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# The antecedents and outcomes of mcgregor's theory endorsement

Amy Elizabeth Sund  
Wayne State University,

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**THE ANTECEDENTS AND OUTCOMES OF MCGREGOR'S THEORY  
ENDORSEMENT**

by

**AMY SUND**

THESIS

Submitted to the Graduate School

of Wayne State University,

Detroit, Michigan

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## The Antecedents and Outcomes of McGregor's Theory Endorsement

In 1960, Douglas McGregor proposed Theory X and Theory Y, which classified managers based on two types of fundamental beliefs about the nature of humans. Individuals who endorse Theory X believe that workers are inherently lazy, incapable of self-control or self-direction, and motivated only by the desire to avoid punishment. Those who endorse Theory Y believe the opposite to be true of subordinates: that they are motivated, possess self-control and self-direction, have a natural liking for work, and can contribute ideas for improved organizational effectiveness (Kopelman, Prottas & Davis, 2008; Sager, 2008). Which theory an individual endorses is often reflective of his or her basic assumptions of human nature. These beliefs are deeply engrained within the individual, so much so that theory endorsement may be outside his or her consciousness (Kopelman, Prottas & Davis, 2008).

Despite being widely recognized, Theory X and Theory Y leadership styles remain relatively unstudied. Although McGregor's theory is often used to make conceptual distinctions, a construct valid measure of the theory has only recently been developed (Kopelman, Prottas & Davis, 2008). As such, little exists in the way of empirical research (Sager, 2008). It is still unknown the extent to which theory endorsement is related to a manager's enduring traits and values, as well the potential effects on his or her health.

A fair amount of research has supported the notion that work stressors lead to certain negative health outcomes (Landsbergis et al., 2011). Furthermore, there is evidence of a link between certain personality traits (Type A personality in particular) and negative health outcomes (Booth-Kewley & Friedman, 1987; Weidner et al., 1997). As of yet, it is unknown whether theory endorsement plays a role in any of these relationships, either as a direct effect or

as a mediator. Should such a relationship exist, it is worthwhile to examine the individual differences (e.g., personality) that act as antecedents to theory endorsement.

Research examining the antecedents of theory endorsement is seemingly non-existent. That which does exist suggests the self-fulfilling prophecy, discussed below, as a potential mechanism for continued theory endorsement (Kopelman, Prottas & Davis, 2008). Although this phenomenon is likely occurring, it only helps to explain how a leader's beliefs are reinforced. It fails to explain why a leader would endorse a certain set of beliefs in the first place. As such, there is a need to understand the reasons why a leader is likely to endorse one theory over the other.

The present research addresses the need to further empirically explore Theory X and Theory Y. It is possible that theory endorsement is meaningfully related to important outcomes for the individual, but it is also plausible that theory endorsement is a conceptual tool that is useful for little more than classification. Overall, it is necessary to know what role theory endorsement plays in the relationship between an individual's characteristics, perceived strain, and overall health. The present research addresses this issue with two predominant questions: first, is theory endorsement related to work strain and/or negative health outcomes? And second, are there individual differences that predict theory endorsement? That is, do certain personality traits (e.g. conscientiousness, neuroticism) and work values (e.g. the need for security or power) have a direct effect on a manager's theory endorsement?

The present research is a first step in understanding the antecedents to and outcomes of theory endorsement for the individual leader. Understanding why a manager holds Theory X or Theory Y beliefs may allow for strategic selection practices or interventions (e.g. teaching Theory X leaders that not all employees are lazy). A better understanding of the outcomes

associated with theory endorsement, particularly health related outcomes, may have a direct impact on organizations, particularly in the areas of health care costs and loss of productivity due to absenteeism. Furthermore, using Kopelman and colleagues' recently developed Theory X/Theory Y measure in empirical research will help provide necessary methodological support for its use in subsequent research.

### Literature Review

#### *Theory X and Theory Y*

McGregor's 1960 theory, originally presented in *The Human Side of Enterprise*, proposed that leaders generally endorse one of two beliefs about the nature of subordinates. A review of McGregor's theory reveals a number of parallels between Theory X/Theory Y and Maslow's Hierarchy of Needs. Specifically, Theory X leaders assume employees are motivated to fulfill their basic needs, and that they work only to ensure their security. This view implies that employees are content so long as their basic survival needs are met. Conversely, Theory Y leaders believe employees are capable of striving toward higher order needs. This view implies that employees are motivated by the chance to better themselves through challenging pursuits (Gillman, 1993).

McGregor's theory says that Theory X leaders believe employees try to avoid work because by nature they dislike it. Therefore, in order to elicit organizational results, a subordinate "must be coerced, controlled, directed, threatened with punishment" (McGregor, 1960, pg. 34). Here, the theory indicates that employees are not motivated by the potential to gain rewards, but rather to avoid punishment. Furthermore, Theory X leaders believe that humans prefer to be directed, will avoid responsibility, and primarily seek security (McGregor, 1960, pg. 34). Because employees are believed to avoid work when possible, Theory X leaders



believe individuals need a great deal of supervision. It is through constant supervision that the threat of punishment works as a motivator (Kopelman, Prottas & Davis, 2008; Sager, 2008).

This discussion of Theory X leaders requires one point of clarification. Although McGregor's intent was to present his theory in neutral terms, Theory X leaders are generally seen by subordinates in a negative light. Indeed, an employee who prefers an over-bearing and distrusting manager would be rare to find. To this point, Theory X leaders are generally less preferred (i.e., associated with lower subordinate satisfaction) (Siegel, 1973). However, assuming that all Theory X leaders engage in negative behaviors may be a false assumption. A manager who assumes his or her employees are lazy may be tough and autocratic with them, but it is also possible that the manager believes the best way to motivate lazy employees is to be kind to them. It is important to remember that Theory X or Theory Y endorsement is not necessarily descriptive of specific leadership behavior (Gillman, 1993).

At the time that McGregor proposed his theory, and arguably still today, Theory X was seen as the predominant mindset among leaders. Given that Theory X leaders are often seen in a negative light, McGregor saw the need to acknowledge the "other" leaders, those who did not believe their employees were lazy, distrustful work-machines. *The Human Side of Enterprise* was in part written to advocate what was at the time a new method of leadership: Theory Y.

Theory Y leaders hold assumptions of employees that are opposite of Theory X beliefs. Specifically, McGregor proposed 6 beliefs held by Theory Y leaders: (1) work is as natural as play or rest, (2) workers are capable of and will express self-control and direction, and do not require a threat of punishment to do so, (3) employees find goal achievement inherently motivating, (4) humans accept and also seek out responsibility, (5) workers are creative and capable of providing meaningful suggestions to solve organizational problems and improve

organizational effectiveness, and (6) most employees are not reaching their full potential, and given the chance to express their intellect they will do so (McGregor, 1960; Johnston, 2007). These leaders are more likely to give subordinates autonomy and allow them opportunities that are challenging. Theory Y leaders are also more likely to seek the input of subordinates, believing they have ideas that can contribute to organizational effectiveness (Kopelman, Prottas & Davis, 2008; Sager, 2008).

There are two predominant schools of thought regarding the nature of theory endorsement. Some scholars (e.g., Finman) treat Theory X and Theory Y as individual variables. As such, it is possible that Theory X endorsement is related to some outcomes while Theory Y is related to others. However, this approach is fairly uncommon. Most research, including the present research, treat X and Y as two ends of a continuum. Therefore, variables that are related to Theory X are considered to be related to Theory Y in the opposite direction.

#### *Theory X, Theory Y and Research*

There is surprisingly little research to date regarding the outcomes associated with Theory X and Theory Y leaders, especially given how recognizable the theory is. A 2003 study conducted by Miner found that out of 73 psychological theories, McGregor's was rated as second most recognizable and 33<sup>rd</sup> most useful (Kopelman et al., 2008). The theory is considered very well-known and fairly useful, yet there is a lack of empirical research. This might indicate that the theory is conceptually sound but lacking in practical application. Kopelman and colleagues (2008) suggested that the lack of empirical research was in large part due to the fact that a universally used, construct valid measure had yet to be developed. Indeed, McGregor himself passed away shortly after the completion of his book. Therefore he did not operationalize his constructs, nor did he pursue any tests of them (Kopelman, Prottas & Davis,

2008). This was the main argument presented by Kopelman and colleagues in the justification of their scale development paper.

Despite the lack of a consistently used measure, McGregor's theory has been used frequently as a means for categorizing individuals (Siegel, 1973). A number of studies have examined workplace outcomes associated with leader styles (i.e. Theory X or Theory Y), but have done so using a wide variety of measures, many of which may not be methodologically sound. Prior to the scale development of Kopelman and colleagues, scales in use were either exclusively in the commercial domain (e.g. Teleometrics International) or were lacking in psychometric data.

Kopelman and colleagues provide a full account of the known Theory X/Theory Y scales in their 2008 scale development paper, of which there are 11 in total. Known scales were contributed by: Swenson (n.d.), the Scanlon Leadership Network (n.d.), Costley and Todd (1987), Miles (1964), Fiman (1973), Chapman (in Borkowski, 2005), Greenberg, 1999, Osland, Kolb and Rubin, (2001), Baron and Paulus (1999), Gordon (1999), and Teleometrics International (1995) (Kopelman, et al., 2008). The scales varied in terms of whether they measured Theory X and Theory Y attitudes or behaviors. Of note, Kopelman and colleague's first scale (2008) measures Theory X and Theory Y attitudes; a second scale has been developed to measure Theory X and Theory Y behaviors (Kopelman, Prottas & Falk, 2010).

Among the studies that have empirically tested Theory X and Theory Y assumptions, a variety of measures are used. Interestingly, three dissertations have examined the impact of theory endorsement in school systems. They are written in an educational context and study the school principal as the leader (Bonner, 2007; Gillman, 1993; Ward, 1990). It should be noted that these studies were multi-level in nature and that, although they had varying sample sizes of

teachers, those teachers were nested within principals. As such, they had fairly small samples of leaders, resulting in potentially unstable results.

Gillman (1993) found that female principals were more likely than male principals to endorse Theory Y, and also that staff satisfaction was higher with a Theory Y principal, regardless of principal gender. The two remaining researchers (Bonner and Ward) had a difficult time finding principals who endorsed Theory X. This is interesting, considering that Theory X is considered the traditional management style. The lack of Theory X principals is likely due to the fact that a school is, in many important ways, different than a business. Although the principal is the leader, he or she is operating in an environment that is different than a typical organization.

Ward (1990) addressed this problem by examining an *extremely* Y principal in comparison to a principal who scored more neutrally. In opposition to most other research, Ward found that overall job satisfaction was less positive among the “extreme-Y” principal’s subordinates than among the “neutral-Y” principal’s subordinates. Furthermore, the neutral-Y principal had a better rapport with staff, and had a more efficient school with less conflict and higher job satisfaction. In this study the researcher mentions that the neutral-Y leader had fewer situational demands (e.g. less conflict) and therefore could be more attentive and supportive to the staff, indicating that the context could provide one explanation for these findings.

One dissertation examined the effect of theory endorsement on executive communication using a sample of executives in the carnival industry (Johnston, 2007). An analysis of narratives revealed that, although executives were equally likely to endorse Theory X or Theory Y, their communication styles were generally reflective of Theory Y endorsement. The author discussed possible reasons for this discrepancy, concluding that an increase in the foreign labor force and a change in the carnival industry overall led to an increased need for Theory Y style relations.

This conclusion has interesting implications for the nature of Theory X or Theory Y endorsement (i.e. that there are cultural differences). A final dissertation found that Theory Y endorsement (specifically participative management behavior) was linked to organizational commitment. Surprisingly, participative management was also positively related to absenteeism, which was the opposite of the hypothesized relationship (Logozzo, 1989).

A limited number of studies regarding subordinate outcomes are found in peer reviewed journals. An early study revealed that a leader's Theory X attitudes were significantly and negatively related to subordinate overall satisfaction ( $r = -.48$ ) and Theory Y behaviors were significantly and positively related to subordinate overall satisfaction ( $r = .59$ ). Similar findings (i.e. significant and positive relationships with Theory Y and significant and negative relationships with Theory X) were found for satisfaction with work, supervisor, people, pay, and promotion (Fiman, 1973). These findings support the notion that Theory Y leaders are preferred to Theory X leaders, but do not support Gillman's (1993) assertion that Theory X leaders, provided they have a likable leadership style, can also be liked.

When Finman's findings are compared to Ward's, the nature of the relationship between theory endorsement and satisfaction is somewhat unclear. Ward's (1990) dissertation results indicated that the relationship may be curvilinear (employees working under the extreme-Y principal had lower job satisfaction than the neutral-Y principal). It appears that employees prefer autonomy to a certain extent, but also need some amount of direction.

Fiman's work has examined the effect of theory endorsement on subordinate attitudes, while other work has examined leader behaviors. For instance, research has found that a leader's endorsement of Theory X or Theory Y is related to leader communication style. Specifically, Theory X endorsement was significantly and positively related to dominant and impression-

leaving communication styles. Theory Y endorsement was significantly and positively related to supportive and non-verbally expressive communication styles and significantly and negatively related to anxious communication styles (Sager, 2008).

Research suggests that Theory X and Theory Y endorsement is also related to compliance gaining strategies (Neuliep, 1987). Namely, the more a leader endorsed Theory X, the more likely he or she was to choose antisocial persuasion techniques. These included deceit, aversive stimulation, and threat. Leaders who endorse Theory Y were more likely to engage in prosocial persuasion techniques including ingratiation and esteem. In a later study, Neuliep (1996) found that Theory X leaders were more likely to perceive unethical behaviors as effective, although these leaders were not more likely than Theory Y leaders to act in unethical ways.

A surprisingly small amount of research, reviewed above, has examined the outcomes of Theory X vs. Theory Y endorsement. Even less research has examined the antecedents of endorsement. Very little is known about why an individual would view subordinates in one way or the other. It has been suggested that subordinates model the behavior of their leaders (Weiss, 1977). If this is the case, individuals would learn to endorse Theory X or Theory Y by observing that endorsement by their previous leaders.

A link has also been found between Machiavellianism and Theory X endorsement (Siegel, 1973). In this study, the “overall leadership” score of managers was calculated as a difference score (Theory Y score - Theory X score). Overall leadership was negatively related to Machiavellianism ( $r = -.20$ ), indicating that the less Machiavellian a leader was, the more likely he or she was to endorse Theory Y. Furthermore, Machiavellianism was negatively related to faith in others ( $r = -.24$ ), internal control ( $-.23$ ) and participation ( $-.08$ ) (Siegel, 1973).

Other researchers (Myers, 2010) argue that one's theory endorsement acts as a self-fulfilling prophecy. The self-fulfilling prophecy says that believing in an idea leads to its fulfillment (Merton, 1948; Myers 2010). For instance, people who believe they are going to fail a test will see studying as futile and will not engage in such behavior. When the student takes the test, he or she will be unprepared and therefore unlikely to pass.

Analogously, leaders who endorse Theory X treat employees as lazy, lacking in self-control, etc. Hence they are likely to elicit such behavior from employees. As such, the manager feels correct in his or her assumption, and therefore continues to hold it. Conversely, a manager who believes that employees enjoy work and should be granted autonomy will feel justified when his or her employees act in a self-directed manner (Kopelman, Protzas & Davis, 2008). Although this explanation is likely true, it fails to address the origins of these beliefs. The self-fulfilling prophecy leaves us with, essentially, a chicken and egg paradox. It could be that leaders endorse Theory X or Y because they have experience with employees who act in a certain way, or it could be that employees act a certain way because their leaders endorse one belief or the other.

The present study attempts to fill the existent void in antecedent research by examining the individual differences (i.e., personality, personal values) associated with theory endorsement. Furthermore, the stress and health related outcomes for these managers will be examined. Research of this kind is useful in furthering the theoretical base of McGregor's work, and is meaningful for organizations both in terms of selection and health-care costs.

### *Personality*

The Five Factor Model of personality is the result of an extensive factor analytic process that began as early as 1936, when Allport and Odbert started compiling terms from the dictionary

that could be used to describe individuals. The result was a list of words which, over the course of nearly 50 years, were clustered into five groups (McCrae & John, 1992). Since then, the study of personality has largely coalesced around the Five Factor Model (Block, 1995).

The model consists of five core personality traits including conscientiousness, neuroticism, openness to experience, agreeableness, and extraversion. The predominant measure of the Five Factor Model, known as the NEO Personality Inventory (NEO-PI), further divides each trait into six sub-dimensions. Each trait and its sub-dimensions will be discussed in more detail below.

A considerable amount of research exists regarding the Five Factor Model. A large number of meta-analyses have examined the traits, indicating that an even larger number of single studies have empirically tested the model. Of these meta-analyses, at least 17 have examined the Five Factor model and job related outcomes. These outcomes include performance (Barrick & Mount, 1991) satisfaction (Judge, Heller & Mount, 2002), absenteeism (Ones, Viswesvaran & Schmidt, 2003), occupational type (Barrick, Mount & Gupta, 2003), burnout (Alarcon, Eschleman & Bowling, 2009), leadership (Judge, Bono, Ilies & Gerhardt, 2002), and counterproductive work behaviors (Berry, Ones & Sackett, 2006) among others. As a testament to the number of meta-analyses conducted regarding personality, one study quantitatively reviewed 15 existing meta-analyses regarding personality and job performance (Barrick, Mount & Judge, 2001). The results of these meta-analyses, when pertinent, will be reviewed in the discussion of each dimension.

There are a few documented criticisms of the Five Factor model. In particular, it has been consistently said that the model is too simplistic to adequately describe the full range of human characteristics. Further criticism says that researchers who rely only on the “Big Five”



are neglecting to measure any other traits (e.g. need for achievement) (Block, 1995). Indeed, one would be hard pressed to find a personality study that is neither based on the Five Factor model nor is framed in contrast or addition to the Big Five traits. Neither of these criticisms is of particular concern in the present study. First, in response to the criticism that the model is overly simplistic, the subscales on the NEO-PI allow for a more detailed personality profile of test takers. Second, although it may be said that those who measure the Big Five neglect to measure other traits, virtually nothing is known about the antecedents of theory endorsement. Because it is unrealistic to measure every possible personality trait, one may argue that the Five Factor Model is as good a starting point as any. Further, the present research will also examine Type A personality, as the trait has been previously linked to meaningful health outcomes. In general, and despite the criticisms of the model, it is widely used. Many researchers have defended its use, stating that, so long as the Five Factor model is a meaningful predictor, there is no reason not to use it (Goldberg & Saucier, 1995).

*Conscientiousness* refers to one's tendency to be organized, reliable and thorough. The conscientiousness dimension of the NEO-PI includes six subscales: competence, order, dutifulness, achievement striving, self discipline and deliberation. Those who are high on the dimension tend to be driven, focused, and responsible, and as such this trait is often associated with successful employees.

Indeed, the relationship between conscientiousness and job performance is reportedly as high as .24 (Barrick, Mount & Judge, 2001). Of note, earlier meta-analyses report a lower correlation ( $r = .13$ ) (Barrick & Mount, 1991). This difference likely represents discrepancies in the extent to which correlations were corrected. Conscientiousness is also positively related to

satisfaction ( $r = .20$ ) (Judge, Heller & Mount, 2002), and negatively related to interpersonal and organizational deviance ( $r = -.19$  and  $-.34$ , respectively) (Berry, Ones & Sackett, 2006).

Of particular relevance to the present study, meta-analyses have reported a relationship between conscientiousness and leadership ( $r = .28$ ), although this refers to one's "overall" leadership as opposed to predicting what kind of leader one will be (Judge, Bono, Ilies & Gerhardt, 2002). To speak to what kind of leader one is likely to be, researchers have examined the relationship between Holland's organizational types and the Five Factor model. Data show that conscientiousness is positively related to conventional pursuits ( $\rho = 0.13$ ), indicating that conscientious individuals may prefer to follow the status quo (Barrick, Mount & Gupta, 2003). This has implications regarding one's theory endorsement, as Theory X endorsement is more closely associated with the preference for order and structure.

Secondly, conscientiousness is related to the emotional exhaustion subset of burnout ( $\rho = -.19$ ), which is closely related to both perceived strain and health outcomes (Alarcon, Eschleman & Bowling, 2009). This indicates that those who are conscientious may actually be less prone to burnout, perhaps because a high level of organization results in preparedness, reducing one's fatigue. Furthermore, conscientious individuals tend to be more liked by both their supervisors and coworkers, resulting in more support at work (Alarcon, Eschleman & Bowling, 2009).

*Neuroticism* refers to the tendency to be anxious, hostile, or insecure. The common definition in the English language is for neurotics to be those prone to worry, but the Five Factor definition is slightly more descriptive than its connotation. The dimension is sometimes referred to as emotional stability (the opposite of neuroticism), indicating that individuals high on neuroticism fluctuate between extremes (both positive and negative) more than others. The sub-

dimensions that fall under the neuroticism dimension include anxiety, hostility, depression, self-consciousness, impulsiveness, and vulnerability to stress.

The dimension is known by two opposing names (neuroticism and emotional stability), and as such one should exercise slight caution in interpreting the results. That is, neuroticism is generally *negatively* related to positive work outcomes, while emotional stability tends to be *positively* related. Meta-analyses reveal that the estimated true correlation between emotional stability and performance is moderate ( $\rho = .15$ ) (Barrick, Mount & Judge, 2001). Similar to conscientiousness, this relationship is higher than that previously reported ( $r = .05$ ) (Barrick & Mount, 1991). However, the relationship between job satisfaction and neuroticism is fairly strong ( $r = -.24$ ) (Judge, Heller & Mount, 2002), as are the relationships between emotional stability and interpersonal deviance ( $r = -.20$ ) and organizational deviance ( $r = -.19$ ) (Berry, Ones & Sackett, 2006).

The reported relationship between neuroticism and leadership is similarly strong and negative ( $\rho = -.24$ ) (Judge, Bono, Ilies & Gerhardt, 2002). This indicates that those high on neuroticism are perceived as less effective leaders overall, but does not indicate what style of leadership they are likely to endorse. The relationship between emotional stability and emotional exhaustion is particularly alarming, as the true correlation is estimated to be  $-.50$ . Of note, emotional stability in this study was measured as part of one's Core Self Evaluation, and therefore was not measured using the NEO-PI. Finally in regards to neuroticism, one meta-analysis indicates that there may be a direct link between neuroticism and certain health outcomes. Although neuroticism was not specifically measured, three of its subscales (anxiety, hostility and depression) were related to coronary heart disease outcomes ( $r = .14, .17$  and  $.23$ , respectively) (Booth-Kewley & Friedman, 1987).

*Openness to Experience* refers to the tendency to prefer new ideas and the willingness to try new activities. Individuals high on the dimension are likely to be interested in the arts, inherently curious, and creative. The six subscales associated with openness to experience include fantasy, aesthetics, feelings, actions, ideas, and values.

Openness to experience is only weakly related to most organizational outcomes. For instance, the relationship between openness to experience and job performance is weak ( $r = .03$  observed,  $\rho = .07$  corrected), indicating that one's intellect is not very indicative of his or her success on the job (Barrick & Mount, 1991; Barrick, Mount & Judge, 2001). Similar results were found regarding job satisfaction ( $r = .01$ ), burnout ( $\rho = -.01$ ), interpersonal deviance ( $r = -.07$ ) and organizational deviance ( $r = -.03$ ) (Judge, Heller & Mount, 2002; Alacron, Eschleman & Bowling, 2009; Berry, Ones & Sackett, 2006).

Importantly, openness to experience is reportedly related to leadership ( $\rho = .24$ ). These results are often interpreted such that those who tend to think outside of the box are more likely than others to emerge as and be successful leaders (Judge, Bono, Ilies & Gerhardt, 2002). The interplay between openness to experience and leadership may be such that those who are open to new ideas are more likely to support unconventional leadership styles. In many ways, Theory Y is considered to be the less conventional of the styles, and as such is likely to be associated with openness to experience. This is supported by meta-analytic results, which report that openness to experience is negatively related to conventional pursuits ( $\rho = -.11$ ) (Barrick, Mount & Gupta, 2003).

*Agreeableness* is the dimension most closely associated with being likeable and cooperative. Individuals high on agreeableness tend to work well with others because they are not hostile, judgmental nor overly confrontational. The sub-dimensions that fall under

agreeableness include trust, straightforwardness, altruism, compliance, modesty, and tendermindedness.

As with the previous two traits, agreeableness is very weakly related to performance ( $r = .04$  when uncorrected,  $\rho = .09$  when corrected) (Barrick & Mount, 1991; Barrick, Mount & Judge, 2001). It is moderately related to job satisfaction ( $r = .13$ ) and fairly strongly and negatively related to deviance ( $r = -.36$  and  $-.25$  for interpersonal deviance and organizational deviance respectively) (Judge, Heller & Mount, 2002; Berry, Ones & Sackett, 2006).

Although overall leadership is only weakly related to agreeableness ( $\rho = .08$ ), the relationship between leader effectiveness and agreeableness is considerably higher ( $\rho = .21$ ) (Judge, Bono, Ilies & Gerhardt, 2002). This is in contrast to the relationship between agreeableness and leader emergence, which is also fairly weak ( $\rho = .05$ ). The relationship between agreeableness and leadership has generally been considered ambiguous, and is often discussed at the sub-dimension level. Although interpersonal sensitivity and cooperativeness are positively associated with leadership, the need for affiliation and modesty are negatively related (Judge, Bono, Ilies & Gerhardt, 2002). The conclusion that need for affiliation is negatively related to leader emergence becomes somewhat intuitive when one considers that, in order to get ahead, it may be less important to make friends.

Finally in regards to agreeableness, the dimension is also related to burnout. The relationship between agreeableness and emotional exhaustion is moderate ( $\rho = -.15$ ), indicating that those who are agreeable are less likely to experience burnout. Researchers explain this relationship with the notion that agreeable individuals tend to be more liked by their coworkers and supervisors, and as such have a more positive working environment (Alacron, Eschleman & Bowling, 2009).

*Extraversion* refers to the tendency to be outgoing, sociable and gregarious. Those high on extraversion prefer to be around others and are easily bored. The subscales associated with extraversion include warmth, gregariousness, assertiveness, activity, excitement seeking and positive emotion.

The relationship between extraversion and performance is moderate at best ( $r = .08$  uncorrected,  $\rho = .15$  corrected) (Barrick & Mount, 1991; Barrick, Mount & Judge, 2001). However, it is more strongly related to job satisfaction ( $r = .19$ ) (Judge, Heller & Mount, 2002). It is very weakly related to interpersonal and organizational deviance ( $r = .02$  and  $-.07$  respectively) (Berry, Ones & Sackett, 2006).

Perhaps not surprisingly, the relationship between extraversion and leadership is strong and positive ( $\rho = .31$ ). Extraversion is strongly related to leader emergence ( $\rho = .33$ ) and leader effectiveness ( $\rho = .24$ ), indicating that extraverts are not only more likely to become leaders but are also better leaders (Judge, Bono, Ilies & Gerhardt, 2002). The relationship between extraversion and emotional exhaustion is equally strong, although negative ( $\rho = -.26$ ). This is presumably because extraverts are more likely to perceive situations more positively, and as such experience less burnout at work (Alacron, Eschleman & Bowling, 2009). Finally, meta-analytic results report a relationship, although rather weak, between extraversion and coronary heart disease outcomes ( $r = .07$ ) (Booth-Kewley & Friedman, 1987). Interestingly, the authors fail to form a hypothesis regarding extraversion or explain their results. Indeed, they fail to address the reasons for its inclusion in their analysis all together. Regardless, the fact that the results are meta-analyzed leads one to conclude that the relationship between the two variables has been examined in the past.

*Type A Personality* The final personality variable included in the present analysis, Type A, is not part of the Five Factor Model. Type A individuals are impatient, competitive, easily frustrated, and ambitious, often to the point of perfectionism. The trait is typically broken into two dimensions: impatience-irritability and achievement striving. Impatience-irritability refers to the tendency to become angry and frustrated, while achievement striving is associated with the tendency to work hard until goals are reached. Interestingly, these dimensions are fairly unrelated to each other, as they differentially predict a number of outcomes (Spector & O'Connell, 1994).

Type A personality has been linked to a number of work-related outcomes. For instance, Type A, particularly paired with an external locus of control, is significantly and negatively related to job satisfaction (Kirkcaldy, Shepard & Furnham, 2002). Impatience-irritability is significantly related to work-family conflict overall as well as work interfering with family ( $r = .17$  and  $.15$  respectively). Interestingly, the same study also reported significant correlations between Type A and gender ( $r = .19$  and  $.15$ , for impatience-irritability and achievement striving respectively) and age ( $r = -.31$  and  $.18$ , respectively) (Bruck & Allen, 2003).

Type A is also related to performance. In a university study, students who were high in achievement striving performed significantly worse on exams than those low on the dimension. These results are typical in the academic domain. Researchers suggest that this is because highly ambitious students are likely to take on too many challenges at once, and as such cannot adequately focus on any one task (Watson, Minzenmayer & Bowler, 2006). This notion is supported by a meta-analysis of Type A and job performance, which found a negative relationship between the two ( $r = -.11$ ) (Tett, Jackson, Rothstein, 1991). Seemingly contradictory evidence was found in a study of pay increases in the fast food industry, which found that

achievement striving was positively related number and amount of pay increases ( $r = .46$  and  $.44$  respectively), while irritability-impatience was not significantly related to either outcome (Aziz, Goldman & Olsen, 2007). Perhaps in the academic environment it is difficult to juggle multiple tasks and one receives little reward for doing so. However, the work domain rewards multitasking, as one who takes on multiple challenges is perceived as driven.

By and large, the majority of studies regarding Type A personality and work-related behaviors have been in the domain of job stress and burnout. A recent meta-analysis reported a strong correlation between Type A personality and burnout, specifically the reduced personal accomplishment dimension ( $\rho = .37$ ) (Alarcon, Eschleman & Bowling, 2009). The reduced personal accomplishment dimension refers to the tendency to feel unable to reach goals and even perpetually inadequate at work. Although Type A was measured unidimensionally, one would suspect that the achievement striving component is more closely related to this type of burnout than is the irritability-impatience dimension.

The relationship between Type A personality and job stress is such that those who exhibit Type A personality behaviors are more prone to be negatively affected by job stressors. They are more likely to perceive certain work conditions as stressors, as well as to experience strain as a result (Spector & O'Connell, 1994). Indeed, the irritability-impatience dimension is significantly related to organizational constraints ( $r = .24$ ) and interpersonal conflict ( $r = .29$ ). The achievement striving dimension is significantly related to role ambiguity ( $r = -.32$ ), role conflict ( $r = -.24$ ), and workload ( $r = .26$ ) (Spector & O'Connell, 1994). It appears that those who are high on the Type A personality dimension perceive their work environment as more stressful, and as such are likely to elicit behavior from others that confirms their suspicions.



Much like the way one's theory endorsement can elicit certain behavior from subordinates, perhaps Type A personality works in some ways as a self-fulfilling prophecy.

It is not simply that Type A individuals perceive more stress in their workplace, they are also more affected by it. The literature surrounding Type A personality reports a link between the personality dimension and an assorted number of health outcomes, many of them heart related (Kirkcaldy, Shephard & Furnham, 2002). Meta-analyses reveal a relationship between Type A and Coronary Heart Disease outcomes ( $r = .11$ ). Interestingly, this relationship is stronger in studies prior to 1977 ( $r = .20$ ) than those after 1977 ( $r = .11$ ) (Booth-Kewley & Friedman, 1987). The reasons for this discrepancy are unclear. To think that the occurrence of coronary heart disease outcomes could dramatically decrease in a relatively short time is unlikely. Instead, researchers suggest a number of methodological explanations, including a shift in articles that journals choose to publish and the deterioration of certain Type A instruments.

### *Personal Values*

One's personal values refer to his or her preferences in style of work. Personal values measures are generally found in the fit literature, where researchers examine the extent to which the characteristics of a job or the culture of an organization align with what an individual is seeking from his or her work life. A number of values measures exist in the commercial domain, the most common of which is the Hogan Motives Values and Preferences Inventory (MVPI). The MVPI is a measure of work-based values. The measure's scales include recognition, power, hedonism, altruistic, affiliation, tradition, security, commerce, aesthetics, and science. This instrument is well normed and available at a cost for use by organizations and individuals. A similar tool, based on the Hogan MVPI, has been created and is available in the public domain.

The assessment, created by Smith, Dickson, Grojean and Hanges (2002), assess 10 values: aesthetic, affiliation, benevolence, economic, hedonistic, power, security, status, theoretical, and tradition. The scale has been used less frequently than the Hogan MVPI, but has been used in previous research (discussed below) (Giberson et al., 2009).

Personal values have received less attention in the literature than personality. This is unfortunate, given that values provide a unique perspective to the often studied personality traits. Particular to this study, values are tied closely to motivations, as they are descriptive of what people will prefer and will in some capacity work toward. Given that Theory X and Theory Y are, at their core, theories of motivation, the use of a values scale is relevant here.

As discussed, values are generally considered in regards to person-environment fit. To the extent that one's personal values are consistent with the organization's values, fit is perceived. Values-based fit generally leads to higher commitment and job satisfaction. Significant relationships were found between values congruence and job satisfaction ( $r = .41$ ), organizational satisfaction ( $r = .41$ ), affective commitment ( $r = .36$ ), normative commitment ( $r = .34$ ) and turnover ( $r = -.37$ ) (Finegan, 2000; Amos & Washington, 2008).

Few significant relationships were found between a leader's personality traits and his or her personal values. Significant relationships include emotional stability and security ( $r = -.38$ ) and agreeableness and tradition ( $r = .47$ ) (Giberson et al., 2009). The lack of relationships suggests that perhaps one's personality and his or her personal values will differentially predict outcomes, including theory endorsement and health outcomes. A limited number of values are hypothesized to be related to theory endorsement (namely security, power and science). As such, a review of each value will not be provided. The rationale for these values will be discussed below in regards to specific hypotheses.

In sum, little is known about the antecedents to theory endorsement. An analysis of personality traits (the Big Five as well as Type A) and personal values is a step towards understanding the personality profile of a Theory X or Theory Y leader. Furthermore, it is plausible that the same antecedents will predict health outcomes in individuals. Following is a review of the health outcomes frequently examined in the organizational domain. These are meaningful outcomes given their negative consequences for individuals (physical well-being) as well as the organization (health-care costs and time lost to absenteeism).

### *Health Outcomes*

When considering the individual differences associated with theory endorsement, it is also worthwhile to examine the effect of such endorsement on the individual. Some studies, reviewed above, have examined the effect of theory endorsement on subordinate outcomes (e.g. performance, satisfaction, etc.) However, none have considered whether endorsement is linked to any health outcomes for the leaders.

Health outcomes have been incorporated into the industrial/organizational literature for some time. As early as 1940 researchers were noting that certain working conditions may be associated with physical and mental symptoms of strain (Hebestreit, 1940). This early work examined primarily physical elements of the job (e.g. muscular effort, the presence of noxious conditions, etc), as at the time little was known about the boundaries of working conditions.

Since then, the relationship between work stressors and physical strains has evolved, and it is now fairly understood that certain working conditions are likely to lead to negative health outcomes for individuals. These outcomes have been classified as being either signs (generally objective, such as x-rays) or symptoms (often based on self-report, such as a headache) (Darr & Johns, 2008). One of the predominant areas of study rests in the domain of heart health. It has

been routinely demonstrated that individuals who have highly stressful jobs are more prone to cardiovascular diseases such as hypertension (Landsbergis et al., 2011).

Despite the wealth of knowledge surrounding job stressors, little is known about the health outcomes associated with other characteristics. A number of psychosocial variables, including hostility and anxiety, have been presented as correlates of cardiovascular risk factors (Weidner et al., 1997; Booth-Kewley & Friedman, 1987). However, the relationship between these outcomes and most individual characteristics (personality and personal values) has never been explicitly examined. These potential relationships could have meaningful implications for organizations, both in terms of selection and organizational processes. Indeed, organizations would benefit from being aware of the impact of employee health on their bottom line. The productivity lost due to absenteeism as well as rising health care costs are likely to have a significant impact on organizational profits.

#### *Present Study*

The present study examines both the antecedents and outcomes of theory endorsement for the leader. First, hypotheses based on the Big Five theory of personality are presented. Namely, trait-endorsement hypotheses are made for conscientiousness, neuroticism, agreeableness, and openness to experience. There is no theoretical reason to believe that extraversion is related to theory endorsement, and as such no hypothesis is presented. However, it is included for exploratory purposes in the health outcomes analysis. Second is a discussion of theory endorsement as it is related to one's personal values. Of the ten dimensions included in the scale, three (power, security, and science, discussed below) are particularly relevant to theory endorsement. Last are hypotheses regarding the relationships between theory endorsement, stress perceptions, and subsequent health outcomes.

Given the nature of the data, the relationship between antecedents (personality and personal values) and stress perceptions and health outcomes could be and is examined. However, no hypotheses were made regarding these relationships. Significant relationships of this kind tell an interesting story, but the lack of a theoretical foundation in this area makes hypothesis generation difficult.

At this point, it is necessary to highlight an important theoretical assumption as it relates to the antecedent hypotheses. The False Consensus Effect (FCE), discussed in the social psychology literature, says that individuals are likely to overestimate the extent to which others share their personality traits, attitudes, and behaviors (Oliver, Bakker, Demerouti & de Jong, 2005; Marks & Miller, 1987). For instance, a smoker is likely to overestimate the percentage of the population that smokes. This phenomenon is relevant to the present study in that managers themselves may possess some of the traits that they ascribe to subordinates. For instance, a Theory Y manager may value autonomy and enjoy work itself, and as such assume that his or her subordinates feel the same. In generating hypotheses, some traits are descriptive of both the manager's assumptions about subordinates *and* the manager him or herself. Be advised, this assumption (i.e. FCE operates as a mechanism in theory endorsement) has not been empirically tested, and although it is a valid empirical question, it is outside the scope of this paper.

*Personality* Conscientiousness refers to one's tendency to be reliable, responsible and organized. Individuals who are high on this dimension are generally thorough and self-disciplined, although those who score extremely high on conscientiousness may be perfectionists (McCrae & John, 1992). It is plausible to think that these traits, often associated with successful managers in general (Gatewood, Feild & Barrick, 2008), would be found in both Theory X and Theory Y individuals. Hence, hypotheses for this variable will be made at the sub-dimension level.

As previously discussed, there are six subscales associated with conscientiousness: competence, order, dutifulness, achievement striving, self discipline and deliberation.

Some dimensions (e.g., competence, achievement striving) are likely descriptive of any manager, regardless of theory endorsement. That is, any manager is likely motivated to achieve, but *how* he or she seeks to achieve may vary by endorsement. Some sub-dimensions are more aligned with the typical Theory X manager, while others are characteristic of Theory Y. Specifically, Theory X individuals may be concerned with following the rules and may strive for perfection as a means to avoid punishment. As such, these individuals are likely to display order and dutifulness. Conversely, individuals who thrive in autonomous situations, by necessity, are likely to be highly self-disciplined. Hence:

H1a: Conscientiousness is related to theory endorsement such that those who score highly on the dutifulness and order dimensions are more likely to endorse Theory X.

H1b: Conscientiousness is related to theory endorsement such that those who score highly on the self-discipline dimension are more likely to endorse Theory Y.

Neuroticism, as defined in the context of the Big Five, refers to the tendency to be anxious, tense, and prone to worry. Those who are high on the dimension are often suspicious of others and may be unstable (McCrae & John, 1992). Theory X managers believe employees are inherently lazy and must be closely supervised, and it is possible that this suspicion stems from a lack of trust. As such:

H2: Neuroticism is related to theory endorsement such that those who are high on the dimension are more likely to endorse Theory X.

Openness to experience refers to one's willingness to try the unfamiliar, as well as the tendency to consider abstract ideas and values (McCrae & John, 1992). To the extent that

Theory X is considered the traditional management style, those scoring high on this dimension may be more likely to endorse newer, less conventional forms of management. For instance, some organizations operate on a “results only” basis, allowing subordinates a large amount of autonomy in how a task gets completed (Pink, 2010). This is not a traditional work environment, and it is likely that the autonomy allowed in this method is largely dependent on a Theory Y perspective. Indeed, openness to experience is negatively related to one’s tendency to pursue Holland’s conventional pursuits (Barrick, Mount & Gupta, 2003). Hence:

H3: Openness to experience is related to theory endorsement such that those who score highly on the dimension are more likely to endorse Theory Y.

Agreeableness refers to one’s tendency to be kind and sympathetic, but also the tendency to be trusting. Those high in agreeableness are less likely to be critical or skeptical and more likely to trust others (McCrae & John, 1992). As such, it is likely that a manager who is high on agreeableness is more apt to trust his or her employees:

H4: Agreeableness is related to theory endorsement such that those high on the dimension are more likely to endorse Theory Y.

Type A individuals value order and structure and have a need to be thorough. They are often rigid and have a need to do the job correctly, bordering on perfectionism, which may result in a “if you want it done right, do it yourself” attitude. Theory X managers tend to believe that subordinates need to be monitored every step of the way. It follows, then, that Type A individuals would more likely be Theory X managers. Hence:

H5: Type A Personality is related to theory endorsement such that those high on the dimension are more likely to endorse Theory X.

*Values* One's personal values refer to the characteristics associated with his or her ideal working environment. The security dimension refers to the desire for a job that is highly predictable with a great deal of structure. Those who score highly on the dimension prefer order and rigidity in their daily work. A similar dimension, referred to as power, describes the tendency to value success, status, and control. Much like the security dimension, those who are high on this dimension prefer to have control over others. Theory X leaders believe subordinates need direction in their day-to-day activities rather than allowing them autonomy. Therefore:

H6: Security is related to theory endorsement such that those who score highly on the dimension are more likely to endorse Theory X.

H7: Power is related to theory endorsement such that those who score highly on the dimension are more likely to endorse Theory X.

Finally, the science scale assesses one's willingness to try new ideas and value new solutions. Leaders high on the science scale are likely to seek out new and creative ideas from employees and may be more willing to encourage their autonomy. Similar to those high in openness to experience, individuals high on the science dimension embrace change and new ideas. Theory Y leaders believe that their subordinates are capable of contributing new and meaningful ideas, and are likely to embrace new ideas themselves. As such, it is hypothesized that:

H8: Science is related to theory endorsement such that those who score highly on the dimension are more likely to endorse Theory Y.

*Health Outcomes* Given the high cost of health care and an organization's loss of productivity, individual health outcomes have been of interest for some time. Theory X individuals are often more preoccupied with the behaviors of others, and as such may find it



difficult to relax while at work. Theory Y managers, who tend to allow their subordinates autonomy, may take a hands-off, and therefore lower stress approach to management. It is hypothesized that Theory X leaders will exhibit more stress related health outcomes than Theory Y leaders. Furthermore, it is hypothesized that stress mediates the relationship:

H9: Leader health is related to theory endorsement such that the reporting of coronary heart disease symptoms is positively related to the endorsement of Theory X.

H10: Stress perceptions mediate the relationship between theory endorsement and health outcomes.

## Methods

### *Participants*

Participants included 115 individuals (56% female, 73% Caucasian, average age = 39 years). Participation was restricted to those who have had managerial experience. This was an essential criterion, given that Theory X/Theory Y endorsement is a reflection of one's beliefs about subordinates. 20.5% of participants had less than one year of managerial experience, 36.8% had 1-5 years experience, 16.2% had 5-10 years and 26.5% had 10 years or more. Of managers, the largest percentage were in educational, health, and human services (25.9%) followed by manufacturing (14.7%). See Table 1 for a summary of demographic data.

Participants were recruited through three methods. First, the researcher spoke to classes of MBA students. Second, an advertisement for the study was placed on the central website for University employees. Third, personal connections and snowball sampling were used to identify interested individuals. Interested individuals were sent an email containing a link to the survey, as well as a unique login and password for the Hogan MVPI. Upon completion of the first portion of the survey, participants were redirected to the MVPI. Upon completing the MVPI,

participants could view, print and/or save their fully interpreted MVPI report. The report is typically valued around \$40, but was made available at no cost to participants. As such, it was presented as an incentive for participation.

A power analysis revealed that 160 participants were necessary in order to detect a small effect with an alpha of .05. Due to problems related to data collection, the final sample size was smaller (115). Further, a fewer number of individuals completed the Hogan than the other instruments (n=100). However, it should be noted that most results reached significance despite the small sample size, indicating that assuming a small effect may have been too conservative. A power analysis conducted assuming a medium effect size revealed that 111 participants were necessary to detect an effect.

### *Materials*

All measures were cross-sectional and based on self-report. All were made available online for participants.

*Big Five* Despite the fact that each trait in the Five Factor model has been broken into sub-dimensions, only one hypothesis predicts effects at the sub-dimension level. Hence, for all hypotheses with the exception of H1a and H1b (conscientiousness), the dimension level is sufficient. In an attempt to reduce fatigue effects, the full NEO-PI was not used. Although this measure allows for analysis at the sub-dimension level, it is a good deal longer. As such, the sub-dimension scales were only used where necessary. The IPIP is considerably shorter but sufficiently valid (Buchanan, Johnson & Goldberg, 2005).

Each scale contains 10 items, five of which are positively coded (*I am always prepared*) and five of which are negatively coded (*I waste my time*). Cronbach's alpha for the scales are as follows: .71 (conscientiousness - dutifulness), .82 (conscientiousness - orderliness), .85

(conscientiousness – self discipline), .86, (neuroticism), .76 (openness to experience), .77 (agreeableness) and .85 (extraversion) (Buchanan, Johnson & Goldberg, 2005). Scale items can be found in Appendix A.

*Type A Personality* The most consistently used measure of Type A personality is known as the Jenkins Activity Survey (JAS). The survey was originally presented by Jenkins (1967) to be used in the clinical psychology discipline. A shorter version of the measure has since become available (Spence, Helmreich & Pred, 1987), and has been more widely used than the original in recent research. Because participants were asked to complete a number of scales, the shorter version of the measure was used (see Appendix B for items).

The revised JAS measures two subscales: impatience-irritability and achievement striving. The scales contain five and seven items, respectively and are measured on a 5-point Likert scale where higher scores indicate more extreme Type A behavior. Chronbach's alpha is acceptable, although low, for impatience-irritability ( $\alpha = .67$  for men and  $.63$  for women) and higher for achievement striving ( $\alpha = .79$  for both genders) (Bruck & Allen, 2003). Of researchers that report reliability of the JAS, the impatience-irritability properties appear consistent. Spector and O'Connell (1994) report the test-retest reliability of the dimension to be .74, they do not report coefficient alpha. The only other article reviewed to report the coefficient alpha was Kirkcaldy et al (2002), who report that the JAS, as well as all other dimension on their scale, had internal consistency statistics between .64 and .89.

*Values* A manager's personal values were measured using the Hogan Motives, Values, and Preferences Inventory. This measure is available for use in the commercial domain, and has been normed on over 10,000 individuals. The scale contains 200 items measuring 10 dimensions: recognition, power, hedonism, altruistic, affiliation, tradition, security, commerce,

aesthetics, and science. Although hypotheses were only generated for three of these dimensions (namely, security, power and science), the instrument is administered in its entirety. See Appendix C for sample items.

*Theory X/Theory Y* Managers were administered two X/Y related scales. The first is the attitude scale developed by Kopelman and colleagues (Kopelman, Prottas & Davis, 2008). This scale was developed to address the need for a construct valid measure of Theory X and Theory Y dimensions. The 17-item attitude measure is composed of items from pre-existing (but non-validated) scales of Theory X and Theory Y, including items from Swenson (n.d.) and the Scanlon Leadership Network (n.d.). The second scale, a behaviorally-based measure, was also developed by Kopelman and colleagues (Kopelman, Prottas & Falk, 2010). The behavior measure consists of 13 items from Costley and Todd (1987), Miles (1964), Gordon (1999), Oslund et al. (2001), Greenberg (1999) and Baron and Paulus (1991). For more information regarding scale validation procedures, please see the work of Kopelman and colleagues (2008, 2010).

Cronbach's alphas are .78 and .77 for the attitude and behavior measure, respectively. The two scales are significantly correlated ( $r = 0.61$ ). Scores were calculated by reverse coding the Theory Y endorsed items and summing them with Theory X endorsed items. This resulted in one Theory X score. In total, 17 items measure Theory X and 13 items measure Theory Y. The items from Kopelman et al.'s measures can be found in Appendix D. For the purpose of analyses, Theory X is considered the high end of the scale, and Theory Y is considered the low end. That is, an individual who is more likely to endorse Theory X will score highly on the measure. As such, a positive correlation indicates that as variable A goes up, the person's score approaches pure Theory X endorsement, while a negative correlation indicates that as variable A

goes up, a person's score approaches pure Theory Y endorsement. This is consistent with the method used in previous Theory X/Theory Y research (Kopelman et al., 2008).

*Stress* In the present study, job stress was measured using the scale presented by Jamal and Baba (1992). The scale consists of 9 items (see Appendix E) measuring perceived stress at work. The coefficient alpha for the scale is sufficiently high (.83).

*Health Outcomes* In keeping with the format of the other scales in the present study, health outcomes were based on manager self-report. There are some criticisms regarding the use of self-reported health data, but other methods (e.g. cortisol) do not appear to be significantly more valid. As such, self-report is considered the most popular method of measuring employee health (Spector & Jex, 1998).

The present study measured health outcomes using the Physical Symptoms Inventory. The scale was originally developed by Wahler (1968) but has since been revised. The current measure consists of 18 items, which can be found in Appendix F. The items are based on physical manifestations of strain (e.g. headache, upset stomach) rather than non-physical symptoms (e.g., cholesterol levels). Managers are asked whether they have, in the last 30 days a.) not experienced the symptom, b.) experienced the symptom but did not report it or c.) experienced the symptom and saw a doctor. Each participant receives three scores: the sum of non-reported symptoms, the sum of reported symptoms, and an overall total (the sum of the previous two scores). Because each item represents a different symptom, internal consistency is not appropriate for this scale (Spector & Jex, 1998).

*Demographics* Five demographic items were included in the survey: age, race, gender, industry, and managerial tenure. There is no reason to suspect different results for any one age

group, race or gender (i.e. an effect for men but not women), and as such these demographics were used only to ensure that there are no systematic differences in results.

The remaining two items provided insight into the nature of theory endorsement. It is possible that a theory is more frequently endorsed in certain industries than others. For instance, managers in the manufacturing industry may be more likely to endorse Theory X, while those in advertising or other creative industries may be more likely to endorse Theory Y. A difference in theory endorsement by industry would imply one or both of two phenomena. The first implication is that endorsement is in some way contextually dependent, perhaps because endorsing one theory is more effective than endorsing the other. In this scenario, managers may adjust their theory endorsement in order to succeed. The second possibility is that individuals are drawn to certain industries because of their endorsement. For instance, a creative industry such as advertising may appeal to an individual who values autonomy. In either scenario, the ASA model (Schneider, 1987) would predict that an individual whose endorsement is congruent with the industry is more likely to succeed, further strengthening that industry's "type" of leaders.

The second work-related demographic, managerial tenure, helps to further understand the nature of theory endorsement. Specifically, it provides insight into whether length of experience with subordinates impacts theory endorsement.

### *Analyses*

The first step in the analysis was to calculate the correlation between all variables in the analysis. Next, hypotheses 1-8 were tested using linear regression. Total scale scores for each of the dimensions (dutifulness, order, self-discipline, neuroticism, openness to experience, agreeableness, extraversion, Type A, security, power, and science) were entered separately as

predictors of theory endorsement. A final step was to enter all antecedents at once to see if certain predictors emerge as being stronger than others.

Hypotheses 9 and 10 were also tested using regression. Consistent with mediated regression methods (Tabachnick & Fidell, 2007), the direct relationship between theory endorsement and health outcomes was tested using multiple regression (hypothesis 9). Next, stress was added to the equation. Based on Sobel's (1982) test of mediation, a reduction in the direct effect after the addition of stress indicates that mediation is taking place (hypothesis 10) (Tabachnik & Fidell, 2007, pp. 159-161).

For exploratory purposes, all antecedents (Big Five and Type A personality scores and values scores) were entered into a linear regression as predictors of stress perceptions and health outcome scores. The direct relationships were tested, in addition to a stress-mediated relationship as described above. Finally, demographic information was used to ensure that there are no systematic differences between groups (by age, race and gender) and to understand the role that context (industry and tenure) plays in theory endorsement.

## Results

An outlier analysis was conducted to ensure data quality. There were no univariate outliers, as no z-scores exceeded 4, the threshold recommended by Stevens (2009). Further, a Mahalanobis test of residuals revealed no multivariate outliers. There is no evidence of range restriction, as the coefficient of variation (mean/standard deviation) exceeds .001 for all variables. A histogram for each variable was reviewed to ensure that there was no apparent skew or kurtosis.

There were no significant between group differences for gender, race, industry, or tenure as a manager. However, females had significantly lower scores on Theory X endorsement,

indicating that they are more likely to endorse Theory Y ( $p < .05$ ). This supports previous research (Gillman, 1993).

Theory endorsement was calculated by reverse coding Theory Y items and summing scores to one scale score, similar to the approach taken by Kopelman and colleagues (2008, 2010). As such, positive correlations are indicative of the magnitude of Theory X endorsement and negative correlations are indicative of the magnitude of Theory Y endorsement. Intercorrelations between all variables can be found in Table 1. Significant correlations were found between theory endorsement and conscientiousness (dutifulness dimension) ( $r = -.20, p < .05$ ), openness to experience ( $r = -0.44, p < .001$ ), agreeableness ( $r = -0.41, p < .001$ ), type A ( $r = .20, p < .05$ ), security ( $r = .31, p < .01$ ), power ( $r = .22, p < .05$ ), and stress ( $r = 0.28, p < .01$ ). The relationship with Type A refers to total Type A score. When broken into two dimensions, Impatience-Irritability and Achievement Striving, neither was significant.

Overall, dutifulness, openness to experience and agreeableness were more likely to co-occur with Theory Y endorsement, and Type A, security, power, and stress were more likely to co-occur with Theory X endorsement. Of note, when all predictors were entered into a stepwise regression equation, the variables predicted 44% of variance in theory endorsement ( $R = .67, p < .001$ ).

The results for the test of Hypothesis 1a, a predicted relationship between dutifulness and Theory endorsement, are opposite the hypothesized direction. Individuals who were high on dutifulness were significantly more likely to endorse Theory Y. This relationship is discussed below. The remaining results support hypotheses 3, 4, 5, 6, and 7 respectively. Although not significant, correlations between theory endorsement and order, self-discipline, neuroticism, science, and health are in the hypothesized direction.



Interestingly, significant correlations were found between theory endorsement and the MVPI dimensions of commerce ( $r = .20, p < .05$ ), aesthetics ( $r = -0.32, p < .01$ ), recognition ( $r = .22, p < .05$ ) and tradition ( $r = .26, p < .01$ ). These relationships were not hypothesized, but potential explanations are offered in the discussion section. When all variables were entered into a regression equation, including variables that were and were not hypothesized, 51% of the variance in theory endorsement was accounted for ( $R = .72, p < .001$ ).

Hypotheses 9 and 10 were tested using Sobel's method. Contrary to hypothesis 9, the relationship between theory endorsement and health outcomes was not significant ( $r = 0.11, ns$ ). Recent advances in mediated regression analyses suggest that a direct effect between the IV and the DV is no longer required for mediation to occur (for instance, Zhao, Lynch & Chen, 2009). As such, hypothesis 10 was tested using Sobel's method.

The Sobel test of mediation was significant ( $p < .01$ ), suggesting that mediation is occurring. These findings provide support for Hypothesis 10. The relationship between stress and theory endorsement is significant ( $r = .28, p < .01$ ), as is the relationship between stress and health ( $r = .49, p < .001$ ). When theory endorsement and stress are entered together, they are significant predictors of health outcomes ( $R = .50, p < .001$ ). The non-significant relationship between theory endorsement and health suggests that stress is accounting for most of the variance in the relationship.

## Discussion

The results of the present study support the notion that certain individual differences predict leadership style. In particular, individuals who are dutiful, open to new experiences and agreeable are more likely to endorse Theory Y. Conversely, individuals who are Type A and those who value power and security are more likely to endorse Theory X. Further, managers who

endorse Theory X are more likely to experience stress on the job. Theory endorsement may also have meaningful affects on health outcomes, as there was support for a relationship mediated by stress.

The relationship between dutifulness and theory endorsement was not in the hypothesized direction. It was hypothesized that individuals high on the dutifulness dimension would be more likely to endorse Theory X, but results show that they may be more likely to endorse Theory Y. The reason for this relationship is unclear. The definition of dutifulness holds that individuals are concerned with adhering to a moral code (Costa & McCrae, 2007). As such, it could be that individuals who endorse Theory Y are more likely to function well with autonomy. They may then go on to expect this behavior in subordinates. In other words, individuals who hold themselves accountable for their own work may be more likely to expect the same behavior in others.

There was no support for hypothesized relationships between theory endorsement and conscientiousness (order and self-discipline), neuroticism, science or health. This could be due to the small sample size or other unknown moderators. Any number of situational context variables, such as number of subordinates, organizational culture, reward structure, etc. could be strong enough to reduce the effect of personality (i.e., strong vs. weak situations, e.g., Withey, Gellatly & Annett, 2005). As discussed above, it is also possible that some aspects of theory endorsement operate non-linearly. That is, very high or very low levels on certain dimensions may be related to one type of theory endorsement, while moderate levels are associated with the other.

Significant but unhypothesized results were found between theory endorsement and four MVPI dimensions: commerce, tradition, recognition and aesthetics. Commerce is defined as

“wanting financial success and seeking business opportunities.” One possible explanation for the relationship is that Theory X, to the extent that it is a traditional style, may be a faster route to promotion. Of note, this may be true for more traditional organizations, where traditional approaches lead to success. However, in some organizations Theory Y styles may be more related to success.

To this point, the MVPI dimension of tradition was significantly related to Theory X endorsement. MVPI defines tradition as “believing in family values and endorsing socially approved behavior”. To the extent that tradition is associated with following the status quo, it is plausible that it would be related to Theory X. Individuals that endorse Theory X may prefer more traditional management styles including close supervision and delegation.

The recognition dimension refers to one’s responsiveness to attention, approval, and praise. This relationship may be understood when one considers the extent to which managers utilize traditional reward and punishment tactics. A manager that considers attention and praise to be motivating may prefer practicing these with employees.

The aesthetics dimension is defined as “wanting to be stylish and fashionable and being concerned about appearances.” It is difficult to speculate how this may be related to Theory Y endorsement. Perhaps individuals who endorse Theory Y are concerned about the image they portray to followers. Those who seek the approval of their followers may be more likely to do so by being a hands-off manager. Again, these four relationships were not hypothesized, and as such any speculation about the relationships is occurring in an ad hoc manner.

### *Limitations*

One limitation of the present research is the possibility of common-method bias. Because all measures are self-report surveys, it is possible that biases exist based on an individual’s

response tendencies or other individual biases. This is a valid concern, and one that has been discussed by a number of researchers (for a detailed list, see Spence & Jex, 1998). However, it remains a common practice to collect only self-report data. This is likely due to the convenience associated with cross-sectional, self report data, particularly when this data can be collected online. Regardless, the method has been defended as valid (Spence & Jex, 1998). Indeed, most if not all of the scales in the present research are, by necessity, self report. It is impossible for another individual to assess someone else's fundamental beliefs about the nature of humans, and fairly difficult to assess someone else's perceived work-related stress. As such, the benefits gained from using self-report data outweigh the proposed costs.

Second, the presented analyses are all correlational and cross-sectional in nature. As such, it is impossible to infer causation. Based on what we know about personality (i.e. that it is fairly stable over time), it is plausible that one's personality is, in essence, causing his or her theory endorsement. This possibility is strengthened when one considers that an individual's personality is likely developed long before he or she is in a managerial role, indicating that personality is developed and stabilized previous to theory endorsement.

Still, it is possible that one's fundamental beliefs about the nature of humans have impacted how he or she sees the world and treats others. This may work to shape his or her personality in a meaningful way. Take, for instance, a Theory X individual who is overseeing a number of disorganized individuals. It may be that, out of necessity, the manager becomes increasingly conscientious as a way to better monitor and organize the work of his or her subordinates. This calls into question the trait vs. state theories of personality, and may suggest that situational strength may dictate which personality traits an individual is likely to express.

The causal relationship is particularly interesting when one considers the relationship between stress and theory endorsement. It is possible that Theory X leadership styles increase one's stress levels because they are overly concerned with the behavior and work processes of subordinates. However, it is also possible that managers who are experiencing a lot of stress, whether personal or because of factors in the work environment, will find Theory X type behaviors more efficient or effective. In other words, they adopt these strategies as a way to cope with stress. There are interesting implications, discussed below, depending on the direction of this causal relationship, and as such one should be cognizant of each potential relationship.

### *Implications*

The results presented have a number of important implications. First, the relationship between personality and leadership style has meaningful selection-related consequences. To some extent, many hiring managers and other professionals are often leery of personality-based selection. However, it has been demonstrated that knowledge of certain personality traits may meaningfully predict leadership style, something that managers are very likely to care about. Further, because endorsement is believed to be deeply held, it is unlikely that it is trainable. Rather, organizations are more likely to select leaders, either directly or indirectly, based on culture fit. Extrapolating the present research, one may consider whether an understanding of personality and leadership style may provide insight into a leader's fit with an organization. The present hypotheses address the extent to which personality-based selection measures could make this a possibility. Overall, there may be implications in selection, succession planning and organizational culture related to theory endorsement.

Another meaningful implication is related to the stress related outcome. Theory endorsement appears to be associated with more stress, suggesting that there may be benefits

associated with certain leadership philosophies. As mentioned above, the causal direction of the relationship between theory endorsement and stress is unknown. If theory endorsement is the cause of perceived stress, there may be justified cause to examine interventions aimed at theory endorsement. It has been argued that theory endorsement is deeply held and may be outside of consciousness. If this is true, changing one's endorsement would be difficult, if not impossible. Rather, it may be worthwhile to investigate the behaviors associate with endorsement, with the eventual aim of helping Theory X leaders develop less stressful practices.

If the opposite causal relationship is occurring (i.e. stress is causing theory endorsement), a different approach may be more appropriate. Specifically, practitioners may consider stress related interventions such as reducing workload or diary keeping techniques. Doing so may allow managers to experience reduced stress, and as such adopt more Theory Y related behaviors.

Stress, in turn, is shown to be linked to health outcomes. The mediated relationship between theory endorsement and health outcomes may have meaningful consequences for individual managers as well as organizations more broadly. Theory Y in particular is closely associated with the positive psychology movement, which is quickly gaining momentum (Wright & Cropanzano, 2004). Tying positive psychological principles (the importance of autonomy, for instance) to meaningful outcomes (such as stress and even health) may lend credibility to the positive psychology movement. Further, it may impact future directions in organizational leadership.

### *Conclusion*

The research presented above examines the context surrounding Theory X and

Theory Y. Theory endorsement is commonly used to categorize individuals, but little is known about the antecedents and consequences of theory endorsement, particularly for the leader. The present study is meant to address the existent void in present research, as well as to substantiate the leadership theory presented by McGregor in 1960. Theory endorsement is meaningfully related to many individual differences and stress and health related outcomes. These relationships are important to organizations both in a selection context and in regards to costs of health care and time lost to absenteeism.

Table 1: Demographic Summary

		Frequency	Percent	Mean
	Age			39
Gender	Male	51	43.6	
	Female	66	56.4	
Race	African American	16	13.7	
	Asian	5	4.3	
	Caucasian	84	71.8	
	Hispanic	2	1.7	
	Two or more races	9	7.7	
Source	MBA	40	34.2	
	Snippet	28	23.9	
	Other	49	41.9	
Managerial Tenure	Less than 1 year	24	20.5	
	1-5 years	43	36.8	
	5-10 years	19	16.2	
	More than 10 years	31	26.5	
Industry	Construction	1	.9	
	Manufacturing	17	14.5	
	Retail trade	7	6.0	
	Transportation and warehousing, and utilities	1	.9	
	Information	8	6.8	
	Finance, insurance, real estate and rental and leasing	7	6.0	
	Professional, scientific, management, administrative, and waste management services	14	12.0	
	Educational, health and social services	30	25.6	
	Arts, entertainment, recreation, accommodation and food services	14	12.0	
	Other services (except public administration)	14	12.0	
	Public administration	3	2.6	



Table 2: Correlations between hypothesized variables

	Mean	SD	Theory X	Duti	Order	Disc	Neur	Open	Agr	Type A	Sec	Pow	Sci	Stress
Theory X	70.4	12.7												
Conscientiousness: Dutifulness	36.9	3.9	-.200*											
Conscientiousness: Order	35.7	5.7	.151	.329**										
Conscientiousness: Self-Discipline	34.3	7.1	-.160	.463**	.409**									
Neuroticism	24.0	6.4	.118	-.066	.063	-.324**								
Openness to Experience	37.9	5.4	-.445**	-.066	-.307**	-.075	-.003							
Agreeableness	38.4	3.7	-.405**	.348**	.122	.117	-.358**	.309**						
Type A	33.2	3.7	.197*	-.134	.064	-.253**	.226*	-.157	-.192*					
MVPI: Security	42.5	7.6	.306**	.410**	.435**	.065	.122	-.399**	-.114	.036				
MVPI: Power	47.5	6.9	.222*	-.053	.124	.320**	-.132	-.106	-.179	-.160	.090			
MVPI: Science	43.1	8.7	-.047	.103	-.089	-.015	.078	.124	-.041	.108	.192	.151		
Stress	26.4	7.2	.283**	-.016	-.107	-.259**	.427**	.019	-.202*	-.032	.189	.040	-.001	
Health	23.3	4.7	.105	-.098	-.046	-.350**	.374**	.195*	-.063	.008	.060	.037	.063	.485**

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

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

## APPENDIX A

## IPIP

**Conscientiousness: Dutifulness (.71)**

- Try to follow the rules. (+)
- Keep my promises. (+)
- Pay my bills on time. (+)
- Tell the truth. (+)
- Listen to my conscience. (+)
- Break rules. (-)
- Break my promises. (-)
- Get others to do my duties. (-)
- Do the opposite of what is asked. (-)
- Misrepresent the facts. (-)

**Conscientiousness: Orderliness (.82)**

- Like order. (+)
- Like to tidy up. (+)
- Want everything to be "just right." (+)
- Love order and regularity. (+)
- Do things according to a plan. (+)
- Often forget to put things back in their proper place. (-)
- Leave a mess in my room. (-)
- Leave my belongings around. (-)
- Am not bothered by messy people. (-)
- Am not bothered by disorder. (-)

**Conscientiousness: Self Discipline (.85)**

- Get chores done right away. (+)
- Am always prepared. (+)
- Start tasks right away. (+)
- Get to work at once. (+)
- Carry out my plans. (+)
- Find it difficult to get down to work. (-)
- Waste my time. (-)
- Need a push to get started. (-)
- Have difficulty starting tasks. (-)
- Postpone decisions. (-)

**Neuroticism (.86)**

- Often feel blue. (+)
- Am often down in the dumps. (+)
- Dislike myself. (+)
- Have frequent mood swings. (+)
- Panic easily. (+)

Seldom feel blue. (-)  
 Feel comfortable with myself. (-)  
 Am very pleased with myself. (-)  
 Rarely get irritated. (-)  
 Am not easily bothered by things. (-)

### **Openness to Experience (.82)**

Believe in the importance of art. (+)  
 Have a vivid imagination. (+)  
 Enjoy hearing new ideas. (+)  
 Tend to vote for liberal political candidates. (+)  
 Carry the conversation to a higher level. (+)  
 Do not like art. (-)  
 Do not enjoy going to art museums. (-)  
 Am not interested in abstract ideas. (-)  
 Avoid philosophical discussions. (-)  
 Tend to vote for conservative political candidates. (-)

### **Agreeableness (.77)**

Have a good word for everyone. (+)  
 Respect others. (+)  
 Believe that others have good intentions. (+)  
 Accept people as they are. (+)  
 Make people feel at ease. (+)  
 Cut others to pieces. (-)  
 Insult people. (-)  
 Have a sharp tongue. (-)  
 Get back at others. (-)  
 Suspect hidden motives in others. (-)

### **Extraversion (.86)**

Am the life of the party. (+)  
 Am skilled in handling social situations. (+)  
 Make friends easily. (+)  
 Know how to captivate people. (+)  
 Feel comfortable around people. (+)  
 Don't talk a lot. (-)  
 Keep in the background. (-)  
 Have little to say. (-)  
 Don't like to draw attention to myself. (-)  
 Would describe my experiences as somewhat dull. (-)

## APPENDIX B

### JENKINS ACTIVITY SURVEY

#### Impatience-Irritability

1. When a person is talking and takes too long to come to the point, how often do you feel like hurrying the person along? (*very frequently to almost never*)
2. Typically, how easily do you get irritated? (*extremely easily to not at all easily*)
3. Do you tend to do most things in a hurry? (*definitely true to not at all true*)
4. How is your "temper" these days? (*very hard to control to I seldom get angry*)
5. When you have to wait in line such as at a restaurant, the movies, or the post office, how do you usually feel? (*accept calmly to feel very impatient and refuse to stay long*)

#### Achievement Strivings

1. How much does college "stir you into action?" (*much less to much more than others*)
2. Nowadays, do you consider yourself to be: (*very hard-driving to very relaxed and easy going*)
3. How would your best friends or others who know you well rate your general level of activity? (*too slow to very active: should slow down*)
4. How seriously do you take your work? (*much more to much less than most*)
5. How often do you set deadlines or quotas for yourself in courses or other activities? (*very often to almost never*)
6. Compared with other students, the amount of effort I put forth is: (*much more to much less*)
7. Compared with other students, I approach life in general: (*much more to much less seriously*)

*Note.* The labels for the end points of the 5-point rating scale accompanying each item appear in abbreviated form in parentheses.

**APPENDIX C****HOGAN MOTIVES, VALUES AND PREFERENCES INVENTORY**

**Items are copyright protected by Hogan Assessments. Sample items are below.**

It is better to be a leader than a follower. T/F

I don't like serious, uptight people. T/F

I enjoy helping others. T/F

Most of my friends would go out of their way to help someone who needed it. T/F

I never judge other people's actions. T/F

I enjoy being in charge. T/F

I would like to be a writer. T/F

I pay close attention to my finances, taxes, and budget. T/F

I would like to create new scientific knowledge. T/F

I rarely worry about moral issues. T/F

## APPENDIX D

### THEORY X/Y ATTITUDES AND BEHAVIORS

#### Attitude Measure

1. Most people will try to do as little work as possible.
2. For most people, work is as natural as play or recreation.
3. Most employees must be closely supervised to get them to perform up to expectations.
4. Most employees actually prefer to be told exactly what to do rather than having to figure it out for themselves.
5. Most employees do not care much about the organization's goals.
6. Most employees would prefer increased responsibility to increased job security.
7. Most people will not use their own initiative or do things that they have not been specifically assigned to do.
8. Employees generally do not have much to contribute when asked to participate in making decisions or solving problems.
9. It is just basic human nature — people just naturally dislike work.
10. Most employees will not exercise self-control and self-motivation — managers must do this for them.
11. Most employees have little ambition.
12. Most people do want responsibility.
13. Most employees prefer to have someone else set their goals and objectives.
14. Most people work to eat and pay their bills rather than because they need to solve problems and be creative.
15. Most employees prefer supervising themselves rather than close supervision.
16. Most people are lazy and don't want to work.
17. Most employees can't be trusted.

#### Behavior Measure

Cronbach alpha = .77

Test-retest = .65

1. Mutual responsibility and shared objectives should be emphasized.
2. The amount of information given to employees should be carefully limited and controlled.
3. High standards of performance should be expected of all employees
4. Company objectives and sub-objectives should be communicated to all employees
5. The amount of responsibility given to employees should be limited and controlled
6. You need to constantly check up on employees to ensure they are working as required
7. It is important to continually remind people to meet deadlines
8. Employees should participate in establishing individual performance goals
9. Employees should be encouraged to participate in decision making within their own departments
10. Jobs should be enriched in terms of adding more meaningful tasks
11. Employees should be encouraged to share their ideas and suggestions
12. If anything is to get done, the manager has to make the decision
13. Establishing a trusting relationship between manager and workers is a good way to motivate employees.

**APPENDIX E****JOB STRESS****Jamal and Baba, 1992 (.83)**

I have too much work and too little time to do it in  
I sometimes dread the telephone ringing at home because the call might be job-related  
I feel like I never have a day off  
Too many people at my level in the company get burned out by my job demands  
I have felt fidgety or nervous as a result of my job  
My job gets to me more than it should  
There are lots of times when my job drives me right up the wall  
Sometimes when I think about my job I get a tight feeling in my chest  
I feel guilty when I take time off work

**APPENDIX F****PHYSICAL SYMPTOMS INVENTORY****(Spector & Jex, 1997)**

During the past **30 days** did you have any of the following symptoms? If you did have the symptom, did you see a doctor about it?

No      Yes, but I didn't see doctor      Yes, and I saw doctor

1. An upset stomach or nausea
2. A backache
3. Trouble sleeping
4. A skin rash
5. Shortness of breath
6. Chest pain
7. Headache
8. Fever
9. Acid indigestion or heartburn
10. Eye strain
11. Diarrhea
12. Stomach cramps (Not menstrual)
13. Constipation
14. Heart pounding when not exercising
15. An infection
16. Loss of appetite
17. Dizziness
18. Tiredness or fatigue



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**ABSTRACT****THE ANTECEDENTS AND OUTCOMES OF MCGREGOR'S THEORY  
ENDORSEMENT**

by

**AMY SUND****AUGUST 2012****Advisor:** Dr. Marcus Dickson**Major:** Psychology (IO)**Degree:** Master of Arts

Despite being used to categorize individuals, little is known about McGregor's Theory X and Theory Y. It is hypothesized that a number of personal traits and personal values predict theory endorsement and that endorsement is subsequently related to stress and health related outcomes. Results support the notion that individual differences are related to endorsement. Further, theory endorsement is related to stress, which mediates the relationship between theory endorsement and health.



## AUTOBIOGRAPHICAL STATEMENT

I graduated from Central Michigan University in 2008 with my B.S. in psychology and a minor in Spanish. I discovered I/O psychology as a junior and knew it was the right fit. As a senior I discovered Pilates, rock climbing, gymnastics, basic auto maintenance, and kickboxing and I knew my hard work early on had paid off. I had a great four years in Mt. Pleasant and I am proud to forever be a Chippewa. I am currently at Wayne State University, where I am working on my PhD. I am honored and humbled to work with smart, engaging, passionate people who work as hard as they play. I credit my colleagues, both faculty and students, for introducing me to the opportunities that have gotten me where I am today.

I have recently accepted a job offer at Ford Motor Company, where I worked as an intern for two years. I work with the Workforce Planning and Analytics Team, as well as the recruiting department, where I am specifically responsible for the assessments used in their North American salaried selection. I am excited to be an official part of the team and look forward to what my future at Ford holds.

When I'm not studying or working, I enjoy being active. I like to do anything outside, but I especially like to run. I run half marathons and will be running my first, last, and only full marathon in the fall of 2012. I enjoy spending time with family and friends, telling lame jokes, and eating as much ice cream as I can get my hands on. I love Jesus, sports, all things Detroit, and being happy all of the time.

“Your life is an occasion, rise to it”