI	-2.40*	.22	.00	-2.83	-1.97

* The mean difference is significant at the 0.05 level.

A significant difference was found in the levels of team cohesion experienced by a low Mach when the low Mach is paired with a low Mach in a low task interdependent setting when compared to a low Mach being paired with a high Mach in a low task interdependent setting (see Line A in Figure 2). Another significant difference in the levels of team cohesion experienced by a low Mach was found when the low Mach was paired with a low Mach in a high task interdependent setting when compared to the levels of team cohesion experienced by the low Mach when paired with a high Mach in a low task interdependent setting (see Line B in Figure 2).

There is also a significant difference in the levels of team cohesion experienced by the low Mach when paired with a low Mach in a low task interdependent setting when compared to the level of team cohesion experienced by a low Mach when paired with a high Mach partner in a high task interdependent setting (see Line C in Figure 2). The final significant difference in the level of team cohesion experienced by a low Mach was when the low Mach was paired with a low Mach in a high task interdependent setting



A= Low Mach and Low TI vs. High Mach and Low TI
B= Low Mach and High TI vs. High Mach and Low TI
C= Low Mach and Low TI vs. High Mach and High TI
D= Low Mach and High TI vs. High Mach and High TI

Figure 2: Hypotheses 5c and 5d

compared to when a low Mach was paired with a high Mach in a high task interdependent setting (see Line D in Figure 2). The results mirror the results found in Figure 1. Once again, no significant difference was found that offered any significance between the levels of team cohesion low Machs reported when paired with either a high or low Mach across task interdependency. Similar to the results found in hypotheses 5a and 5b, the results suggest that no difference in team cohesion levels for low Machs existed when a low Mach was paired with a low Mach in either high or low task interdependency conditions. Alternatively, no difference was found between the levels of team cohesion reported by low Machs when paired with high Machs in either high or low task interdependency conditions. This lack of significance could exist because the task interdependency was irrelevant to the low Machs' and that they determined their team

cohesion level, similar to hypotheses 5a and 5b, based upon their partner's Machiavellian traits and ignored the level of interaction they would have. Task interdependency seems to have little to no effect on the levels of team cohesion experienced by lower Machs across different conditions of task interdependency.

Summary

In conclusion, this chapter sought to explain the findings in the current study. In summation, the study found a statistically significant correlation between Mach and Agreeableness. Furthermore, the study was unable to replicate previous findings and failed to find a statistically significant relationship between Mach and Conscientiousness. The current study successfully found a statistically significant negative relationship between Mach and EI. The pairing of an either high or low Mach partner does moderate the relationship between lower Mach and team cohesion such that lower Mach employee experienced lower team cohesion when paired with a high Mach employee, and a lower Mach employee experienced higher team cohesion when paired with a low Mach employee. Higher Machs did not show any significant relationship with team cohesion scores. The current study also found a statistically significant negative correlation between Mach and teamwork preferences. The current study was unable to determine the conditions that would create the lowest levels of trust and team cohesion for low Machs as well as the highest levels of trust and team cohesion for A ow Machs.

Chapter 7: Conclusion

This study has attempted to advance the management literature by adding to the breadth of previous research and filling the void that existed pertaining to dyadic relationships within the context of intergroup competition among variables of Mach and interdependency. In this chapter, the strengths and limitations will be assessed as well as both the practical and academic implications of the study. Following these subsections, future research directions will be discussed, and final remarks will be shared.

Strengths and Limitations

The present study possessed several strengths despite several limitations. First, the selection of participants enabled the surveying of a particular population; undergraduate business students from a large regional university in the Midwest United States. The findings are representative of the sample population. Furthermore, the quantitative nature of this projects allows the findings to be explored in great detail and allows the results to be generalized considering the representative sample of the study population. Secondly, the use of validated scales and popular measurement tools allow for more control of validity and credibility. Third, Mach has rarely been explored or researched in the context of a dyad. Most research investigates Mach as it pertains to the dark triad and leadership literature. This study implemented a different angle to an old and under-researched literature and sought to shed light on a new concept. This study's innovativeness helps further the research into Mach by adding the variables of competition, teamwork, varying levels of Mach in a partner, and varying degrees of task interdependency. When building upon the findings in the present study, future research must maintain the strengths found

within this study while also finding new ways to improve upon and minimize the study's current limitations so that Mach in different workplace settings is better understood and advanced in the diluted literature.

Despite the strengths found within the structure, development, implementation, and analysis of the current study, one must not ignore glaring limitations. The first limitation to this study was the usable sample size (N=117). Given the number of different conditions present in the study, a larger sample size would have achieved a higher statistical power to possibly produce more statistically significant findings. A larger sample would have yielded more observable participants who display more variance within the construct of Mach. Increasing the sample size would have not only helped build a more representative sample, but it would have also allowed for more accurate data and higher degrees of power. Should this study be replicated, the investigators should strive to accumulate a larger sample size so the statistical power is greater and the results are more credible and generalizable. Furthermore, the generalized sample population minimizes the implications found within this study as it pertains to a small generalized population. The sample included undergraduate business students from a large regional university in the Midwest United States and is hardly representative of any other population. The lack of generalizability in the sample is a grave weakness that limits the implications of the findings. A more diverse sample would have helped generate stronger implications to a more broad scope of individuals and would have been more representative of the general population as a whole.

The second limitation presented itself in the overall format and structure of the study. The study attempted to induce a feeling of competition and tried to establish

enough character traits in the non-existent partner to adequately create a genuine, real-life response to the measures; in other words, no behavioral data was collected. The study did not include the actual completion of a task in a real-life situation nor was the pairing of a genuine high or low Mach partner feasible. Had the study included the completion of a task while being paired with another participant after Mach scores were attained, the study could have measured more outcome variables as more scales and measurements refer to post-task perceptions and behaviors as opposed to pre-task. Considering the time restraint and lack of resources, this was unfortunately not possible. The consequence of this unavoidable determent presented itself in the form of low effects and potentially inaccurate findings. Furthermore, it was difficult to measure what the study sought to measure because of the context of the study. Prior to measuring responses, the number of outcome variables applicable to the study and available for use were extremely limited and sparse. It was difficult to find validated scales that investigated the perceived opinions related to teamwork, trust, and other preferences in a pre-task setting as opposed to a post-task completion setting; most readily available and commonly used scales seek perceptions following the completion of a task as opposed to beliefs, opinions, and perceptions prior to a task. An *in-vivo* laboratory study that first measured Mach levels, then randomly paired individuals together to complete an externally competitive task varying in interdependency, followed by valid measurements of outcome variables and performance would provide scholars with a much clearer picture on the relationship between Machiavellianism and dyadic settings. The authenticity of an *in-vivo* experiment could also trigger the common manipulativeness and self-serving behaviors normally found in individuals high in Machiavellianism. The extent to which the high Machs could

employ their tactics would potentially be greater in a real-life setting as opposed to no face-to-face interaction. The socialization of the high and low Machs in the different settings would potentially yield different results than the currently employed methods.

Another limitation to this study was the usage of scales for the Big Five Personality Index (BFI), Machiavellianism, and EI. The BFI scale used was scaled down from a larger assessment tool that yielded higher alphas. Although the alpha for the BFI-44 was adequate (α=.76-.78) (John & Srivastava, 1999), the lower number of items caused the alpha to decline from the original scale. The BFI-44 was selected because of the time restraint each participant was to be subjected to (preferably less than 20 minutes) and because it was a self-report scale. Other BFI scales such as the commonly used NEO PI-R (Costa & McCrae, 1992) was not used. The NEO PI-R is a scale comprised of 240 items and takes, on average, 35 minutes to complete. Although the NEO PI-R allows for a more in-depth look in to the Big Five personality traits, the length required to complete the assessment coupled with the training required to utilize the measure all but rendered it unfeasible. The MACH-IV (Christie & Geis, 1970) was used considering its prevalence in the research. It would have been difficult to compare the findings of this study with older studies investigating somewhat similar research ideas if a different scale had been used. Furthermore, newer scales such as the Machiavellian Personality Scale (MPS) (Dahling et al., 2009) have gained popularity. The MPS, in this case, was not used due to the greater number of items (45) and the sacrifice of generalizability and relation to other popular studies that used the MACH-IV. In reference to the SSEIT, the measurement used to assess trait EI, this was not the first scale chosen for the study. EI is roughly broken down in to three different models/theories: the Ability Model (Mayer, Salovey,

Caruso, & Sitarenios, 2001), Mixed Model (Goleman, 1998), and the Trait Model (Petrides & Furnham, 2000). Goleman's model is the most popularized and has been the focus of much research regarding EI (Schutte et al., 1998). His mixed model pulls from both the trait and ability model. A limitation of this study is in reference to how difficult it was to find a scale created by Goleman that represents the popular Mixed Model of EI that is neither a) expensive, nor b) requires actual training. His measurements are quite in depth and require the participant to receive one-on-one attention for several hours. Goleman's required level of commitment per each participant was not feasible for this study. Van Rooy & Viswesvaran (2004) suggest that there is, in fact, no generally accepted, robust measure of EI, and often researchers construct their own measures because of the lack of research examining the validity of existing measures. For this reason, the SSEIT was selected due to its length and validity. Should this study be replicated, investigators need to select measurements conducive to the theory they support so long as time restraints and monetary values are no cause for concern. Sacrifices were made for the sake of time, usability, accessibility, and convenience. Although the Cronbach's alphas found in each scale were adequate, removing time constraints in a future study would enable the researcher to employ more freedom over the selection of measures and scales used.

Another weakness found within this study pertains to the scale used to measure team cohesion. For the purpose of this study, team cohesion was defined as the tendency of a dyad or group to stick together and remain united in pursuit of its instrumental objectives and/or for the satisfaction of member affective needs (Carron et al., 1998). Given the unique procedure of this study, a previously constructed scale measuring team

cohesion was not found as most current scales measure team cohesion following a completed task. A team cohesion scale was created and implemented. Usually, the development and analysis of a scale follows 7 steps and are as follows: 1) create items, 2) test for conceptual consistency of items, 3) determine the scale for items, determine adequate sample size, and administer questions with other established measures, 4) conduct a factor analysis to reduce the set of items and generate a confirmatory to test the significance of the scale, 5) determine the reliability of the scale, 6) determine the convergent and criterion-related validity of the scale, and 7) repeat the scale-testing process with a new data set (Hinkin, Tracey, & Enz, 1997). The scale created to measure team cohesion perceptions did not follow those seven steps. Instead, the scale was created and used. The validity and reliability of the scale is unknown and should be explored before using in future research studies.

Additionally, Machiavellianism is difficult to represent in several lines of a vignette. The ability to manipulate is often highlighted in most definitions, as it is a key characteristic. Attempting to induce the feeling of imminent manipulation is difficult to do in a laboratory study, let alone a vignette. High Machs are often smart enough to blend in with their respective groups and will not defect until their subtle manipulations have been identified. A grave limitation is that the participants assigned to the high Mach condition were made aware of their personality traits well before a real high Mach would have defected. A genuine high Mach would have blended in with the group, gathered information about the group, self-disclosed strategic information to gain trust (Dahling et al., 2009). The low Machs were never given the chance to be manipulated and were instead forced to feel feelings of distrust for the sake of the study. It is justified to ask:

would a low Mach in a low interdependent task be able to recognize Machiavellianism in their partner without sufficient interaction?

Given the nature of this study, the application of self-report methods was required. The data received from the participants is subject to biases as social norms and social desirability may have influenced their responses. In other words, the participants could have ignored their own personal beliefs and opinions and answered the questions regarding the vignette and scales in a way that mirrors what they believe society thinks is socially acceptable. Furthermore, the self-report method places a great deal of trust towards the participants assuming they will participate in the study genuinely and authentically. The low number of high Machs could have been a result of the high Machs manipulating the methodology of the study; high Machs could have been among the participants that did not complete the study or that chose not to participate. Given their propensity to defect (Dahling et al., 2009), it is not irresponsible to consider the idea that they manipulated the confidentiality component of the methodology and simply did not complete the study. As previously mentioned, a real-life experiment might induce a sense of accountability that could render more complete and authentic participation by high Machs.

High Machs are renowned for blending in with the crowd; this is one of their manipulative techniques (Dahling et al., 2009). Furthermore, the low response and completion rate of the distributed surveys has implications for the data received. The majority of the data received was found to come from low Machs. It is possible that the high Mach individuals who were invited to participate in the study saw little to gain and avoided the task all together. Furthermore, low Machs score high in helping behaviors

and are far more likely to assist someone in need of help; high Machs are less likely to engage in helping behaviors, especially when they view the potential reward as insufficient for their efforts (Wolfson, 1981).

Implications

The findings of this thesis provide more information regarding the construct of Machiavellianism. The results have enabled several implications to be generated that pertain to both the academic and practical realm of organizational behavior. This study attempted to build on the body of research regarding the construct of Machiavellianism and approached the recently popular topic from a new and unique perspective. The addition of intergroup competition and variables of task interdependency and Machiavellianism have generated results and implications that have not been investigated before.

This study has implications for the Machiavellianism literature, since it was largely built upon previous work from the Machiavellianism literature. First, this thesis promotes further investigation into Machiavellianism. Since Christie and Geis (1970) developed the first construct of Machiavellianism from Niccolo Machiavelli's book *The Prince*, Machiavellianism has been examined by many different angles. This thesis is evidence that there are still many dimensions and aspects of Machiavellianism that have yet to be investigated and that could facilitate important implications both practically and academically. Unlike most studies that focus more on high Machs, this study chose to investigate and integrate new variables and explore their effect on low Machs' perceptions of trust and team cohesion along with several other variables. While the findings of this study were predominantly non-significant, the theoretical principles in

which hypotheses were formulated support the relationships being examined. Ultimately, this thesis proposes that more research should be devoted towards better understanding the relationship between low and high Machs in an attempt to generate future research that is theoretically comprehensive and provides implications for organizations and academics alike.

A second implication of this thesis is that it builds on the literature pertaining to comparisons of high and low Machs. Previous literature has focused on the behaviors of high and low Machs, but this thesis is unique in that it explores the perceptions of both high and low Machs in various settings representative of real-life situations. While the sample size within the study was deemed too small to adequately investigate high Machs' perceptions, perceptions and significant findings related to low Machs were able to be explored and investigated. Previous research has been conducted which implemented popular trust games between high and low Machs (Gunnthorsdottir et al, 2002; Wilson et al., 1996); however, no prior research has investigated the relationships between high and low Machs in the presence of varying levels of task interdependency in the context of intergroup competition. This thesis attempted to fill the void in literature and was able to identify relationships between low Machs' perceptions of trust and team cohesion in various conditional settings.

In terms of practical implications, this thesis has attempted to highlight the relationship that Machiavellianism has with important outcome variables such as team cohesion, trust, and teamwork preferences. Since significant differences were found in the levels of trust and team cohesion amongst the different dyads, organizations need to remain vigilant in whom they pair in workplace situations. Low Machs are sensitive to

high Machs and report significantly different levels of trust and team cohesion when paired with them as opposed to when they are paired with fellow low Machs. Wilson et al. (1996) proposed that organizations need to recognize individuals who are high in Machiavellianism and make an effort to move them between groups frequently rather than remaining in a single group than can learn, recognize, and retaliate against, manipulation and deception. High Machs immediately influence the levels of trust and team cohesion low Machs feel prior to even beginning a task.

Organizations would benefit from testing their employees' levels of Machiavellianism prior to any group work. The time spent analyzing each employees' Mach score would pay dividends given the plethora of research that has been conducted regarding the counter productive work behaviors (Dahling et al., 2009), amoral leadership tendencies (Deluga, 2001), lack of helping behaviors (Wolfson, 1981), and manipulative tactics (Harrell, 1980) of high Machs in groups. Machiavellianism is detrimental to both groups and organizations and must be controlled for and properly measured.

Organizations would also benefit by identifying optimal dyads between low and high Machs. According to the findings of this study, task interdependency is not a significant contributing factor to low Mach employees' perceptions of trust or team cohesion. It seems as though the pairing of the different Mach levels influences the outcome variables more than the task interdependency. In other words, the degree of interaction is irrelevant when a low Mach is paired with a high Mach as both team cohesion and trust displayed significantly different results than when paired with a low Mach. In sum, organizations would benefit from advancing this research to find which dyad performs best and how even more outcome variables will be effected by their

pairings. For example, if two managers are responsible for the same group of employees, would it not behoove the organization to identify the optimal pairing of the managers so that they work well together and lead the employees in the same direction? Given the significant differences found in low Machs' levels of trust and team cohesion when paired with a high Mach, an organization might benefit from pairing two low Machs who both cooperate, share information, are agreeable, conscientious, and are more extraverted. Given the lack of research pertaining to Mach pairings and the limited findings of this thesis, identifying optimal dyads in terms of Mach scores could bode well for the overall functionality of an organization. Doing so may increase the productivity of the dyad and improve overall efficiency on projects within an organization.

Future Research Directions

Several questions have been formulated and many future research directions have been generated from this thesis. Since the popularizing of Machiavellianism in the 1970s and 1980s (Dahling et al., 2009) research delving in to the personality construct has become less popular in recent years. Substantial work is needed from the Machiavellianism research perspective. Specifically, the implications that this personality construct has pertaining to dyads and teamwork in organizations needs to be further investigated. Previous research regarding Machiavellianism has divulged valuable information as to how high Machs act as leaders (e.g., Deluga, 2001), their job satisfaction (e.g., Gable & Topol, 1987), their engagement in helping behaviors (e.g., Wolfson, 1981), and relationship with unethical behavior.

Future researchers interested in the construct of Machiavellianism may want to look at how the varying generations still active in today's workforce react to the different

levels of Machiavellianism. Future research might be interested in assessing how older generations (Generation Xers, Baby Boomers, and The Silent Generation) as well as the new and upcoming Generation Z will react to the Machiavellianism construct. Research within the realm of Machiavellianism is tapering. Implications can be derived from studies investigating the effect of Machiavellianism on different generations and can farther assist in bridging the gap between intergenerational workforces. Furthermore, who is to say that one generation is higher or lower in Mach than another? Given the lack of intergenerational research pertaining to the construct of Mach, management principles and practices may need altering if one is found to be higher in the construct and vice-versa.

Future research may also look to create a timeline documenting important events and activities that occurred in the past and assess how Mach has changed overtime. For example, an investigation in to the levels of Mach and prevalence of Mach at the time of Enron's huge scandal could be assessed. A timeline describing the status of Mach throughout time could help identify trends and patterns that could be used to better detect big corporate scandals or even help explain why they occurred. It may be interesting to document how the construct of Mach has changed overtime and how the current business world reflects those changes or if it even does.

A longitudinal study of Mach has not been attempted but may offer important insights regarding the construct. A future research direction could attempt to measure the Mach levels of individuals throughout their lifetime to investigate whether Mach is susceptible to changing. For example, Mach levels could be determined in a group of young boys and girls and re-measured every 5-10 years. This research project would help

explore the plasticity of Mach and provide insight as to how or if it changes. It could also help provide insight on how, if Mach can change overtime, to change Mach levels in employees. A longitudinal study would be revolutionary in the Mach literature and could provide information and data that has never been collected.

Another future research direction involves generating a similar study in a full behavioral laboratory setting as the current study was a semi-laboratory study. Future researchers interested in the relationship between Machiavellianism and outcome variables such as the ones employed in this thesis should investigate those relationships implementing a real-life task. The completion of a task by dyads that have been pre-screened and randomly assigned to conditions would offer a great deal of information. The addition of intergroup competition would also mirror the intentions of this study. Future research should select high Machs prior to the completion of a task to best dichotomize the participants. Future researchers may feel inclined to conduct a field study of observation in an organization as well. This would offer even more data relating to the construct and would produce valuable insights relating to the dynamic of Machin the workplace.

The current study slightly attempted to induce an unethical thought in the low Mach conditions. In the low Mach condition, the fake partner explains how they are upset about their place in the competition and would be able to alter the scores given their knowledge of IT. They then go on to explain how they would never do such a thing as it is better to lose with dignity than to win by cheating. The limitation in this regard lies within the following question: would a genuine low Mach even think in an unethical way? High Machs have a propensity to manipulate and overlook long-term consequences

and unethical principles when faced with something they want (Dahling et al., 2009). Is it possible to infer the thought process of a low Mach given the lack of research in to their unethical cognitions? It is possible that low Machs do have cognitions similar to those of a high Mach and that low Machs simply have more self-restraint and practice more regulated behavioral management. Given the lack of literature and potential confounds associated with social desirability and self-assessments, an inquiry in to a difficult question would be rather arduous and susceptible to many confounds. As this interesting dynamic remains unexplored, future researchers should consider this relationship. For the purpose of the current study, no significant findings were discovered.

The final future research direction proposed involves selecting from a different participant pool. The current study utilized college undergraduates who were in junior standing. The lack of high Machs from the sample was both disheartening and frustrating during data collection as the analyses were limited and the scope of the study was forced to shrink. Future researchers may want to include individuals who are high in Machiavellianism by assessing employees in an actual company. A related future direction could be the investigation of Machiavellianism levels within a company and involve an attempt to correlate the Mach levels with levels of power or position.

Final Remarks

This thesis was relatively successful in advancing the literature regarding Machiavellianism by including new variables of task interdependency and the context of competition. Further, this thesis aimed to identify optimal dyads in which team cohesion and trust would be highest. Significant correlations were identified regarding levels of Machiavellianism and variables such as teamwork preferences, EI, general trust, team

cohesion, and the Big Five Personality domains. Further work exploring the many facets of Machiavellianism will generate more concrete findings regarding the relationship between Machiavellianism and outcome variables important to organizational success so the effects may be observed and conceptualized to answer more complex questions regarding management principles.

References

Allen, T. H. (1990). An investigation of Machiavellianism and imagined interaction. *Communication Research Reports*, *7*(2), 116-120. Retrieved from http://eds.a.ebscohost.com.libproxy.eku.edu/ehost/pdfviewer/pdfviewer?sid=8d5689be-243b-4600-a4dc-719202b22f6b%40sessionmgr4006&vid=1&hid=4208

Anand, V., Ashforth, B. E., & Joshi, M. (2004). Business as usual: The acceptance and perpetuation of corruption in organizations. *Academy of Management Executive*, 18, 39-55.

Babiak, P. (1995). When psychopaths go to work: A case study of an industrial psychopath. *Applied Psychology: An International Review*, *44*, 171–188.

Barrick, M. R., & Mount, M. K. (1991). The big five personality dimensions and job performance: A meta-analysis. *Personnel Psychology*, *44*, 1-26.

Barrick, M.R., & Mount, M.K. (1993). Autonomy as a moderator of the relationship between the big five personality dimensions and job performance. *Journal of Applied Psychology, 78*, 111-118.

Barrick, M. R., Stewart, G. L., Neubert, M. J., & Mount, M. K. (1998). Relating member ability and personality to work-team processes and team effectiveness. *Journal of Applied Psychology*, *83*(3), 377. Retrieved from http://down.cenet.org.cn/upfile/47/200510611228176.pdf

Bereczkei, T., & Czibor, A. (2014). Personality and situational factors differently influence high mach and low mach persons' decisions in a social dilemma game. *Personality and Individual Differences*, *64*, 168-173. http://dx.doi.org/10.1016/j.paid.2014.02.035

Board, B. J., & Fritzon, K. (2005). Disordered personalities at work. *Psychology, Crime and Law, 11*, 17–32. doi:10.1080/10683160310001634304

Bochner, A. P., & Bochner, B. (1972). A multivariate investigation of machiavellianism and task structure in four-man groups. *Speech Monographs*, *39*, 277-285. http://dx.doi.org/10.1080/03637757209375766

Boddy, C. R., Ladyshewsky, R., & Galvin, P. (2010). Leaders without ethics in global business: Corporate psychopaths. *Journal of Public Affairs, 10,* 121–138.

Butler, J. K. (1983). Reciprocity of trust between professionals and their secretaries. *Psychological Reports, 53*(2), 411-416. doi:10.2466/pr0.1983.53.2.411

Butler, J. K. (1991). Toward understanding and measuring conditions of trust: Evolution of a conditions of trust inventory. *Journal of Management*, *17*(3), 643-663. Retrieved from http://ejournal.narotama.ac.id/files/butler%20jr,%201991.pdf

Campbell, W. K., Rudich, E. A., & Sedikides, C. (2002). Narcissism, self-esteem, and the positivity of self-views: Two portraits of self-love. *Personality and Social Psychology Bulletin, 28,* 358–368.

Campion, M. A., Medsker, G. J., & Higgs, A. C. (1993). Relations between work group characteristics and effectiveness: Implications for designing effective work groups. *Personnel Psychology*, *46*(4), 823-847. Retrieved from http://www.krannert.purdue.edu/faculty/campionm/Relations_Between_Work.pdf

Carron, A. V., Brawley, L. R., & Widmeyer, W. N. (1998). The measurement of cohesiveness in sport groups. *Advances in Sport and Exercise Psychology Measurement*, 213-226.

Christe, R., & Geis, F. (1970). *Studies in Machiavellianism.* San Diego, CA: Academic

Press. Retrieved from https://books.google.com/books?hl=en&lr=&id=d5tGBQAAQBAJ&oi=fnd&pg=PP1&ots=rhoJKIUDB5&sig=wn3HYRbCktpDnvtd_yf_ig56DbU#v=onepage&q&f=false

Cleckley, H. (1941). The mask of sanity; an attempt to reinterpret the so-called psychopathic personality. St. Louis, MO. Retrieved from http://cassiopaea.org/cass/sanity_1.PdF

Cooper, S., & Peterson, C. (1980). Machiavellianism and spontaneous cheating in competition. *Journal of Research in Personality*, *14*(1), 70-75. doi:10.1016/0092-6566(80)90041-0

Costa, P. T., Jr., & McCrae, R. R. (1992). *NEO Personality Inventory—Revised (NEO-PI-R) and NEO Five-Factor Inventory (NEO-FFI) Professional Manual*. Odessa, FL: Psychological Assessment Resources.

Corzine, J. B. 1997. Machiavellianism and management: A review of single-nation studies exclusive of the USA and cross national studies. *Psychological Reports*, *80*, 291-304.

Czibor, A., & Bereczkei, T. (2012). Machiavellian people's success results from monitoring their partners. *Personality and Individual Differences*, *53*(3), 202-206. Retrieved from http://dx.doi.org/10.1016/j.paid.2012.03.005

Dahling, J. J., Whitaker, B. G., & Levy, P. E. (2009). The development and validation of a new Machiavellianism scale. *Journal of Management, 35*, 219−257. doi:10.1177/0149206308318618

Davies, M., & Stone, T. (2003). Synthesis: Psychological understanding and social skills. In B. Repacholi & V. Slaughter (Eds.), *Individual Differences in Theory of Mind* (305-353). New York: Psychology Press. Retrieved from http://www.mkdavies.net/Martin_Davies/Papers_files/PsychUnderstanding.pdf

Decuyper, M., De Pauw, S., De Fruyt, F., De Bolle, M., & De Clercq, B. J. (2009). A meta-analysis of psychopathy-, antisocial PD- and FFM associations. *European Journal of Personality, 23*(7), 531-565. doi:10.1002/per.729

De Dreu, C. K. (2007). Cooperative outcome interdependence, task reflexivity, and team effectiveness: a motivated information processing perspective. *Journal of Applied Psychology*, *92*(3), 628-638. doi:10.1037/0021-9010.92.3.628

Deluga, R. J. (2001). American presidential Machiavellianism: Implications for charismatic leadership and rated performance. *Leadership Quarterly*, *12*, 339-363.

Den Hartog, D. N., & Belschak, F. D. (2012). Work engagement and machiavellianism in the ethical leadership process. *Journal of Business Ethics*, *107*(1), 35-47. doi:10.1007/s10551-012-1296-4

Dirks, K. T., & Ferrin, D. L. (2002). Trust in leadership: Meta-analytic findings and implications for research and practice. *Journal of Applied Psychology, 87,* 611-628. Retrieved from http://dx.doi.org/10.1037/0021-9010.87.4.611

Drory, A., & Gluskinos, U. M. (1980). Machiavellianism and leadership. *Journal of Applied Psychology*, *65*, 81-86. Retrieved from https://www.researchgate.net/profile/Amos_Drory/publication/232510451_Machiavellianism_and_leadership/links/552b9b410cf21acb091e4c31.pdf

Durkin, J. (1970). Encountering: What low-machs do. P*aper presented at the annual meeting of the Eastern Psychological Association*, Boston.

Dyer, J. L. (1984). Team research and team training: A state of the art review. In F. A. Muckler (Ed*.), Human factors review,* 285–323. Santa Monica, CA: Human Factors Society

Ealias, A., & George, J. (2012). Emotional intelligence and job satisfaction: a correlational study. *Research Journal of Commerce and Behavioral Science*, *1*(4). Retrieved from https://www.researchgate.net/profile/Jijo_George3/publication/256019752_Emotional_Intelligence_and_Job_Satisfaction_A_Correlational_Study/links/0deec53887806990c5000000.pdf

Edwards, R., Honeycutt, J. M., & Zagacki, K. S. (1988). Imagined interaction as an element of social cognition. *Western Journal of Communication, 52*(1), 23-45. Retrieved from http://s3.amazonaws.com/academia.edu.documents/3825812/IISasanelementofcognition_WJC.pdf?AWSAccessKeyId=AKIAJ56TQJRTWSMTNPEA&Expires=1475682214&Signature=CrJ4NWSa8yFNtIEX3HtijOu9XcQ%3D&response-content-disposition=inline%3B%20filename%3DImagined_Interaction_as_an_Element_of_So.pdf

Evans, C. R., & Dion, K. L. (1991). Group cohesion and performance a meta-analysis. *Small Group Research*, *22*(2), 175-186. doi:10.1177/1046496491222002

Fukuyama, F. (1999). *The great disruption: Human nature and the reconstitution of social order.* New York: Free Press.

Foster, J. D., Campbell, W. K., & Twenge, J. M. (2003). Individual differences in narcissism: Inflated self-views across the lifespan and around the world. *Journal of Research in Personality, 37,* 469–486. Retrieved from http://dx.doi.org/10.1016/S0092-6566(03)00026-6

Frost, T., Stimpson, D. V., & Maughan, M. R. (1978). Some correlates of trust. *The Journal of Psychology: Interdisciplinary and Applied*, *99*(1), 103-108. Retrieved from http://dx.doi.org/10.1080/00223980.1978.9921447

Fry, W. R. (1985). The effect of dyad Machiavellianism and visual access on integrative bargaining outcomes. *Personality and Social Psychology Bulletin*, *11*(1), 51-62. Retrieved from http://psp.sagepub.com/content/11/1/51.full.pdf

Gable, M., & Topol, M. T. (1987). Job satisfaction and machiavellian orientation among department store executives. *Psychological Reports*, *60*(1), 211-216. Retrieved from http://prx.sagepub.com.libproxy.eku.edu/content/60/1/211.full.pdf+html

Geis, F. (1970). The con game. In R. Christie & Geis (Eds.), *Studies in Machiavellianism* (106-129). New York: Academic Press.

George, J. M. (2000). Emotions and leadership: The role of emotional intelligence. *Human Relations*, *53*(8), 1027-1055. Retrieved from http://s3.amazonaws.com/academia.edu.documents/3461333/wk_3_EI_and_leadership.pdf?AWSAccessKeyId=AKIAJ56TQJRTWSMTNPEA&Expires=1476299740&Signature=grWDWu%2FjSjUr8nPUaXVaz5U2WhY%3D&response-content-

disposition=inline%3B%20filename%3DEmotions_and_leadership_The_role_of_emot.pdf

Gunnthorsdottir, A., McCabe, K., & Smith, V. (2002). Using the Machiavellianism instrument to predict trustworthiness in a bargaining game. *Journal of Economic Psychology*, *23*, 49-66. Retrieved from http://teamvdf.free.fr/TER%20M1/Machiavellianism%20et%20bargain%20game.pdf

Goldberg, L. R. (1981). Language and individual differences: The search for universals in personality lexicons. In L. Wheeler (Ed.), *Review of Personality and Social Psychology*, *2*, 141 -165. Beverly Hills, CA: Sage

Goldberg, L. R. (1993). The structure of phenotypic personality traits. *American Psychologist, 48*, 26-34.

Goldstein, H. W., Zedeck, S., & Goldstein, I. L. (2002). Is this your final answer? *Human Performance, 15*, 123–142. Retrieved from http://dx.doi.org/10.1080/08959285.2002.9668087

Goleman, D. (1998). *Working with emotional intelligence*. Bantam. Retrieved from http://www.mann-ivanov-ferber.ru/assets/files/bookparts/working-with-emotional-intelligence/ei_read.pdf

Guzzo, R. A., & Shea, G. P. (1992). Group performance and intergroup relations in organizations. *Handbook of Industrial and Organizational Psychology*, *3*, 269-313. Retrieved from http://tamuweb.tamu.edu/faculty/bergman/guzzo1990.pdf

Gully, S. M., Devine, D. J., & Whitney, D. J. (1995). A meta-analysis of cohesion and performance effects of level of analysis and task interdependence. *Small Group*

Research, *26*(4), 497-520. Retrieved from http://sgr.sagepub.com.libproxy.eku.edu/content/26/4/497.full.pdf+html

Hansen, C. H., & Hansen, R. D. (1991). Constructing personality and social reality through music: Individual differences among fans. *Journal of Broadcasting and Electronic Media, 35,* 335–350. doi:10.1080/08838159109364129

Hare, R. D. (1980). A research scale for the assessment of psychopathy in criminal populations. *Personality and Individual Differences, 1*, 111-119. doi:10.1016/0191-8869(80)90028-8

Harrel, W. A. (1980). Retaliatory aggression by high and low machiavellians against remorseful and non-remorseful wrongdoers. *Social Behavior and Personality: an International Journal*, *8*(2), 217-220. Retrieved from http://dx.doi.org/10.2224/sbp.1980.8.2.217

Harrell, W. A., & Hartnagel, T. 1976. The impact of Machiavellianism and the trustfulness of the victim on laboratory theft. *Sociometry*, *39*, 157-165. doi:10.2307/2786216

Heretick, D. M. (1984). Trust-suspicion and gender differences in interpersonal functioning. *Journal of Research in Personality*, *18*(1), 27-40. Retrieved from http://dx.doi.org/10.1016/0092-6566(84)90036-9

Hinkin, T. R., Tracey, J. B., & Enz, C. A. (1997). Scale construction: Developing reliable and valid measurement instruments. *Journal of Hospitality & Tourism Research*, *21*(1), 100-120. doi:10.1177/109634809702100108

Hinsz, V. B., Tindale, R. S., & Vollrath, D. A. (1997). The emerging conceptualization of groups as information processors. *Psychological Bulletin, 121*, 43–64. Retrieved

from https://www.researchgate.net/profile/Scott_Tindale/publication/14207306_The_Emerging_Conceptualization_of_Groups_as_Information_Processes/links/00b7d52261b9fa5bd6000000.pdf

Hogan, R. (1986). *Hogan Personality Inventory Manual*. Minneapolis, MN: National Computer Systems.

Hörmann, H. & Maschke, P. (1996). On the relation between personality and job performance of airline pilots. *The International Journal of Aviation Psychology, 6*, 171-178.

Jaffe, E. D., Nebenzahl, I. D., & Gotesdyner, H. (1989). Machiavellianism, task orientation, and team effectiveness revisited. *Psychological Reports*, *64*(3), 819-824. Retrieved from http://prx.sagepub.com.libproxy.eku.edu/content/64/3/819.full.pdf+html

Jay, A. (1968). *Management and Machiavelli*. New York: Holt, Rinehart & Winston, 1968.

John, O. P., & Srivastava, S. (1999). The Big Five trait taxonomy: History, measurement, and theoretical perspectives. *Handbook of Personality: Theory and Research*, *2*(1999), 102-138. Retrieved from http://www.rc.usf.edu/~jdorio/Personality/BIG%20FIVE%20TRAIT%20TAXONOMY.pdf

Johnson, J.A. (1997). Seven social performance scales for the California psychological inventory. *Human Performance, 10*, 1-30.

Jones, D. N., & Paulhus, D. L. (2009). Machiavellianism. In M. R. Leary & R. H. Hoyle

(Eds.), *Handbook of Individual Differences in Social Behavior,* (93–108). New York, NY: Guilford Press.

Jones, D. N., & Paulhus, D. L. (2014). Introducing the short dark triad (SD3) a brief measure of dark personality traits. *Assessment*, *21*(1), 28-41. doi:10.1177/1073191113514105

Jones, R. E., & White, C. S. (1983). Relationships between Machiavellianism, task orientation and team effectiveness. *Psychological Reports, 53(*3), 859-866. Retrieved from http://www.amsciepub.com.libproxy.eku.edu/doi/pdf/10.2466/pr0.1983.53.3.859

Jones, R. G., & Lindley, W. D. (1998). Issues in the transition to teams. *Journal of Business and Psychology*, *13*(1), 31-40. Retrieved from http://download.springer.com/static/pdf/210/art%253A10.1023%252FA%253A1022966915545.pdf?originUrl=http%3A%2F%2Flink.springer.com%2Farticle%2F10.1023%2FA%3A1022966915545&token2=exp=1476922064~acl=%2Fstatic%2Fpdf%2F210%2Fart%25253A10.1023%25252FA%25253A1022966915545.pdf%3ForiginUrl%3Dhttp%253A%252F%252Flink.springer.com%252Farticle%252F10.1023%252FA%253A1022966915545*~hmac=9fb34855cba3a332dda73fe0d2df37f56abce15e5ddccc43185ca87d4fe9f543

Judge, T. A., & Zapata, C. P. (2015). The person–situation debate revisited: Effect of situation strength and trait activation on the validity of the big five personality traits in predicting job performance. *Academy of Management Journal*, *58*(4), 1149-1179. Retrieved from http://ww.w.timothy-judge.com/documents/PersonSituationStrengthinpressAMJ.pdf

Kessler, S. R., Bandelli, A. C., Spector, P. E., Borman, W. C., Nelson, C. E., & Penney, L. M. (2010). Re-Examining machiavelli: A three-dimensional model of machiavellianism in the workplace. *Journal of Applied Social Psychology*, *40*(8), 1868-1896. Retrieved from http://s3.amazonaws.com/academia.edu.documents/43768968/Re-examining_Machiavelli_A_three-dimensi20160315-30999-hsm2nr.pdf?AWSAccessKeyId=AKIAJ56TQJRTWSMTNPEA&Expires=1476886777&Signature=rBjOJDP5XIN6ZmTh1oRyW7zXhVs%3D&response-content-disposition=inline%3B%20filename%3DRe-Examining_Machiavelli_A_Three-Dimensi.pdf

Kiffin-Petersen, S., & Cordery, J. (2003). Trust, individualism and job characteristics as predictors of employee preference for teamwork. *International Journal of Human Resource Management*, *14*(1), 93-116. Retrieved from https://www.researchgate.net/profile/John_Cordery/publication/233033502_Trust_individualism_and_job_characteristics_as_predictors_of_employee_preference_for_teamwork/links/0fcfd50e01aca3fd61000000.pdf

Kirkman, B., & Shapiro, D. (1997). The impact of cultural values on employee resistance to teams: Toward a model of globalized self-managing work team effectiveness. *The Academy of Management Review, 22*(3), 730-757. Retrieved from http://www.jstor.org/stable/259411

Kirkman, B. L., Shapiro, D. L., Novelli Jr, L., & Brett, J. M. (1996). Employee concerns regarding self-managing work teams: A multidimensional justice perspective. *Social Justice Research*, *9*(1), 47-67. Retrieved from

https://www.researchgate.net/profile/Debra_Shapiro/publication/225652613_Employee_concerns_about_self-managing_teams_A_multi-dimensional_justice_perspective/links/02e7e53b386b750516000000.pdf

Kirkman, B. L., Jones, R. G., & Shapiro, D. L. (2000). Why do employees resist teams? Examining the "resistance barrier" to work team effectiveness. *International Journal of Conflict Management*, *11*(1), 74-92. Retrieved from https://brainmass.com/file/305724/7+Kirkman+et+al+on+resisting+teams.pdf

Lee, K., & Ashton, M. C. (2005). Psychopathy, Machiavellianism, and narcissism in the Five-Factor Model and the HEXACO model of personality structure. *Personality and Individual Differences, 38,* 1571–1582. doi:10.1016/j.paid.2004.09.016

Lyons, M. T., & Aitken, S. J. (2008). Machiavellianism in strangers affects cooperation. *Journal of Evolutionary Psychology*, *6*(3), 173-185. doi:10.1556/JEP.6.2008.3.2

Machiavelli, N. (1984). *The prince.* New York: Bantam. (Original work published in 1531)

Martinez, D. C. (1981). Group composition and machiavellianism. *Psychological Reports, 49*, 783-793. doi:10.2466/pr0.1981.49.3.783

Mayer, R. C., Davis, J. H., & Schoorman, F. D. (1995). An integrative model of organizational trust. *Academy of Management Review*, *20*, 709-734. Retrieved from http://www.jstor.org/stable/258792

Mayer, J. D., Caruso, D. R., & Salovey, P. (1999). Emotional intelligence meets traditional standards for an intelligence. *Intelligence, 27*, 267– 298. Retrieved from

http://www.unh.edu/emotional_intelligence/EIAssets/EmotionalIntelligenceProper/EI1999MayerCarusoSaloveyIntelligence.pdf

Mayer, J. D., Salovey, P., Caruso, D. R., & Sitarenios, G. (2001). Emotional intelligence as a standard intelligence. *Emotion, 1(3)*, 232-242. doi:10.1037//1528-3542.1.3.232

Mayer, J. D., Salovey, P., & Caruso, D. R. (2008). Emotional intelligence: new ability or eclectic traits? *American psychologist*, *63*(6), 503-517. doi:10.1037/0003-066X.63.6.503

McDougall, W. (1932). Of the words character and personality. *Character and Personality*, *1*, 3-16. doi:10.1111/j.1467-6494.1932.tb02209.x

McGuire, D., & Hutchings, K. (2006). A Machiavellian analysis of organisational change. *Journal of Organizational Change Management*, *19*(2), 192-209. doi:10.1108/09534810610648906

Melita Prati, L., Douglas, C., Ferris, G. R., Ammeter, A. P., & Buckley, M. R. (2003). Emotional intelligence, leadership effectiveness, and team outcomes. *The International Journal of Organizational Analysis*, *11*(1), 21-40. Retrieved from http://s3.amazonaws.com/academia.edu.documents/43287253/EMOTIONAL_INTELLIGENCE_LEADERSHIP_EFFECT20160302-23459-alv5k5.pdf?AWSAccessKeyId=AKIAJ56TQJRTWSMTNPEA&Expires=1476299819&Signature=IyUUrsOwMYt%2FgSnTx9NEBV9NBqY%3D&response-content-disposition=inline%3B%20filename%3DEmotional_Intelligence_Leadership_Effect.pdf

Mooradian, T., Renzl, B., & Matzler, K. (2006). Who trusts? Personality, trust and knowledge sharing. *Management Learning*, *37*(4), 523-540. doi:10.1177/1350507606073424

Nachamie, S. S. (1970). *Machiavellianism in Children: The Children's Mach Scale and the Bluffing Game* (Doctoral dissertation, ProQuest Information & Learning).

Nahrgang, J. D., Morgeson, F. P., & Ilies, R. (2009). The development of leader–member exchanges: Exploring how personality and performance influence leader and member relationships over time. *Organizational Behavior and Human Decision Processes*, *108*(2), 256-266. Retrieved from http://dx.doi.org/10.1016/j.obhdp.2008.09.002

Newsom, C. R., Archer, R. P., Trumbetta, S., & Gottesman, I. I. (2003). Changes in adolescent response patterns on the MMPI/MMPI-A across four decades. *Journal of Personality Assessment, 81*, 74–84. Retrieved from http://s3.amazonaws.com/academia.edu.documents/46312464/Changes_in_adolescent_response_patterns_20160607-30988-altr1v.pdf?AWSAccessKeyId=AKIAJ56TQJRTWSMTNPEA&Expires=1477061808&Signature=1F%2Fdnmby%2FqoUlZrhS0AMQFR%2BkXY%3D&response-content-disposition=inline%3B%20filename%3DChanges_in_Adolescent_Response_Patterns.pdf

Norman, Warren T. (1963). Toward an adequate taxonomy of personality attribute: Replicated factor structure in peer nomination personality ratings. *Journal of*

Abnormal and Social Psychology, *66*, 574-83. Retrieved from http://dx.doi.org/10.1037/h0040291

Paal, T., & Bereczkei, T. (2007). Adult theory of mind, cooperation, Machiavellianism: The effect of mindreading on social relations. *Personality and individual differences*, *43*(3), 541-551. doi:10.1016/j.paid.2006.12.021

Pandey, J., & Rastogi, R. (1979). Machiavellianism and ingratiation. *The Journal of Social Psychology*, *108*(2), 221-225. Retrieved from http://homepages.se.edu/cvonbergen/files/2012/12/Machiavellianism-and-Ingratiation.pdf

Paulhus, D. L., & Williams, K. M. (2002). The dark triad of personality: Narcissism, machiavellianism, and psychopathy. *Journal of Research in Personality*, *36*(6), 556-563. doi:10.1016/S0092-6566(02)00505-6

Penney, L. M., & Spector, P. E. (2002). Narcissism and counterproductive work behavior: Do bigger egos mean bigger problems? *International Journal of selection and Assessment*, *10*(1-2), 126-134. Retrieved from http://s3.amazonaws.com/academia.edu.documents/39392545/Narcissism_and_counterproductive_work_be20151023-27432-82xmtk.pdf?AWSAccessKeyId=AKIAJ56TQJRTWSMTNPEA&Expires=1477061937&Signature=1L8yG%2BIQvy%2F4RT1%2BjeZn00cBLEY%3D&response-content-disposition=inline%3B%20filename%3DNarcissism_and_Counterproductive_Work_Be.pdf

Petrides, K. V., & Furnham, A. (2000). On the dimensional structure of emotional intelligence. *Personality and Individual Differences*, *29*(2), 313-320. Retrieved from http://www.psycometriclaboratory.xentricserver.com/adminsdata/files/PAID%20(2000)%20-%20T_EI.pdf

Petrides, K. V., Perez-Gonzalez, J. C., Furnham, A. (2007). On the criterion and incremental validity of trait emotional intelligence. *Cognition and Emotion 21*(1), 26-55. doi:10.1080/02699930601038912

Petrides, K. V., Vernon, P. A., Schermer, J. A., & Veselka, L. (2011). Trait emotional intelligence and the dark triad traits of personality. *Twin Research and Human Genetics*, *14*(01), 35-41. doi:10.1375/twin.14.1.35

Prahalad, C. K., & Bettis, R. A. (1986). The dominant logic: A new linkage between diversity and performance. *Strategic Management Journal*, *7*(6), 485-501. Retrieved from http://www.jstor.org/stable/pdf/2486135.pdf

Ray, J. J. (1983). Defective validity of the machiavellianism scale. *The Journal of Social Psychology, 119*, 291–292. Retrieved from http://jonjayray.comuv.com/machval.html

Rotter, J. B. (1980). Interpersonal trust, trustworthiness, and gullibility. *American Psychologist*, *35*(1), 1. Retrieved from http://dx.doi.org/10.1037/0003-066X.35.1.1

Sakalaki, M., Richardson, C., & Thepaut, Y. (2007). Machiavellianism and economic opportunism. *Journal of Applied Social Psychology*, *37*(6), 1181-1190. doi:10.1111/j.1559-1816.2007.00208.x

Salas, E., Cooke, N. J., & Rosen, M. A. (2008). On teams, teamwork, and team performance: Discoveries and developments. *Human Factors: The Journal of the Human Factors and Ergonomics Society*, *50*(3), 540-547. doi:10.1518/001872008X288457

Salas, E., & Fiore, S. M. (Eds.). (2004). *Team cognition: Understanding the factors that drive process and performance.* Washington, DC: American Psychological Association. Retrieved from http://dx.doi.org/10.1037/10690-000

Salgado, J. F. (2002). The big five personality dimensions and counterproductive behaviors. *International Journal of Selection and Assessment*, *10*(1-2), 117-125. Retrieved from https://www.researchgate.net/profile/Jesus_Salgado4/publication/227969193_The_Big_Five_Personality_Dimensions_and_Counterproductive_Behaviors/links/0a85e536a7bd7130d4000000.pdf

Salovey, P., & Mayer, J. D. (1990). Emotional intelligence. *Imagination, Cognition, and Intelligence, 9,* 185–211. Retrieved from http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.385.4383&rep=rep1&type=pdf

Schutte, N. S., Malouff, J. M., Hall, L. E., Haggerty, D. J., Cooper, J. T., Golden, C. J., & Dornheim, L. (1998). Development and validation of a measure of emotional intelligence. *Personality and Individual Differences*, *25*(2), 167-177. Retrieved from https://www.researchgate.net/profile/Lena_Hall/publication/247166550_Develop

ment_and_validation_of_a_measure_of_emotional_intelligence/links/5488ffae0cf2ef344790a747.pdf

Schutte, N., Malouff, J., & Bhullar, N. (2009). The assessing emotions scale. In C. Stough, D. Saklofske, & J. Parker (Eds.). *The Assessment of Emotional Intelligence*, 119-135. New York: Springer Publishing.

Schoorman, F. D., Mayer, R. C., & Davis, J. H. (1996). *Empowerment in Veterinary Clinics: The Role of Trust in Delegation.* Paper presented at the 11th annual meeting of the Society for Industrial and Organizational Psychology, San Diego, CA.

Sendjaya, S., Pekerti, A., Härtel, C., Hirst, G., & Butarbutar, I. (2016). Are authentic leaders always moral? The role of machiavellianism in the relationship between authentic leadership and morality. *Journal of Business Ethics*, *133*(1), 125-139. doi:10.1007/s10551-014-2351-0

Shahid, A., & Azhar, S. M. (2013). Power and culture of teamwork. *Global Business and Economics Research Journal*, *2*(3), 50-70. Retrieved from http://journal.globejournal.org/index.php/GBERJ/article/view/27

Shepperd, J. A., & Socherman, R. E. (1997). On the manipulative behavior of low Machiavellians: Feigning incompetence to" sandbag" an opponent. *Journal of Personality and Social Psychology*, *72*(6), 1448. Retrieved from http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.513.7117&rep=rep1&type=pdf

Simonton, D. K. (1986). Presidential personality: Biographical use of the gough adjective check list. *Journal of Personality and Social Psychology*,*51*(1), 149. Retrieved from http://dx.doi.org.libproxy.eku.edu/10.1037/0022-3514.51.1.149

Smillie, L. D., Yeo, G. B., Furnham, A. F., & Jackson, C. J. (2006). Benefits of all work and no play: The relationship between neuroticism and performance as a function of resource allocation. *Journal of Applied Psychology*, *91*(1), 139. doi:10.1037/0021-9010.91.1.139

Smith, S. F., & Lilienfeld, S. O. (2013). Psychopathy in the workplace: The knowns and unknowns. *Aggression and Violent Behavior*, *18*(2), 204-218. Retrieved from http://dx.doi.org/10.1016/j.avb.2012.11.007

Song, F. (2009). Intergroup trust and reciprocity in strategic interactions: Effects of group decision-making mechanisms. *Organizational Behavior and Human Decision Processes*, *108*(1), 164-173. doi:10.1016/j.obhdp.2008.06.005

Stimpson, D. V., & Maughan, M. R. (1978). Some correlates of trust. *The Journal of Psychology*, *99*(1), 103-108. Retrieved from http://dx.doi.org/10.1080/00223980.1978.9921447

Tam, T., Hewstone, M., Kenworthy, J., & Cairns, E. (2009). Intergroup trust in Northern Ireland. *Personality and Social Psychology Bulletin*, *35*(1), 45-59. doi:10.1177/0146167208325004

Tang, T. L., & Liu, H. (2012). Love of money and unethical behavior intention: Does an authentic supervisor's personal integrity and character (ASPIRE) make a difference? *Journal of Business Ethics, 107*(3), 295–312. doi:10.1007/s10551-011-1040-5

Tett, R.P., Jackson, D.N. & Rothstein, M. (1991). Personality measures as predictors of job performance: A meta-analytic review. *Personnel Psychology*, *44*, 703-742. Retrieved from https://www.researchgate.net/profile/Robert_Tett/publication/227639468_Personality_Measures_as_Predictors_of_Job_Performance_A_Meta-Analytic_Review/links/0c960532087611c9f5000000.pdf

Thorndike, E. L. (1920). Intelligence and its uses. *Harper's Magazine. 140.* Retrieved from http://harpers.org/archive/1920/01/intelligence-and-its-uses/

Trevino, L. K., & Brown, M. E. (2004). Managing to be ethical: Debunking five business ethics myths. *The Academy of Management Executive*, *18*(2), 69-81. Retrieved from http://www.jstor.org/stable/pdf/4166063.pdf

Twenge, J. M., Konrath, S., Foster, J. D., Keith Campbell, W., & Bushman, B. J. (2008). Egos inflating over time: a cross-temporal meta-analysis of the narcissistic personality inventory. *Journal of Personality*, *76*(4), 875-902. doi:10.1111/j.1467-6494.2008.00507.x

Van Rooy, D. L., & Viswesvaran, C. (2004). Emotional intelligence: A meta-analytic investigation of predictive validity and nomological net. *Journal of Vocational Behavior*, *65*(1), 71-95. Retrieved from http://dx.doi.org/10.1016/S0001-8791(03)00076-9

Vien, A., & Beech, A. R. (2006). Psychopathy theory, measurement, and treatment. *Trauma, Violence, & Abuse*, *7*(3), 155-174. doi:10.1177/1524838006288929

Wageman, R., & Baker, G. (1997). Incentives and cooperation: The joint effects of task and reward interdependence on group performance. *Journal of Organizational Behavior*, *18*(2), 139-158. Retrieved from http://www.jstor.org/stable/pdf/3100246.pdf

Walumbwa, F. O., & Schaubroeck, J. (2009). Leader personality traits and employee voice behavior: mediating roles of ethical leadership and work group psychological safety. *Journal of Applied Psychology*, *94*(5), 1275. doi:10.1037/a0015848

Wang, J. M., Hartl, A. C., Laursen, B., & Rubin, K. H. (2016). The high costs of low agreeableness: Low agreeableness exacerbates interpersonal consequences of rejection sensitivity in US and Chinese adolescents. *Journal of Research in Personality*. Retrieved from http://dx.doi.org/10.1016/j.jrp.2016.02.005

Wastell, C., & Booth, A. (2003). Machiavellianism: An alexithymic perspective. *Journal of Social and Clinical Psychology*, *22*(6), 730-744.Retrievd from http://guilfordjournals.com/doi/pdf/10.1521/jscp.22.6.730.22931

West, M. A. (2012). *Effective teamwork: Practical lessons from organizational research*. John Wiley & Sons. Retrieved from http://samples.sainsburysebooks.co.uk/9781119966005_sample_407514.pdf

Wilson, D. S., Near, D., & Miller, R. R. (1996). Machiavellianism: A synthesis of the evolutionary and psychological literatures. *Psychological Bulletin*, *119*, 285-299. Retrieved from https://www.researchgate.net/profile/David_Sloan_Wilson/publication/14354698

_Machiavellianism_A_Synthesis_of_the_Evolutionary_and_Psychological_Literatures/links/56bf4e1608ae44da37fa5ac2.pdf

Wilson, D. S., Near, D. C., & Miller, R. R. (1998). Individual differences in Machiavellianism as a mix of cooperative and exploitative strategies. *Evolution and Human Behavior*, *19*(3), 203-212. Retrieved from http://www.sciencedirect.com/science/article/pii/S1090513898000117

Wolfson, S. L. (1981). Effects of Machiavellianism and communication on helping behavior during an emergency. *British Journal of Social Psychology*, *20*(3), 189-195. doi:10.1111/j.2044-8309.1981.tb00531.x

Zaheer, A., McEvily, B., & Perrone, V. (1998). Does trust matter? Exploring the effects of interorganizational and interpersonal trust on performance. *Organization Science*, *9*(2), 141-159. Retrieved from http://www.jstor.org/stable/2640350

APPENDIX A:

Recruitment Email

Recruitment Email

Greetings Students,

I am contacting you as the Principal Investigator of a research study examining workplace behavior to ask if you would be willing to participate in this research project. Your participation is voluntary; there is no penalty for choosing not to participate. Your participation would require you to complete a 20 minute online survey with questions about how you would respond in certain workplace situations. Your instructor from (*specific Management class*) has agreed to give you 1 bonus point toward your final grade in the class in exchange for your participation.

Although we will ask for your name at the start of the survey so that your bonus point may be awarded to you upon completion of the survey, your name is not connected to your responses on the survey, making all survey responses anonymous. Any reports compiled from this data will be aggregate reports about how large groups of participants responded. If you wish to earn the bonus point toward your final grade in (*specific Management class*) but do not wish to participate in a research study, please email me at logan_penticuff@mymail.eku.edu and an alternative assignment will be provided to you.

If you are interested in participating in this survey in exchange for 1 bonus point toward your final grade in (*specific Management class*) please click on the link below:
[weblink to Qualtrics survey]

If you have any questions, please feel free to email me at Logan_Penticuff@mymail.eku.edu

Thank you!
Logan Penticuff

APPENDIX B:

Cover Letter at Start of Survey

Cover Letter at Start of Survey
Welcome! Thank you for your interest in our survey!

About this study. This study is being conducted by researchers at Eastern Kentucky University. The purpose of this study is to examine how millennials might respond to specific workplace situations presented to them. This particular survey present you with a workplace situation and ask questions about how you would respond in this situation if you encountered it in the workplace.

About your participation. To be eligible to participate in this study, you must be able to read this web page and be 18 years of age or older. You must be of junior or senior level standing with at least 60 credit hours completed. Your participation in this study involves completing this online survey, which should take approximately 20 minutes to complete. Your participation in this study is voluntary. You may choose not to participate without any penalty.

Confidentiality of your responses. The survey and your answers are housed on a secure server and a password protected computer. Your individual responses will only be seen by the researchers. We do ask for your name at the start of the survey so that we may award your bonus point toward your final grade in your class upon completion of the survey, but your name is kept separate from your survey responses. Although we will make every effort to protect the confidentiality of your answers, it is important to point out that no guarantee of internet security can be given, as, while unlikely, transmission can be intercepted and IP addresses can be identified.

Please contact Logan Penticuff (logan_penticuff @mymail.eku.edu) if you have any questions about this research.

Agreement to participate. You are being asked to participate in a research study being conducted by Logan Penticuff (Eastern Kentucky University).

I have read this page and am 18 years of age or older and have completed at least 60 credit hours. I am aware that I am being asked to participate in a research study. By continuing on to the survey, I voluntarily agree to participate in this study.

If you do not wish to participate, simply close this window to end this session. Do the same should you wish to discontinue your participation once you have begun. To print a copy of this page, select the print button on your web browser.

Click on the next button below to continue to the survey.

APPENDIX C:

BFI-44

BFI-44 (John & Srivastava, 1999) (Alpha=.8)

I see myself as someone who…	Scale				
	Strongly Disagree	Disagree	Ambivalent	Agree	Strongly Agree
Is talkative	1	2	3	4	5
Tends to find fault in others	1	2	3	4	5
Does a thorough job	1	2	3	4	5
Is depressed, blue	1	2	3	4	5
Is original, comes up with new ideas.	1	2	3	4	5
Is reserved	1	2	3	4	5
Is helpful and unselfish with others.	1	2	3	4	5
Can be somewhat careless	1	2	3	4	5
Is relaxed, handles stress well	1	2	3	4	5
Is curious about many different things	1	2	3	4	5
Is full of energy	1	2	3	4	5
Starts quarrels with others	1	2	3	4	5
Is a reliable worker.	1	2	3	4	5
Can be tense	1	2	3	4	5
Is ingenious, a deep thinker	1	2	3	4	5
Generates a lot of enthusiasm	1	2	3	4	5
Has a forgiving nature	1	2	3	4	5
Tends to be disorganized	1	2	3	4	5
Worries a lot	1	2	3	4	5

Has an active imagination	1	2	3	4	5
Tends to be quiet	1	2	3	4	5
Is generally trusting	1	2	3	4	5
Tends to be lazy	1	2	3	4	5
Is emotionally stable, not easily upset	1	2	3	4	5
Is inventive	1	2	3	4	5
Has an assertive personality	1	2	3	4	5
Can be cold and aloof	1	2	3	4	5
Perseveres until the task is finished	1	2	3	4	5
Can be moody	1	2	3	4	5
Values artistic, aesthetic experiences	1	2	3	4	5
Is sometimes shy, inhibited	1	2	3	4	5
Is considerate and kind to almost everyone	1	2	3	4	5
Does things efficiently	1	2	3	4	5
Remains calm in tense situations	1	2	3	4	5
Prefers work that is routine	1	2	3	4	5
Is outgoing, sociable	1	2	3	4	5

Is sometimes rude to others	1	2	3	4	5
Makes plans and follows through with them	1	2	3	4	5
Gets nervous easily	1	2	3	4	5
Likes to reflect, play with ideas	1	2	3	4	5
Has few artistic interests	1	2	3	4	5
Likes to cooperate with others	1	2	3	4	5
Is easily distracted	1	2	3	4	5
Is sophisticated in art, music, or literature	1	2	3	4	5

Appendix D:

MACH-IV

MACH-IV (Test of Machiavellianism) (Christie and Geis, 1970) (Alpha=.79)

To what extent do each of the following statements accurately describe you? Please indicate the degree to which you personally agree or disagree with each of the following statements by choosing a number from the scale below that reflects your opinion.

1=strongly disagree, 2=disagree, 3=slightly disagree, 4= neutral, 5=slightly agree, 6= agree, 7= strongly agree

1) Never tell anyone the real reason you did something unless it is useful to do so.
1 2 3 4 5 6 7

2) The best way to handle people is to tell them what they want to hear.
1 2 3 4 5 6 7

3) One should take action only when sure it is morally right.
1 2 3 4 5 6 7

4) Most people are basically good and kind.
1 2 3 4 5 6 7

5) It is safest to assume that all people have a vicious streak and it will come out when they are given a chance.
1 2 3 4 5 6 7

6) Honesty is the best policy in all cases.
1 2 3 4 5 6 7

7) There is no excuse for lying to someone else.
1 2 3 4 5 6 7

8) Generally speaking, people won't work hard unless they're forced to do so.
1 2 3 4 5 6 7

9) All in all, it is better to be humble and honest than to be important and dishonest.
1 2 3 4 5 6 7

10) When you ask someone to do something for you, it is best to give the real reasons for wanting it rather than giving reasons which carry more weight.
1 2 3 4 5 6 7

11) Most people who get ahead in the world lead clean, moral lives.

○ 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7

12) Anyone who completely trusts anyone else is asking for trouble.

○ 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7

13) The biggest difference between most criminals and other people is that the criminals are stupid enough to get caught.

○ 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7

14) Most people are brave.

○ 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7

15) It is wise to flatter important people.

○ 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7

16) It is possible to be good in all respects.

○ 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7

17) P.T. Barnum was wrong when he said that there's a sucker born every minute.

○ 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7

18) It is hard to get ahead without cutting corners here and there.

○ 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7

19) People suffering from incurable diseases should have the choice of being put painlessly to death.

○ 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7

20) Most people forget more easily the death of their parents than the loss of their property.

○ 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7

APPENDIX E:

SSEIT

The Schutte Self Report Emotional Intelligence Test (SSEIT) (Alpha= .90)

Indicate the extent to which each item applies to you using the following scale:	**SSEIT**				
	Strongly Disagree	**Disagree**	**Ambivalent**	**Agree**	**Strongly Agree**
I know when to speak about my personal problems to others	1	2	3	4	5
When I am faced with obstacles, I remember times I faced similar obstacles and overcame them	1	2	3	4	5
I expect that I will do well on most things I try	1	2	3	4	5
Other people find it easy to confide in me	1	2	3	4	5
I find it hard to understand the non-verbal messages of other people	1	2	3	4	5
Some of the major events of my life have led me to re-evaluate what is important and not important	1	2	3	4	5
When my mood changes, I see new possibilities.	1	2	3	4	5
Emotions are one of the things that make my life worth living	1	2	3	4	5
I am aware of my emotions as I experience them	1	2	3	4	5
I expect good things to happen	1	2	3	4	5
I like to share my emotions with others	1	2	3	4	5
When I experience a	1	2	3	4	5

positive emotion, I know how to make it last					
I arrange events others enjoy	1	2	3	4	5
I seek out activities that make me happy	1	2	3	4	5
I am aware of the non-verbal messages I send to others	1	2	3	4	5
I present myself in a way that makes a good impression on others	1	2	3	4	5
When I am in a positive mood, solving problems is easy for me	1	2	3	4	5
By looking at their facial expressions, I recognize the emotions people are experiencing	1	2	3	4	5
I know why my emotions change	1	2	3	4	5
When I am in a positive mood, I am able to come up with new ideas	1	2	3	4	5
I have control over my emotions	1	2	3	4	5
I easily recognize my emotions as I experience them	1	2	3	4	5
I motivate myself by imagining a good outcome to tasks I take on	1	2	3	4	5
I compliment others when they have done something well	1	2	3	4	5
I am aware of the non-verbal messages other	1	2	3	4	5

people send					
When another person tells me about an important event in his or her life, I almost feel as though I have experienced this event myself	1	2	3	4	5
When I feel a change in emotions, I tend to come up with new ideas	1	2	3	4	5
When I am faced with a challenge, I give up because I believe I will fail	1	2	3	4	5
I know what other people are feeling just by looking at them	1	2	3	4	5
I help other people feel better when they are down	1	2	3	4	5
I use good moods to help myself keep trying in the face of obstacles	1	2	3	4	5
I can tell how people are feeling by listening to the tone of their voice	1	2	3	4	5
It is difficult for me to understand why people feel the way they do	1	2	3	4	5

APPENDIX F:

Vignette

Imagine that you have been working for the same employer for three consecutive years. Your superiors have been known to trust you and your colleagues with important tasks that greatly influence the outcomes of the firm's dealings. Recently, several people in your office have been talking about the possibility of a new supervisory position opening in your department. You and several colleagues would be the most logical choice for the promotion.

Your manager calls you into their office several weeks later and explains to you that the new position is, indeed, being created. The new positon is your dream job. The position includes a pay raise (which you find substantial) more responsibility, and could present you with opportunities to significantly advance your career. Only one employee will be promoted. This makes you anxious, as promotions are rare in your workplace. Your manager informs you that applications will be accepted throughout the week and that everyone in your position is encouraged to apply. You quickly apply.

Page Break (Click)

By the end of the week, everyone in the office (including you) that is qualified for the position has applied and no more applications are being accepted. Ten people have applied for the new position. The office is stirring with anticipation as the hiring managers announce they're beginning to review the applications. The hiring managers implore everyone in the office to continue with their hard work as they are all being monitored closely during the review process.

A little time later, you enter the work lounge to grab your lunch. As you enter the room, a colleague is talking about how one of the hiring managers expressed how difficult the decision had become due to the many qualified and capable applicants that applied.

Page Break (Click)

Later that day, the hiring manager began appearing in the office more than usual. The manager was addressing each individual that applied for the position. The manager individually approached each person one at a time. Some individuals became upset while others seemed excited. The manager approached you and informed you that you are to attend a meeting in the conference room at 4:30 that afternoon, 15 minutes from now, and to not speak to anyone about the meeting.

You are confused about the nature of the meeting and are anxious.

Page Break (Click)

You walk into the conference room and a manager begins the meeting by explaining how everyone present in the room is technically qualified for the position. A manager then explains how they have convinced the CEO and Board of Directors to create an identical position to the one everyone, including you, applied to. Now, instead of one person being promoted for the position, the company has created **two identical positions!**

The manager then begins to explain how they and the rest of the managers are indifferent as to who receives the two positions as everyone in the conference room is qualified and should be promoted. The manager then describes the method as to how the new managers will be selected: each individual will be assigned a partner amidst the qualified applicants and will work together on a project. The team that performs the best on the project will both be hired for the open positions.

Page Break (Click)

Soon, you find that the task involves:

(1: High Task Interdependency) working closely with your randomly assigned partner and relying heavily on each other to succeed. You realize that you will be unable to accomplish this task alone and must work together. This task will require a significant amount of teamwork and interaction.
(2: Low Task Interdependency) a project that focus on your strong suit. You feel confident that your assigned partner cannot deter you from succeeding as you will not need to rely heavily on their help or skills. This task will not require much interaction or teamwork.

Management explains the *(1: Independent or 2: Dependent)* nature of the task and expresses, once again, the implications of being successful. You are confident in your ability but also respect your colleagues' abilities as well. Finally, the management team hands everyone a folder with instructions regarding the task as well as your partner's information.

Page Break (Click)

You are introduced to your partner and find that they are:

(1: High Mach) willing to partake in unethical practices to succeed and motivated to get ahead. You find that they are capable and known for manipulating others easily and struggle distinguishing right from wrong. You come to learn that they are devious, bend the truth, and are over and above all interested in their own self-interests.
G
(2: Low Mach) honest and trustworthy. You come to learn that they are somewhat passive and have a more relaxed demeanor. After introductions, you come to learn how they generally believe that people are good natured. You have established that your

partner is reluctant to break the rules, ethical, highly agreeable, and motivated to succeed.

Page Break (Click)

Perceived team cohesion prior to task

Given your partner's traits and the nature of the project, please rate the following:	Significantly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Significantly Agree
Given the personality traits of my partner, I am looking forward to being their partner…	○	○	○	○	○	○
My partner and I will work well together…	○	○	○	○	○	○
I would like to select a different partner…	○	○	○	○	○	○
I am confident that my personality will not clash with my partner's…	○	○	○	○	○	○
I feel good about my team…	○	○	○	○	○	○

Page Break (Click)

Benevolence Measurement

Think about your partner. For each statement, click on the number that best describes how much you agree or disagree with each statement.	Disagree Strongly	Disagree	Neither Agree nor Disagree	Agree	Agree Strongly
My partner is very concerned about my welfare…	1	2	3	4	5
My needs and desires are very important to my partner…	1	2	3	4	5
My partner would not knowingly do anything to hurt me…	1	2	3	4	5
My partner really looks out for what is important to me…	1	2	3	4	5
My partner will go out of their way to help me…	1	2	3	4	5

Page Break (Click)

General Trust Measurement

Think about your partner. For each statement, click on the number that best describes how much you agree or disagree with each statement.	Disagree Strongly	Disagree	Neither Agree nor Disagree	Agree	Agree Strongly
If I had my way, I wouldn't let my partner have any influence over issues that are important to me…	1	2	3	4	5
I would be willing to let my partner have complete control over performance on this task…	1	2	3	4	5
I really wish I had a good way to keep an eye on my partner…	1	2	3	4	5
I would be comfortable giving my partner a task or problem which was critical to me, even if I could not monitor their actions…	1	2	3	4	5

Integrity Measurement

Think about your partner. For each statement, click on the number that best describes how much you agree or disagree with each statement.	Disagree Strongly	Disagree	Neither Agree nor Disagree	Agree	Agree Strongly
My partner seems to have a strong sense of justice.	1	2	3	4	5
I never have to wonder whether my partner will stick to their word.	1	2	3	4	5
My partner seems as though they will try hard to be fair in dealings with others.	1	2	3	4	5
My partner's actions and behaviors seems as though they are not very consistent.	1	2	3	4	5
I like my partner's value.	1	2	3	4	5

Sound principles seem to guide my partner's behavior.	1	2	3	4	5

Page Break (Click)

Participation and Task Interdependency Check

For each statement, click on the number that best describes how much you agree or disagree with each statement.	Disagree Strongly	Disagree	Neither Agree nor Disagree	Agree	Agree Strongly
As a team member, I will have a real say in how the team carries out most of its work.	1	2	3	4	5
Both my partner and I get a chance to participate in the decision making.	1	2	3	4	5
My team is designed to let both of us participate in the decision making.	1	2	3	4	5
I cannot accomplish my tasks without information or materials from my partner.	1	2	3	4	5
My partner will depend on me for information or materials needed to perform this task.	1	2	3	4	5
Within my team, jobs performed by both my partner and myself are related to one another.	1	2	3	4	5

Page Break (Click)

Teamwork Preference

For each statement, click on the number that best describes how much you agree or disagree with each statement.	Disagree Strongly	Disagree	Neither Agree nor Disagree	Agree	Agree Strongly
If given a choice, I would prefer to work as part of a team rather than work alone.	1	2	3	4	5

I find that working as a member of a team increases my ability to perform effectively.	1	2	3	4	5
I generally prefer to work as part of a team.	1	2	3	4	5

Willingness to Cheat

It is the last day of the task and you and your partner learn that your team is currently in second place. The day is coming to an end and, given the large scoring gap, it is impossible for your team to pass the leaders. You will not receive the promotion. You are devastated. However, the managers are unaware of the current rankings and will not be aware of them until the next day.

(1: High MACH): Your partner approaches you and says; "I often work with the company's IT department and can easily gain access to all of the computers in the building. I could easily log-in to the manager's computer and alter the scores without anyone ever finding out." They demonstrate their ability and you realize that they are telling the truth and that neither of you would ever get caught.)

(2: Low MACH): *Your partner approaches you and says: "I am really disappointed that we got so close to winning and lost in the end. We did all we could have done and should be proud! I was so upset earlier that I tried to figure out a way to change the scores and realized that I could since I often work with the IT department and have Administrative access to all the computers in the building. But, obviously I would never do that! I would much rather lose with dignity and pride than win by cheating even if no one would ever find out it was me.*

Page Break (Click)

Willingness to Cheat Measurement

Given the previous events, please rate the following:	Significantly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Significantly Agree
I would try to convince my partner to alter the scores…	o	o	o	o	o	o

If my partner wanted to alter the scores, I would not stop them…	o	o	o	o	o	o
Given my partner's previous comments, I have more respect for my partner…	o	o	o	o	o	o
I would ultimately leave the decision to my partner…	o	o	o	o	o	o

Manipulation Checks:

- *A new position is being created in your firm and you really want the position. True or False?*
- *The decision to promote an employee to the new position was an easy decision for the management team to make. True or False?*
- *You were asked to attend a meeting at 4:30 and found that the management team created two identical positions. True or False?*
- *You and a randomly selected partner will work together on a project and whomever performs the best on the project will be offered the positions. True or False?*

Demographics

Finally, to better understand who has participated in our study, please provide us with the following information. Please mark the answer choice that best describes you.

What is your age, in years (open response)?

What is your gender?

- Male
- Female

Which of the following best describes your race/ethnicity?

- Asian
- Black / African-American
- Hispanic / Latino
- White
- Native American
- Pacific Islander
- Other

Is English your primary language?

- Yes

- No