THESIS

TRANSFORMATIONAL LEADERSHIP, ENGAGEMENT, AND PERFORMANCE: A NEW PERSPECTIVE

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ABSTRACT

TRANSFORMATIONAL LEADERSHIP, ENGAGEMENT, AND PERFORMANCE: A NEW PERSPECTIVE

The transformational leadership style has long been shown to elicit above average performance in followers; however, the reasoning behind why this process occurs is unclear. The present study investigates whether follower engagement mediates the relationship between perceived transformational leadership and performance on a task. Although the relationships between transformational leadership, employee engagement, and job performance have been studied before, they have been studied at a macro level that seems to go against the original conceptualization of engagement as being task-related. Therefore, the present laboratory study explores these relationships at a micro task-related level, in a specific interaction between leader and follower in which the leader delegates a task to the follower. Results provide evidence that follower task engagement mediates the relationship between perceived transformational leadership and task performance. By better understanding how leaders build engagement and drive performance in regard to a specific task, organizations can take advantage of the influence that leaders have on everyday interactions with their followers.

Keywords: transformational leadership, engagement, task performance

DEDICATION

I dedicate this thesis to my father, Jerry Sandell. I hope that this achievement is one of many ways I may emulate him in my lifetime.

TABLE OF CONTENTS

INTRODUCTION

Since the application of transformational leadership to organizational settings over two decades ago, numerous studies have shown that followers of transformational leaders display above average performance (see Wang, Oh, Courtright, & Colbert, 2011 for a meta-analysis on the subject). Still, the question of how transformational leaders elicit performance beyond expectations (Bass, 1985) remains a topic with many theories but few clear answers. An answer to this question may lie in the concept of employee engagement, which refers to a personal investment of the self into individual work tasks that are performed on a job (Christian, Garza, & Slaughter, 2011; Kahn, 1990; Macey & Schneider, 2008; Rich, LePine, & Crawford, 2010; Schaufeli, Salanova, Gonzalez-Roma, & Bakker, 2002).

Indeed, employee engagement has been separately linked to both transformational leadership (Tims, Bakker, & Xanthopoulou, 2011; Zhu, Avolio, & Walumbwa, 2009) and job performance (Harter, Schmidt, & Hayes, 2002; Rich et al., 2010; Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2009). However, despite these findings that engaged employees perform well and that transformational leaders beget engaged employees, no research has considered the possibility that employee engagement mediates the relationship between transformational leadership and employee performance, thus offering an explanation for how transformational leaders elicit performance. Employee engagement is a fluid state that arises due to an individual's positive perceptions of his or her environment, and transformational leaders work to shape their employee's work environment for the better (Bass, 1990). Hence, employee perceptions of transformational leadership may play a role in how positively they perceive their environment thereby affecting their personal investment at work, ultimately influencing how well they perform.

Despite speculation that engagement may play a key role in explaining the relationship between transformational leadership and follower performance (Tims et al., 2011), this study appears to be one of the first to investigate the merits of this hypothesis. Research linking transformational leadership to employee performance outcomes has shown mediating effects for employees' levels of trust in the supervisor (Schaubroeck, Lam, & Peng, 2011), self-efficacy (Kirkpatrick & Locke, 1996), and intrinsic motivation (Zhu et al., 2009). It appears that the link between transformational leadership and employee performance is affected by many factors, suggesting that engagement will likely partially mediate this relationship. Additionally, no studies have investigated this relationship at the task level; they have instead focused on broader measures of overall job performance and job engagement. This comes as a surprise given the foundational conceptualization that engagement is a fluid or moment-to-moment state, varying within individuals based on contextual variables that are related to a specific task (Kahn, 1990; Saks, 2006; Sonnentag, 2003). In understanding that engagement can fluctuate based on task-specific environmental influences, it is important to study its antecedents and outcomes from the same perspective.

Previous studies have investigated broad-level performance outcomes (e.g., overall job performance) and employee perceptions of leadership established over time (e.g., an overall sense of supervisor support), thus leading to a conclusion about engagement at an overall job level. Most likely this research focus reflects the general approach to transformational leadership research, which has shied away from specificity since routine encounters such as the assignment of specific tasks typically fall under the category of management. That is, leadership researchers have, for the most part, strictly adhered to the idea that leaders are different than managers (Alvesson & Sveningsson, 2003; Terry, 1995; Zaleznik, 1977). The major difference is that

leadership is generally viewed as a heroic force that promotes change through inspirational means (Bass & Riggio, 2006; Conger & Kanungo, 1998), whereas management is viewed as dealing with the more mundane, routine activities that are necessary to the functioning of an organization (Larsson & Lundholm, 2010). However, some claim that this distinction is unnecessary and that it clouds leadership research by inferring that leadership is somehow set apart from an organizational reality that includes such everyday activities (Sveningsson & Larsson, 2006). Leadership is commonly viewed in an abstract, broad, and romantic manner, which severely limits the more practical issues of understanding and measuring leadership.

Much like the transformational leadership literature, research on employee engagement has thus far suffered from a broad focus that neglects its moment-to-moment nature. This focus on a broad outcome of engagement rather than the processes and environmental stimuli that bring rise to engagement leads to issues in the practicality of its study. If the performance benefits of employee engagement are to be successfully harnessed within an organization, researchers should attempt to study engagement as it was originally conceptualized; that is, as a personal investment of oneself in moments of specific task behavior (Kahn, 1990). By studying engagement and its antecedents and outcomes at the task level rather than at a more encompassing job level, organizations and leaders within these organizations can better understand how to foster an overall sense of engagement through building from the ground up. In other words, leaders can better tackle the issue of creating a more engaged workforce by using smaller, more actionable steps. Thus, the question remains: can transformational leaders influence their followers' engagement on a specific task? If so, do these elevated levels of engagement lead to superior performance on a specific task?

Employee engagement is fostered through providing resources in an environment that supports and rewards engagement – leaders who consistently create an atmosphere that is conducive to engagement may have more engaged employees, but they begin by bringing rise to engagement at a task-based level (Tims et al., 2011). If employee engagement does truly garner a competitive advantage for organizations (Macey, Schneider, Barbera, & Young, 2009), then it is critical that organizations and leaders first understand how to promote engagement on an individual employee scale.

By studying the transformational leadership-engagement-performance relationship at the task level, researchers and companies can offer more concrete examples of how leaders should delegate and describe the many individual tasks that comprise a given job. Generally speaking, it has been proposed that supervisor support (May, Gilson, & Harter, 2004), trust in one's leader (Kahn, 1990), and perceptions of leader fairness (Macey & Schneider, 2008) are antecedents of employee engagement. However, it is certainly true that one could view his or her leader as being supportive or unsupportive, trustworthy or untrustworthy, and fair or unfair based on a specific interaction. Negative encounters may be what lead to temporary dips in engagement within employees who are otherwise considered to be on average engaged (Sonnentag, Dormann, & Demerouti, 2010). As a consequence, everyday interactions, such as the delegation of a task, take on increased significance over time, especially if the leader's goal is to engender engagement in the performance of a task with the hopes of this leading to consistent moments of engagement over time.

The aim of the current study is to understand the role that engagement plays in the relationship between transformational leadership and follower performance on a task. The present study will add to the literature by examining the relationship between transformational

leadership, engagement, and performance at the task level, thus differentiating it from past research that investigated each relationship separately, as well as at a broader job level. This concentrated level of analysis may lead to a greater understanding as to how organizations and leaders can influence individual employees' levels of engagement and performance on specific tasks.

Transformational Leadership

Burns (1978) created the concept of transformational leadership as a description of political leaders who transform the values of their followers, but Bass (1985, 1990) later expanded the scope to include leadership within organizational settings. Since then, transformational leadership has become one of the most widely-studied leadership styles due to its emphasis on changing workplace norms and motivating employees to perform beyond their own expectations (Yukl, 1989). Transformational leaders are believed to achieve such results through aligning their subordinates' goals with those of the organization and by providing an inspiring vision of the future (Bass, 1985).

Transformational leadership is typically divided into four major components: (1) inspirational motivation; (2) idealized influence; (3) individualized consideration; and (4) intellectual stimulation. Inspirational motivation involves the ability to communicate clearly and effectively while inspiring workers to achieve important organizational goals. Transformational leaders are considered to be enthusiastic and optimistic when speaking about the future, which arouses and heightens their followers' motivation (Dubinsky, Yammarino, & Jolson, 1995). Idealized influence refers to behaviors that help to provide a role model for followers. Such behaviors could involve displaying strong ethical principles and stressing group benefits over individual benefits (Bono & Judge, 2004). Individualized consideration involves treating each

follower as an individual with his or her own unique needs and attending to these needs appropriately (Judge & Bono, 2000). The focus of behaviors falling under the individualized consideration category is on the development of the follower (Bass, 1985). Lastly, intellectual stimulation involves encouraging the follower to be creative and challenging him or her to think of old problems in new ways (Bass, 1985). Transformational leaders create a culture of active thinking through intellectual stimulation, and this culture encourages followers to become more involved in the organization (Tims et al., 2011).

Transformational Leadership and Performance

At the time of its inception, one of the most promising aspects of transformational leadership was its hypothesized relationship with employee performance (Bass, 1985). Nearly three decades of transformational leadership research has supported this hypothesis, and several more recent meta-analyses have lent strong evidence to the idea that followers of transformational leaders display high levels of performance (see: DeGroot, Kiker, & Cross, 2000; Judge & Piccolo, 2004; Wang et al., 2011). However, along with the proliferation of research on this topic has come a desire to know *why* transformational leaders bring about higher levels of performance.

Though there are a number of different theories as to how transformational leaders elicit above-average performance from their followers, there exist some commonalities throughout the literature. These common findings have mainly focused on the idea that transformational leaders increase their followers' levels of motivation by igniting personal change within them. For example, Bass (1997) claims that transformational leaders boost their followers' sense of self-worth through treating each follower as an individual (individualized consideration) and by framing their work as meaningful (intellectual stimulation). This sense of self-worth that

transformational leaders nurture is a key motivator that acts to commit the follower to a specific performance goal (Shamir, 1991). Additionally, Bass and Avolio (1993) found that transformational leaders increase their followers' levels of motivation and self-efficacy through inspirational appeals (inspirational motivation) and clear communication of high performance expectations (idealized influence). These leader behaviors establish organizational norms that foster follower initiative, achievement-oriented behaviors, and goal-attainment (Masi & Cooke, 2000), thereby leading to a culture of employee empowerment (Harrison, 1995).

Previous transformational leadership research has focused on follower performance on a variety of tasks over time, which although referred to as task performance in that it deals with core job duties (Wang, Law, Hackett, Wang, & Chen, 2005), is not the same as performance on a specific task, which fails to incorporate variety over time. This distinction is crucial because follower performance could very well taper off based on how the task is presented by his or her leader. Therefore, the idea that transformational leaders influence their followers to achieve outstanding performance appears to be substantiated, but much less is known as to whether these leaders can successfully influence their followers to achieve exceptional performance on specific, day-to-day tasks. Larsson and Lundholm (2010) lament the lack of leadership research focusing on everyday interactions, claiming that leadership is nurtured through such discursive moments between leader and follower. The following section explores why this gap in the literature may exist, as well as why examining this relationship may be useful from a practical and theoretical perspective.

A Micro Level of Focus

Given the plethora of evidence on how transformational leaders affect their followers on an individual level, many researchers have proposed that transformational leaders also impact

performance measured at the group and organizational levels (Bass, 1985; Conger & Kanungo, 1998; Shamir, House, & Arthur, 1993). Several meta-analyses on the relationship between transformational leadership and performance measured at broad organizational and team levels have confirmed these beliefs (DeGroot, Kiker, & Cross, 2000; Judge & Piccolo, 2004; Wang et al., 2011). However, there exist many contextual factors that can influence transformational leaders' impact on team- and organizational-level performance. For instance, Howell and Avolio (1993) found that organizational support for innovation moderated the effect between transformational leadership and the performance of the leaders' unit or team. Additionally, Lim and Ployhart (2004) found that transformational leadership had a differential impact on team performance depending on whether it was measured in a maximum or typical performance context. In his seminal work on transformational leadership, Bass (1985) posited that transformational leaders do not have as great of an impact on performance in organizations that are operating in routine, stable external environments as they do in more fluid, rapidly-changing work environments.

Kelly (2008) claims that "It is only when one attempts to see leadership from a member's point of view – one that deliberately sets aside (or brackets off) explicit theories, models and assumptions as to the essential character of leadership – that one is able to see that other kinds of work are being done" (p. 770). This is wise advice that seems to point towards the direction of smaller-scale field studies and laboratory studies in which researchers can more concretely understand and measure how leadership manifests in the workplace and how it affects specific follower outcomes. Such studies will also help to answer the call for leadership research that focuses on the follower (Lord & Brown, 2004; Meindl, 1995; Shamir, 2007; Uhl-Bien & Pillai, 2007), as researchers can better understand which specific leader behaviors evoke a

positive response from followers and which do not. Smaller-scale research also holds a greater practical importance because it could point leaders toward specific behaviors that can impact their followers *every day*. For example, informing a supervisor that he or she needs to foster an environment of individualized concern and intellectual stimulation is much too broad to understand and implement. What is lost in such guidance and trends in leadership study is that such an environment is fostered through smaller, everyday interactions that leaders have with their followers (Larsson & Lundholm, 2010). It is, therefore, particularly useful to know how leaders influence their followers' specific work environment through particular behaviors that motivate, stimulate, and engage them to perform everyday tasks to the best of their abilities. Influencing followers at such a specific level ultimately accrues to form our current understanding of leadership, and is therefore informative. Thus, the present study will operate from the perspective that leadership is "better understood as imbedded in management, rather than distinct from it," (Larsson & Lundholm, p. 160) and will focus on leadership injected into the delegation of a task.

Employee Engagement

Employee engagement refers to a personal investment of the self into individual work tasks that are performed on a job (Kahn, 1990). Though there exist many descriptions of what engagement may be, a common agreement among researchers is that engaged employees are immersed and involved in their work (Macey, Schneider, Barbera, & Young, 2009), take pride in their job (Mathews, 2010), and exert a great deal of effort toward their work (Hay Group, 2010). The general consensus in both academic and business circles is that employee engagement is easier to recognize than it is to understand. Therefore, it is important to obtain a firm understanding as to the theory behind this intriguing concept.

Though there are some common themes in the engagement literature, there are several distinctions to be made across theories. Schaufeli and colleagues (Schaufeli & Bakker, 2004; Schaufeli, Martinez, Marques Pinto, Salanova, & Bakker, 2002; Schaufeli, Salanova, Gonzalez-Roma, & Bakker, 2002) view engagement as the opposite of burnout and propose that engagement contains three components: vigor (high levels of energy), absorption (full concentration), and dedication (a sense of significance and pride in one's work). In contrast, Kahn (1990) proposes that engagement is the harnessing of one's physical, cognitive, and emotional energies into one's work roles. Kahn further specifies that engagement is based on how employees perceive the context in which they work, specifically how their work environment impacts their feelings of psychological meaningfulness, psychological availability, and psychological safety.

There are disagreements as to whether engagement should be considered a trait, state, or behavior. Macey and Schneider (2008) propose that engagement can be conceptualized as a combination of the three, integrating them into a process that moves from trait (predisposition to view work as engaging) to state (the feeling of absorption at work) to behavioral (extra-role behavior) engagement. In contrast, Schaufeli et al. (2002) posited that "Engagement refers to a persistent and pervasive affective-cognitive state that is not focused on any particular object, event, individual, or behavior;" (p. 295). In other words, engagement can be thought of as a state that is not specific to any one task. Kahn (1990) highlights the importance of the context of employees' work environments, claiming that engagement is a sort of motivational tool that is elicited through employees' beliefs that their work is valuable (meaningfulness), that they have a necessary amount of physical, emotional, and psychological resources to do the work well (availability), and that they can immerse themselves in their work without fear of negative

consequences (safety). This view suggests that engagement is more state-like, as it changes based on employees' perceptions of the environment in which they work.

In the proposed study, I will view engagement through a lens similar to that of Kahn, in that I consider engagement to be influenced by the context in which one works. Although other conceptualizations of employee engagement exist (e.g. Harter et al., 2002; Macey & Schneider, 2008; Schaufeli et al., 2002) including those reviewed above, Kahn's definition most adequately recognizes the importance of situational factors on the psychological *state* of engagement, factors over which leaders may have influence or control. Thus, engagement is defined as a motivational state of mind influenced by the factors of psychological meaningfulness, availability, and safety, which are impacted by situational features of the work environment. This state of mind manifests itself as behaviors such as task performance.

Ties to Employee Performance and Attitudes

From a business perspective, an engaged workforce is considered crucial because it means that an organization is supposedly receiving 100% effort from its employees. This effort is displayed through persistence and intensity toward one's job tasks (Christian et al., 2011; Rich et al., 2010). As logic would suggest, one could then expect employee engagement to be positively related to job performance, and indeed several studies do support this relationship (Harter et al., 2002; Rich et al., 2010; Xanthopoulou et al., 2009). Employee engagement is such a powerful force that it has been shown to account for significant performance improvements, even after controlling for workforce talent (Corporate Leadership Council, 2004). However, it is perhaps more critical to understand what effect engagement has upon employee attitudes, since attitudes are what ultimately drive behavior (McGregor, 1960).

Employee engagement has a strong association with many attitudes that are considered desirable in the workplace because engagement is largely shaped by environmental factors within that same workplace (Kahn, 1990). Engagement can therefore be viewed as part of a feedback process, where the first step in this process is the influence of the environment in which one performs a given task. This environment can include characteristics of the task itself (Hackman & Oldham, 1976), as well as interpersonal relationships with peers and managers, and a physical readiness to perform the task (Kahn, 1990). If these environmental factors are viewed as positive and the employee is physically able and ready to perform the task, the employee will respond with engagement toward the task. Engagement, in turn, relates to known predictors of job performance such as satisfaction (Harter et al., 2002), job involvement (Macey & Schneider, 2008), and commitment (Kanste, 2011). Therefore, certain environmental factors give rise to engagement, which then drives attitudes that ultimately increase performance on a task. When employees display these positive job attitudes and are performing well, they are oftentimes given more important, meaningful work and are treated with respect by their peers and managers. These aspects of the job can not only give rise to engagement, they can also be driven by engagement itself, making engagement a form of feedback in a cyclical process. Thus, the engaged employee works in, and helps to create, an environment that is conducive to engagement, and reinforces more engagement.

The key to fostering engagement, then, is to manipulate the context in which one performs one's work because this will create the factors that drive engagement. By providing an environment in which one can derive meaning, feel secure, and be physically able to perform a given task, the organization can increase the likelihood that employees will engage fully in their tasks and therefore perform. The problem with this process of fostering engagement and

resulting performance is that executives responsible for overall organizational performance typically do not directly control the environment in which each employee works; this requires a hands-on approach that a direct supervisor can employ, given his or her direct relationship with the employee. Supervisors who display transformational leadership qualities appear to be very well suited to positively impact the environment in which employees work day to day, due to their ability to create meaning, provide support, and boost followers' levels of confidence in performing specific tasks (Bass, 1985; Conger 1989).

Engagement and Transformational Leadership

In his seminal article on employee engagement, Kahn (1990) proposed that leadership has the greatest potential to influence follower feelings of psychological safety by providing a supportive environment in which one feels safe to fully engage in a task. However, Kahn did not consider that transformational leaders appear capable of promoting psychological meaningfulness and availability as well. Because of their ability to elicit a sense of challenge and meaning while boosting their followers' belief that they can complete their work, transformational leaders are in an ideal position to promote psychological availability and meaningfulness. Some have suggested that leadership is one of the most important factors contributing to employee engagement (Harter et al., 2002; May et al., 2004; Xu & Cooper Thomas, 2011), thus it is necessary to understand *how* an influential leadership style such as transformational leadership can affect the three psychological states that Kahn proposes lead to engagement on a task.

Relationship with Psychological Meaningfulness

Transformational leaders add to their subordinates' sense of challenge in the workplace (Zhu et al., 2009). By challenging their employees to think creatively and proactively (Bass,

1990), transformational leaders work to re-frame seemingly routine, everyday tasks into exciting work that instills in the employee a greater sense of meaning (Sparks & Schenk, 2001). The process of challenging employees to see problems from a new perspective is known as intellectual stimulation, one of the main components of transformational leadership (Bass, 1985). The benefits of intellectual stimulation are plentiful. For example, Bolkan and Goodboy (2010) found that when teachers were viewed as intellectually stimulating, their students reported high levels of motivation, satisfaction, and empowerment. Intellectual stimulation has also been shown to relate to subordinate feelings of significance and autonomy in the workplace (Judge, Parker, Colbert, Heller, & Ilies, 2001). Kahn (1990) proposed that psychological meaningfulness arises out of feelings that an individual is worthwhile, useful, and valuable, which are associated with high levels of felt significance and autonomy. Thus, it appears as though transformational leaders foster engagement through increasing employees' sense of meaning.

Social Learning Theory (SLT; Bandura, 1977) may explain how followers of transformational leaders adopt meaningfulness and are therefore more engaged in their work. Although SLT is generally thought of as explaining how individuals modify their behavior based on the observation of others (Manz & Sims, 1981), it has also been conceptualized as a mechanism in which leaders pass on abstract concepts such as values, attitudes, and beliefs (Lam, Krause, & Ahearn, 2010; Weiss 1977, 1978). One reason why leaders achieve this transference of concepts is because they are often viewed by their followers as the *face* of the organization (i.e.., the agents of the organization), and as such they are seen as social referents worthy of imitation (Weiss, 1977). It is far more difficult to pass on values and beliefs than it is to pass on behaviors; however, it may be that transformational leaders do so, most likely through their use of inspirational motivation in which they "develop and articulate a shared vision and

high expectations that are motivating, inspiring, and challenging" (Wang et al., 2011, p. 230). This articulation of expectations and goals, along with the individualized consideration and support that transformational leaders provide, add to their followers' sense of meaning, as well as the belief that they can accomplish great things (Shamir, House, & Arthur, 1993). Thus, as the transformational leader is viewed as a social referent and articulates a value system that includes making meaning out of work, consistent with SLT followers adopt similar values in a desire to be like and identify with the leader.

Impact on Psychological Availability

Psychological availability can be thought of as assessing the readiness or confidence of a person to engage in his or her work (May et al., 2004). Transformational leaders foster psychological availability by increasing follower levels of personal resources, which are aspects of the self that are generally associated with resiliency (Hobfoll, Johnson, Ennis, & Jackson, 2003). A number of studies have illustrated the relationship between transformational leadership and higher levels of a myriad of personal resources such as optimism (Tims et al., 2011), self-esteem (Xanthopoulou et al., 2007), intrinsic motivation (Charbonneau, Barling, & Kelloway, 2001), well-being (Arnold, Turner, Barling, Kelloway, & McKee, 2007), positive affect (Erez et al., 2008), empowerment (Kark, Shamir, & Chen, 2003), and self-efficacy (Kirkpatrick & Locke, 1999). Self-efficacy in particular has a strong association with transformational leadership (Walumbwa & Hartnell, 2011) as well as engagement (Xanthopoulou et al., 2007) and performance (Chen, Casper, & Cortina, 2001; Stajkovic & Luthans, 1998; Walumbwa, Avolio, & Zhu, 2008), suggesting that it may be an important factor in the process by which transformational leaders elicit higher levels of engagement and performance.

The Galatea effect may explain how personal resources such as self-efficacy play a role in employee engagement and performance (Eden, 1992, 1994; Eden & Kinnar, 1991). The Galatea effect refers to a process in which an individual translates positive expectations regarding performance outcomes into tangible performance outcomes. In other words, "one's positive belief and expectation about one's ability and self-expectations about one's performance can significantly determine one's real performance or success" (Zhu et al., 2009, p. 598). As previously stated, transformational leaders impact the confidence of their followers by raising their self-efficacy (Kirkpatrick & Locke, 1999), and self-confidence is associated with higher levels of engagement (Judge et al., 2003) and increased performance (Eden & Kinnar, 1991). Since self-efficacy is especially salient in short-term performance (McNatt & Judge, 2004), transformational leaders have the unique ability to influence their followers' performance through cultivating engagement on a specific task.

Relationship with Psychological Safety

Feelings of psychological safety are compromised when individuals perceive the workplace environment as being ambiguous, unpredictable, and threatening (May et al., 2004). Transformational leaders add to feelings of safety and trust by treating each subordinate as an individual with her or her own unique needs, and by supporting employees' work progress (Bass, 1990). An example of this process is noted in Schaubroeck, Lam, and Peng's (2011) study on transformational leadership and team performance. The authors found that transformational leaders influenced the team's levels of affect- and cognition-based trust, which in turn positively affected team levels of psychological safety. Other researchers (Pillai et al., 1999; Podsakoff, MacKenzieu, Moorman, & Fetter, 1990) have observed the mediating role of supervisor trust in

the relationships between transformational leadership and positive follower attitudes and extra-role behaviors.

A potential answer to the question of how transformational leaders elicit employee engagement through the creation of a trustful environment may lie with Social Exchange Theory (Blau, 1964). Blau contrasted social exchanges, which are based in trust and are composed of relatively diffuse obligations that occur in an "open-ended stream of transactions" (Organ & Konovsky, 1989, p. 162), with economic exchanges, which are specific and contractual reciprocations. A basic tenant of social exchange theory when applied to the realm of leadership is that followers will "repay" supportive leaders by displaying organizationally beneficial attitudes and behaviors such as job satisfaction, organizational commitment, and higher levels of performance (Gerstner & Day, 1997). Saks (2006) included engagement in this list of outcomes resulting from positive exchange relationships, stating that: "Bringing oneself more fully into one's work roles and devoting greater amounts of cognitive, emotional, and physical resources is a very profound way for individuals to respond to an organization's actions" (p. 603). It seems as though transformational leaders can elicit employee engagement in much the same way, due to their tendency to create an environment of trust (Bass, 1985).

Current Study

Although relations between transformational leaders, engagement, and performance have been established in previous research, there have, to date, been no studies that specifically examine the process by which transformational leadership influences engagement, which in turn influences performance at the task level. Though there may be little argument that transformational leaders play a role in shaping the work environment that promotes engagement, much less is known about the size of this role or how the process occurs at a micro or individual

task level. Perhaps part of the reason for this lack of understanding is because, as previously noted, leadership is commonly viewed from a macro-level perspective; hence no attention has been paid to the micro-level processes and influence. However, if organizations want to increase employee engagement, they must understand how their leaders can foster meaning and promote engagement at the task level.

Understanding what creates a sustained level of task engagement can promote a better understanding of what fosters engagement at an aggregated performance level (e.g., overall job performance, group and organizational level performance). Thus, I will investigate whether transformational leaders can impact follower engagement through the way in which they delegate a task, and whether follower engagement is associated with greater performance on this specific task. These relationships will be evaluated in a laboratory study in which participants are given a task to complete, as described in a memo from a fictitious CEO of a company who is either displaying the transformational leadership style, or simply assigning the task to them without creating a context that is conducive to engagement.

Based on the extant empirical and theoretical connections discussed thus far, I propose a model in which engagement partially mediates the relationship between transformational leadership and performance on a task. This model is displayed in Figure 1. Following Baron and Kenny's (1986) causal steps approach for mediation, the following hypotheses are proposed to fully evaluate the mediation model:

Hypothesis 1: Transformational leadership style is significantly related to follower task performance.

Hypothesis 2: Transformational leadership style is significantly related to follower task engagement.

Hypothesis 3: Follower task engagement is significantly related to follower task performance.

Hypothesis 4: Employee engagement will partially mediate the relationship between transformational leadership and follower task performance.

Furthermore, to adequately test Hypotheses 1-3, I will compare the effects of the transformational leadership style on follower task engagement and task performance with that of a non-transformational leader who simply assigns the task. Comparing participants' engagement and performance levels between these two leadership conditions will determine whether transformational leaders can influence their followers by going beyond the routine delegation of a task by creating an engaging environment.

Hypothesis 5: Participants who are recipients of the transformational leadership style will report higher task engagement and will exhibit greater task performance than those who are recipients of the non-transformational style.

METHOD

Participants

Participants were recruited voluntarily through Amazon's Mechanical Turk (MTurk; www.MTurk.com). MTurk is a website in which a diverse group of people from over 100 countries (called "workers") log in to complete a wide variety of tasks that are set up by other individuals or organizations (referred to as "requestors") for a monetary sum that is listed by the requestor. The nature of these tasks varies widely, but all tasks must be completed in their entirety online. After successful completion of the task, workers are either paid automatically through an online account, or are paid upon the requestor reviewing the work and deeming it to be of sufficient quality. Requestors can determine the geographical scope of their sample as well as the quality of worker that they recruit. Workers can be refused payment if requestors deem their work to be unsatisfactory, and a high "refusal rate" can mean less work available for a worker, as requestors can limit their participants to those workers who have low refusal rates (i.e., demonstrate the highest quality work).

Although some remain wary of internet samples, results gathered from MTurk workers have been shown to be as reliable as results gathered from university undergraduates, who remain a popular source of participants for research in the social sciences (Buhrmester, Kwang, & Gosling, 2011; Sprouse, 2010). In particular, researchers in the field of psychology have long lamented the widespread use of undergraduate research samples (Gordon, Slade, & Schmitt, 1986; Sears, 1986), an issue that is commonly referred to as the college-sophomore problem. Therefore, one advantage of MTurk is that it provides a sample that is more demographically diverse than typical college student samples (Buhrmester et al., 2011). Another benefit of MTurk that may interest the Industrial/Organizational psychology or organizational behavior community

is that a good majority of MTurk workers (approximately 70% of a U.S. sample, *n* = 500) tend to be employed (Ipeirotis, 2010), which improves the generalizability of results to a general working sample above that of a college-aged sample.

Despite the issues related to college-aged samples, an additional sample was recruited from several large psychology classes at Colorado State University due to difficulties in collecting an adequate sample size from the MTurk website over a two-month period. In all, 468 individuals participated in this study; 408 from undergraduate psychology classes, and 60 from the MTurk website. In the combined sample, participants' age ranged from 18 to 77 years, with a mean age of 22.92 years (*SD* = 9.19). The sample was 74.1% female (347) and 25.9% male (121). The sample was racially homogenous: 79.1% (370) of participants identified as Caucasian; 6.2% (29) of participants identified as Hispanic/Latino; 3.6% (17) of participants identified as Black/African American; 3.2% (15) of participants identified as Asian; 0.2% (1) of participants identified as Native Hawaiian/other Pacific Islander; and 7.7% (36) identified as two or more races. The majority of participants worked part-time (43.5%; *n* = 203). Unemployed (but not retired) participants accounted for 42% of the sample (*n* = 196), and 7.5% (*n* = 35) of participants worked full-time. Lastly, 6.2% (*n* = 29) reported "other" as their employment status, and 0.9% (*n* = 4) were retired.

Student sample demographics. The student participants' age ranged from 18 to 45 years, with a mean age of 20.28 years (*SD* = 3.26). The student sample was 74.3% female (303) and 25.7% male (105). The sample was racially homogenous: 78.4% (320) of participants identified as Caucasian; 6.9% (28) of participants identified as Hispanic/Latino; 2.9% (12) of participants identified as Black/African American; 3.4% (14) of participants identified as Asian; 0.2% (1) of participants identified as Native Hawaiian/other Pacific Islander; and 8.1% (33) identified as two

or more races. The majority of student participants worked part-time (46.8%; *n* = 191). Unemployed (but not retired) participants accounted for 44.4% of the sample (*n* = 181), and 2.7% (*n* = 11) of participants worked full-time. Lastly, 5.9% (*n* = 24) reported "other" as their employment status, and none were retired.

MTurk sample demographics. The MTurk participants' age ranged from 19 to 77 years, with a mean age of 40.63 years (*SD* = 14.85). The MTurk sample was 73.3% female (44) and 26.7% male (16). The MTurk sample was also racially homogenous: 83.3% (50) of participants identified as Caucasian; 1.7% (1) of participants identified as Hispanic/Latino; 8.3% (5) of participants identified as Black/African American; 1.7% (1) of participants identified as Asian; and 5% (3) identified as two or more races. The majority of MTurk participants worked full-time (40%; *n* = 24). Unemployed (but not retired) participants accounted for 25% of the sample (*n* = 15), and 20% (*n* = 12) of participants worked part-time. Lastly, 8.3% (*n* = 5) reported "other" as their employment status, whereas 6.7% (*n* = 4) were retired.

Procedure

MTurk workers who volunteered to complete the study were provided with a link to an online survey website where they read an informed consent letter, completed the task, and anonymously filled out a series of surveys and demographic information. Participants were randomly assigned to one of two leadership conditions (transformational or non-transformational), automatically upon entering the survey website. They were then asked to complete the anagram task, followed by a series of surveys. After completing the task and surveys, participants were given a three-digit number that they then entered into a field on the MTurk study page, which was separate from the data collection website. By successfully entering the correct code, participants indicated that they completed my study in its entirety and

were compensated for their participation. Because no deception was involved, there was no debriefing for participants at the end of their survey completion.

MTurk workers were compensated at $0.40 for successfully completing the task and measures. This compensation rate was determined by posting a question on an MTurk worker message board – Amazon offers online message boards to workers and requestors so that they can communicate with one another as to what is considered adequate compensation based on a specified time commitment. After reviewing responses to my question of "How much compensation would you expect for completing a task and a series of surveys that will take approximately 45 minutes," I arrived at the conclusion that $0.40 would be adequate. Although $0.40 is a seemingly small exchange for 45 minutes of work, past research has shown that compensation rate of MTurk workers does not affect data quality (Buhrmester et al., 2011). Furthermore, with the majority of workers from the U.S. (which will be where my sample draws from) viewing MTurk as a fruitful way to spend free time while earning small amounts of cash, it is unlikely that the compensation rate for this study will independently affect the outcome variables (Ipeirotis, 2010).

The undergraduate students in the study received extra credit points toward their psychology class for participating in my study. The extra credit opportunity was announced by myself or the course instructor, and participants had roughly two months to complete the survey to receive credit. The procedure was identical to what the MTurk workers experienced, except there was no three-digit number presented at the end of the survey; the undergraduate sample was instead instructed to input their unique course user name and class information so that they could be compensated for their participation.

The prompt. Participants were asked to imagine that they are the Vice President of the Human Resources Department at a large packaging plant called A+ Packaging. They were told that A+ Packaging is considering the use of a word-scramble (anagram) task for their job application packet, and that the CEO of A+ Packaging would like them to complete it before the company incorporates it into their application materials. The prompt that explains this scenario is located in Appendix A. Participants were asked to continue on to read a memo from the company's CEO, Jonathon Fitzgerald. Participants were randomly assigned to one of two conditions, each condition incorporating a different memo wherein leadership style is manipulated.

Transformational leader condition. In the transformational leadership condition, participants were provided with a memo that closely resembles Kirkpatrick and Locke's (1996) "vision" vignette. This vignette was chosen as the basis for the memo because it incorporates the four major components of Bass's (1990) conceptualization of transformational leadership: inspirational motivation (providing a vision), idealized influence (setting an example of exemplary performance), intellectual stimulation (challenging employees to be creative), and individualized consideration (making the employee feel appreciated through support). The transformational leader memo contains information about the importance of the task for the company, an example of performance that went above and beyond expectations, a personal challenge to complete the work to the best of the participant's ability, and offers of support through personal beliefs that the participant can perform well and complete the task. The full transformational leadership memo is located in Appendix B.

Non-transformational leader condition. The non-transformational leader condition provided a memo that assigned and described the task, but did provide a vision, set an example

of performance, challenge the participant, or offer support. The non-transformational memo was not intended to reflect any other leadership style or a leaderless condition; it merely reflected a leader-follower interaction in which the leader delegated a task to the follower. This type of manipulation allows for the comparison of a routine leadership encounter with an exchange that incorporates the elements of transformational leadership. Transformational leaders create an exciting environment through their presentation of idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration (Bass, 1985). The non-transformational memo purposefully did not incorporate these components – it instead focused on explaining and assigning the task. Therefore, comparisons can be adequately made between the transformational and non-transformational conditions.

Due to the omission of the vision segment of the memo, this memo is considerably shorter than the one presented in the transformational leader condition (approximately 250 words as opposed to 920 for the transformational condition). As such, there is concern that participants in the transformational condition would be adversely affected by having to read more. However, the alternative would be to saturate the non-transformational memo with filler content, which could negatively affect the participants' perception of the leader as it would have little to do with the task at hand. As the intent of the non-transformational leadership condition is to provide participants with a relatively neutral leader interaction, I decided against the use of such fillers. The non-transformational leadership memo is located in Appendix C.

Anagram task. After reading the leader memo, participants were asked to complete a multi-solution anagram, or word-scramble, task for 15 minutes (Hicks, Hicks, & Mansfield, 1969). Participants were presented with 34 lower-cased, five-letter word scrambles that, with the exception of one word scramble, each have at least four potential solutions. Instructions and

example word scrambles are provided in Appendix D. Participants were told to come up with as many solutions to each of the word scrambles as they can within the 15 minute period. This type of task was chosen because it is objectively scored, requires some thought and attention to complete (thus allowing for greater engagement fluctuations based on how it was presented), and has shown no confounding effects based on subject variables such as sex, college grade point average, and verbal scores on the College Entrance Examination Board test (Hicks et al., 1969). The task was presented as relevant to A+ Packaging company's application materials in both leader memos using the following statement: "research has shown that those who score well on this anagram task tend to display higher job performance and creativity, along with a number of other positive outcomes." After the task, participants were asked to complete a number of measures, after which the study will be considered complete.

Measures

Cronbach's alpha reliability of scores and descriptive statistics for each measure are shown in Table 1. Intercorrelations between all measures used in the analyses are located in Table 2. All measures and response scales are located in Appendix E.

Transformational leadership inventory (TLI). The TLI (Podsakoff, MacKenzie, Moorman, & Fetter, 1990) contains 28 items responded to on a 7-point Likert scale ranging from (1) *Strongly Disagree* to (7) *Strongly Agree*. However, four items composing the *Fostering the Acceptance of Group Goals* subscale were removed from the measure because the leader manipulation and task do not include any mention of group-level goals. Additionally, five items composing the *Contingent Reward* subscale were removed because this subscale is intended to capture behavior that is typical of the transactional leadership style. These omissions left 19

items measuring five subscales. A brief description and sample items from each subscale follows below.

Identifying and Articulating a Vision is behavior aimed at identifying new opportunities for the company and inspiring others through the articulation of a vision for the future. This subscale corresponds with the inspirational motivation component of Bass's transformational leadership theory. A sample item is "Has a clear understanding of where we are going." *Providing an Appropriate Model* involves setting an example for employees that is consistent with the values the leader espouses. This subscale corresponds with the idealized influence (behavior) component of transformational leadership. A sample item is "Provides a good model for me to follow." *High Performance Expectations* is the demonstration of expectations of excellence, high performance, and quality work on the part of followers. This subscale corresponds with the idealized influence (attributed) component of transformational leadership. A sample item is "Insists on only the best performance." *Providing Individualized Support* involves leader displays of respect and concern for the personal feelings and needs of his or her followers. This subscale measures the individualized consideration component of transformational leadership. A sample item is "Shows respect for my personal feelings." Lastly, *Intellectual Stimulation* is leader behavior that invokes a sense of challenge in followers to re-examine some of their basic assumptions about their work. Although Podsakoff et al. did not believe that intellectual stimulation was a component of transformational leadership, this subscale was created to better align with Bass's (1985) measure. A sample item is "Challenges me to think about old problems in new ways."

The instructions and items for the scale were slightly modified to accommodate the experimental nature of the study, as well as the nature of the leader interaction. Podsakoff et al.'s

transformational leadership measure asks questions about leader *behavior*. Because the participants in this study did not directly observe the leader's behavior, I asked them to instead infer behavior based on the content of the memo provided. Therefore, the prompt for the questions in this measure will read "My leader seems to…," and the items were modified to fit with this prompt. Items that addressed group-level issues were also changed to read as more specific to the scenario presented to the participant. An example that encompasses both of these modifications is the item "Has a clear understanding of where we are going," which was modified to read "Have a clear understanding of where our company is going." The inclusion of the word "company" offers a more descriptive prompt for the participant to respond to, as "we" may be confusing because the participant worked alone and was given minimal information regarding the fictional company at which they were supposed to work. No further modifications were made to the items, other than the slight changes fitting the two categories mentioned above.

Manipulation check. The TLI was also used as a manipulation check for the two leadership conditions; high scores on the TLI reflect a leader who is transformational. Participants in the transformational leadership condition were expected to report the fictional CEO as more transformational than what those in the non-transformational leadership condition rated the CEO.

Engagement. Rich et al. (2010) developed a measure of employee engagement based on Kahn's (1990) conceptualization. Participants respond to this 18 item measure on a 5-point scale ranging from (1) *Strongly Disagree* to (5) *Strongly Agree*, and contains three dimensions corresponding to the respondent's levels of physical, emotional, and cognitive engagement. The three dimensions contain six items each and form a second-order factor of engagement. Rich et al. reported strong correlations (r = .63 to.74) between the three dimensions, supporting their

aggregation to form an overall engagement scale. Therefore, scores on the three dimensions were added together to form an overall engagement score. Rich et al. developed the physical engagement dimension based on Brown and Leigh's (1996) measure of work intensity, with significant modifications to create a greater conceptual agreement with Kahn's definition of physical engagement. A sample item is "I devote a lot of energy to my job." The emotional engagement dimension was drawn from Russell and Barrett's (1999) research on core affect, which was defined as a state consisting of pleasantness (positive feelings) and activation, or a sense of energy (Rich et al.). A sample item is "I feel positive about my job." Lastly, for the cognitive dimension Rich et al. drew from Rothbard's (2001) measure of engagement that includes the dimensions of attention and absorption. A sample item of the cognitive dimension is "At work, I concentrate on my job." Although the original employee engagement scale was meant to measure job engagement, a more generalized state of engagement, the instructions and items were modified slightly in the current study to assess engagement on the anagram task. Also, because the measure was administered after the task, the instructions asked participants to respond according to how they felt while they were conducting the task. The instructions read "Please respond to the following questions regarding the anagram task that you completed." An example of item modification is "I devote a lot of energy to my job" being modified to read "I devoted a lot of energy to this task." No further modifications were made to the instructions or items, other than the slight changes fitting the two categories mentioned above. These modifications did not change the meaning of the questions, they only changed the reference from job to task; therefore, no changes to the measurement of the actual construct of engagement were expected.

Task performance. Performance on the anagram task was measured by counting the total number of correct responses. I hand counted the number of correct responses given for each word scramble and added them together to arrive at a total for each participant.

Demographics. A short demographic measure was included at the end of the survey. This measure asked participants to report their age, sex, race/ethnicity, and employment status.

Controls. Though compensation may not be a factor in participants' performance, there is a possibility that participants' inherent interest in word games similar to the anagram task could influence their performance and engagement on the task. Support for this contention comes from Niemivirta and Tapola's (2007) study in which they found that participants' interest in a problem-solving task was associated with their level of self-efficacy and subsequent performance on that task. Participants' overall need for cognition was also identified as a potential influence on their performance and engagement for the same reasons. Therefore, I measured and controlled for the potential effects of interest in the task and need for cognition in the analyses.

Additionally, although Motowidlo, Borman, and Schmit (1997) predicted that personality would have a greater effect on contextual performance than on task performance, a recent meta-analysis showed that the Big Five personality characteristics of conscientiousness, emotional stability, and agreeableness significantly predicted task performance as well (Chiaburu, Oh, Berry, Li, & Gardner, 2011). Therefore, I included a measure of the Big Five personality characteristics (John, Donahue, & Kentle, 1991) and I controlled for conscientiousness and agreeableness in my analyses. Emotional stability was excluded as a control because it was very weakly related to engagement (r = -.06) and task performance (r = -.03).

Interest in task. Participants reported their interest in anagram tasks by indicating their level of agreement to two questions on a 5-point scale ranging from (1) *Strongly Disagree* to (5)

Strongly Agree. The first statement reads: "I found the word scramble task to be very interesting," and the second statement (which will be reverse coded) reads: "I am not interested in word games such as the word scramble task." These questions are similar to other interest measures used in past laboratory research involving anagram and problem-solving tasks (Hackett & Campbell, 1987; Niemivirta & Tapola, 2007).

Need for cognition. Need for cognition was assessed using Cacioppo, Petty, and Kao's (1984) 18 item measure. Participants were asked to indicate their level of agreement on descriptions of themselves using a 9-point scale ranging from (1) *Very Strong Disagreement* to (9) *Very Strong Agreement*. Sample items include: "I would prefer complex to simple problems" and "The notion of thinking abstractly is appealing to me." Item scores on this measure were summed to assess participants' overall need for cognition.

Personality. The Big Five Inventory (John, Donahue, & Kentle, 1991) contains 44 statements assessing the five personality dimensions of conscientiousness, agreeableness, neuroticism, openness, and extraversion. However, the dimensions of extraversion, neuroticism, and openness were not used in analyses and items measuring these two dimensions were dropped from the questionnaire, leaving 18 items in total. Participants were asked to indicate their level of agreement on descriptions of themselves starting with the phrase "I see myself as someone who…" on a 5-point scale ranging from (1) *Strongly Disagree* to (5) *Strongly Agree*. Sample items for each dimension include: "Does a thorough job" (conscientiousness), and "Is helpful and unselfish with others" (agreeableness). Both dimensions were treated as a distinct subscale; therefore, I used scores from two of the five subscales (conscientiousness and agreeableness) in the analyses.

RESULTS

Testing assumptions

To appropriately conduct multiple linear regression, several assumptions about the data must be met. Linearity was assessed in a number of ways. First, residuals were obtained using regression analyses and then plotted to reveal violations of the linearity assumption. The dependent variable (performance) was first regressed on engagement and the control variables (agreeableness, conscientiousness, interest in task, and need for cognition). Next, transformational leadership was regressed on engagement and the control variables. The residuals for these models were saved, and plotted against one another on a scatterplot. Results revealed that a linear model was appropriate.

To further check for linearity, performance was regressed on transformational leadership and the control variables. Next, the mediator (engagement) was regressed on transformational leadership, using the same control variables. Again, the residuals from these models were saved and plotted against one another on a scatterplot. Results revealed that a linear model was appropriate. Next, performance was regressed on the control variables. Then, transformational leadership was regressed on those same control variables. The residuals from these models were saved and plotted against one another on a scatterplot. Results revealed a slight curvilinear relationship in the scatterplot, indicating non-linearity. Next, engagement was regressed on the control variables and then transformational leadership was regressed on the same controls. The residuals from these models were saved and plotted against one another on a scatterplot. Results revealed that a linear model was appropriate.

The full model was analyzed in the next step. The dependent variable was regressed simultaneously on transformational leadership and engagement, controlling for agreeableness,

conscientiousness, interest in task, and need for cognition. Both the residuals and predicted values for these models were saved, and plotted against one another. No patterns were found in the plot, supporting the appropriateness of a linear model. Lastly, the residuals from the full model were plotted on a histogram and a normal probability plot. The histogram displayed a slightly positive distribution and the normal probability plot deviated from a straight line. The full model residuals displayed high skew and kurtosis values (1.31 and 2.23, respectively), further suggesting that they were not normally distributed.

Both of the independent variables and the dependent variable were plotted on a histogram to determine which variable was causing the non-normal distribution for the overall model residuals. Performance was shown to be highly positively skewed, hence the variable was transformed by calculating the square root for performance. The transformed performance score was plotted on a histogram and satisfactorily displayed a normal distribution indicating the transformation was adequate. All assumptions for linearity were met for the transformed performance scores. Because these assumptions were met, it was deemed appropriate to continue with the multiple linear regression analyses for hypothesis testing.

Locating outliers

Outliers were located through a number of methods. All these methods necessitated running the regression model to calculate criteria for outliers; studentized deleted residuals and Cook's distance values were calculated for locating outliers in the sample. The model included the following variables: agreeableness, conscientiousness, interest in task, and need for cognition as control variables, transformational leadership and engagement as independent variables, and the transformed performance values as the dependent variable.

First, studentized deleted residuals were calculated. Studentized deleted residuals represent the number of standard deviations above the average residual value for each residual. All cases with a studentized deleted residual greater than ± 2 were removed, since this represents residual values that were extreme outliers. This led to the removal of 23 cases.

Second, Cook's distance was calculated for each case. Cook's distance is a measure of the influence of a single case based on the total changes in all other residuals when the case is deleted from the parameter estimates. In following a conservative approach to outlier exclusion, cases with Cook's distance values greater than 4/n (.008 for this dataset) were removed. This led to the removal of ten cases.

In all, 33 cases were identified as outliers and removed from the analysis. Eighteen of these 33 cases met both the studentized deleted residuals and Cook's distance criteria for removal. After removal of the outliers, the total sample size was 468 participants. The assumptions for conducting multiple linear regression were still met after the removal of outliers.

Manipulation check

To determine if the leadership manipulation was successful, an independent samples t-test was conducted to compare scores on the Transformational Leadership Inventory (TLI) between participants in the transformational (n = 225) and non-transformational (n = 243) conditions. There was a significant difference in TLI scores between the transformational (M = 101.03; SD = 14.32) and non-transformational (M = 90.5; SD = 13.81) conditions; $t(466) = 8.09$, $p < .001$. Participants exposed to the memo that displayed the CEO as a transformational leader reported the CEO as significantly higher in transformational leadership behavior than those participants exposed to the non-transformational memo, suggesting that the leadership manipulation was successful.

Differences between samples

To determine whether there were meaningful differences between the college student sample and the sample obtained from MTurk, several t-tests were conducted that compared the two groups on their reported levels of overall performance, need for cognition, conscientiousness, agreeableness, interest in the task, and engagement. The comparisons were significant for all variables except agreeableness, indicating differences between the two samples (see Table 3 for means, standard deviations, and t-test results). In particular, participants from the MTurk sample answered significantly more anagrams, reported higher need for cognition, higher conscientious, and more interest in the task than the students. The MTurk sample also reported, on average, higher levels of engagement than the student sample. Lastly, participants in the MTurk sample perceived the CEO to be more transformational than did those in the student sample, regardless of leadership condition.

The significant differences between the two samples suggested that they should not be treated homogenously; in other words, the two samples were obtained from distinct populations and must be treated as such. Therefore, the analyses were conducted separately on each group, and then conducted on the combined sample to determine what, if any, differences between the relationships expressed in the hypotheses could be found.

Regression analyses on MTurk sample

To assess hypotheses 1-3 for the MTurk sample (n = 60), several multiple linear regressions were performed. First, performance was regressed on the control variables. The model was not significant R^2 = .06, $F(4, 55)$ = .87, p = .49. Together, the four control variables accounted for approximately 6% of the variance in the squared value of performance.

To assess the effect of perceived transformational leadership on performance, TLI scores were added to the analysis. After entering the control variables, perceived transformational leadership had a non-significant relationship with performance, $\Delta R^2 = .03$, *ns*, $F(1, 54) = 1.02$, $p = .21$ (see Table 4). This finding indicates a lack of support for the first hypothesis, which predicted that perceived transformational leadership style would be significantly related to task performance. This finding also violates the first step of Baron and Kenny's causal steps approach to testing mediation. However, finding significance at this first step is not required for concluding mediation (MacKinnon, Fairchild, & Fritz, 2007; Zhao, Lynch, & Chen, 2010); therefore, the remaining steps in mediation analyses were executed as planned.

Next, engagement was regressed on the control variables for the MTurk sample. The model was significant $R^2 = .59$, $F(4, 55) = 20.13$, $p < .001$. Together, the four control variables accounted for approximately 59% of the variance in task engagement. To assess the effect of perceived transformational leadership on participant task engagement, TLI scores were added to the regression equation with engagement as the dependent variable. Shown in Table 4, perceived transformational leadership demonstrated a significant relationship with task engagement after considering the control variables, $\Delta R^2 = .06$, $p < .01$, $F(1, 54) = 20.30$, $p < .01$. The level of perceived transformational leadership style explained a significant amount of variance in task engagement beyond the control variables; therefore, hypothesis 2 was supported.

To test hypothesis 3, that engagement is related to task performance, task engagement was included as a predictor. After entering the control variables, task engagement did not have a significant relationship with performance $\Delta R^2 = .05$, *ns*, $F(1, 54) = 1.28$, $p = .09$; therefore hypothesis 3 was not supported in the MTurk sample. Figure 2 displays the hypothesized model with standardized regression weights for each path tested.

Differences between conditions in MTurk Sample

Hypothesis 5 stated that participants who were exposed to the transformational leadership condition would report higher task engagement and would exhibit greater task performance than those who were exposed to the non-transformational condition. To test for differences in task engagement and task performance between the leadership conditions, a multivariate analysis of covariance (MANCOVA) was conducted, which allows for comparisons in task engagement and task performance between the two leadership conditions while controlling for interest in task, agreeableness, need for cognition, and conscientiousness.

Before running the MANCOVA analysis, a Box's M test was executed to check the assumption of homoscedasticity. The results were not significant: Box's M = 1.02, $F(3, 605520) = .33$, $p = .81$, and, therefore, the assumption of homoscedasticity was upheld. The assumption of homogeneity of error variances between conditions was upheld by Levene's test of equality of error variances being non-significant for performance $F(1, 58) = .003$, $p = .96$.

Results of the MANCOVA revealed no main effect for condition on the dependent variables of engagement and performance: Wilks' $\lambda = .96$, $F(2, 53) = 1.09$, $p = .34$. To view the separate effect of condition on the two dependent variables, the univariate main effects were examined. The univariate main effects for condition (shown in Table 5) were non-significant for both dependent variables of engagement, $F(1, 54) = .68$, $p = .41$ and performance, $F(1, 54) = 1.92$, $p = .17$. The overall engagement scores were very similar for MTurk participants in the transformational ($M = 78.83$; $SD = 10.07$) and the non-transformational conditions ($M = 77.13$; $SD = 10.47$). The same pattern was found in regard to performance for participants in the transformational ($M = 7.53$; $SD = 1.57$) and non-transformational condition ($M = 6.89$; $SD =$

1.59). Therefore, hypothesis 5 was rejected, as there were no significant differences in overall engagement or performance between leadership conditions in the MTurk sample.

Regression Analyses on Student Sample

To assess hypotheses 1-3 in the student sample (n = 406), the transformed performance variable was first regressed on the control variables. The model was significant R^2 = .06, F(4, 401) = 6.27, p < .001. Together, the four control variables accounted for approximately 6% of the variance in the squared value of performance.

To assess the effect of perceived transformational leadership on task performance, TLI scores were added to the analysis. After accounting for the control variables, perceived transformational leadership did not have a significant relationship with performance, ΔR^2 = .01, F(1, 400) = 5.28, p = .25 (see Table 6). As in the MTurk sample, this finding did not support the first hypothesis; however, the remaining steps of mediation analyses were executed as planned.

Engagement was regressed on the control variables. The model was significant R^2 = .36, F(4, 401) = 56.9, p < .001. Together, the four control variables accounted for approximately 36% of the variance in task engagement. To assess the effect of perceived transformational leadership on participant task engagement, TLI scores were added to the analysis. After considering the control variables, perceived transformational leadership had a significant relationship with task engagement, ΔR^2 = .02, p < .01, F(1, 400) = 48.76, p = .001 (see Table 6). The level of perceived transformational leadership style explained a significant amount of variance in task engagement beyond the control variables (2%); therefore, hypothesis 2 was supported.

Lastly, task engagement was included as a predictor of task performance, in addition to controls. Task engagement showed a significant relationship with performance after accounting

for control variables, $\Delta R^2 = .05$, $p < .01$, $F(1, 400) = 10.23$, $p < .001$, demonstrating support for hypothesis 3.

Mediation analysis for student sample

As noted above, higher levels of perceived transformational leadership style were associated with higher levels of participant task engagement. Additionally, task engagement predicted task performance: $\beta = .29$, $t(401) = 4.96$, $p < .001$. When task performance was regressed on transformational leadership while controlling for task engagement, the relationship between transformational leadership and task performance dropped: $\beta = .06$, $t(401) = 1.15$, $p = .25$ in the model excluding engagement as a control, as compared to $\beta = .02$, $t(400) = 0.38$, $p = .70$ in the model that controlled for engagement. A Sobel test performed using Preacher and Leonardelli's (2001) macro confirmed that the relationship between the perceived level of transformational leadership style and subsequent task performance was mediated by the level of engagement on the task ($z = 2.68$, $p < .001$). These results indicate a full mediation effect, rather than partial mediation, as proposed in hypothesis 4. Figure 3 displays the mediation model with standardized regression weights for each path tested.

Differences between conditions in student sample

Again, hypothesis 5 stated that participants who were exposed to the transformational leadership condition would report higher task engagement and would exhibit greater task performance than those who were exposed to the non-transformational condition. To test for differences in task engagement and task performance between the leadership conditions, a multivariate analysis of covariance (MANCOVA) was conducted.

Before running the MANCOVA analysis, a Box's M test was conducted to check the assumption of homoscedasticity. The results were not significant: Box's M = 3.58, F(3,

39152242) = 1.19, p = .31, and the assumption of homoscedasticity was therefore upheld. The assumption of homogeneity of error variances between conditions was upheld by Levene's test of equality of error variances being non-significant for both engagement $F(1, 404) = 1$, p =.32 and performance $F(1, 404) = .14$, p = .71.

Results of the MANCOVA revealed no main effect for condition on the dependent variables of engagement and performance: Wilks' $\lambda = 1$, $F(2, 399) = 0.6$, p = .94. To view the separate effect of condition on the two dependent variables, the univariate main effects were then examined. The univariate main effects for condition (shown in Table 7) were non-significant for both dependent variables of engagement, $F(1, 400) = 0$, p = .99 and performance, $F(1, 400) = 0.19$, p = .67. Overall engagement scores were very similar for participants in the transformational (M = 65.8; SD = 11.61) and the non-transformational conditions (M = 65.75; SD = 11.73). The same pattern was shown in regard to performance for participants in the transformational (M = 6.07; SD = 1.69) and non-transformational condition (M = 6.08; SD = 1.74). Therefore, hypothesis 5 was rejected, as there were no significant differences in overall engagement or performance between leadership conditions.

Regression analyses on combined sample

To assess hypotheses 1 for all participants (n = 466) combined, performance was first regressed on the control variables. The model was significant $R^2 = .08$, $F(4, 461) = 9.80$, $p < .001$ (shown in Table 8). Together, the four control variables accounted for approximately 8% of the variance in the squared value of performance.

To assess the effect of perceived transformational leadership on task performance, TLI scores were added to the analysis. Controlling for interest in task, agreeableness, need for cognition, and conscientiousness, perceived transformational leadership had a non-significant

relationship with performance, β = .09, t = 1.85, p = .07. This finding does not support the first hypothesis, which predicted that perceived transformational leadership style would be significantly related to task performance.

Next, engagement was regressed on the control variables. The model was significant R^2 = .41, $F(4, 461) = 81.30$, $p < .001$ (see Table 8). Together, the four control variables accounted for approximately 41% of the variance in task engagement. To assess the effect of perceived transformational leadership on participant task engagement, TLI scores were added to the analysis. After control variables were explained, perceived transformational leadership had a significant relationship with task engagement, $\Delta R^2 = .02$, $p < .001$, $F(1, 460) = 71.35$, $p < .001$. The level of perceived transformational leadership style explained a significant amount of variance in task engagement beyond the control variables; therefore, hypothesis 2 was supported.

To test hypothesis 3, task engagement was included as a predictor of task performance. After controlling for interest in task, agreeableness, need for cognition, and conscientiousness, task engagement had a significant relationship with performance $\Delta R^2 = .07$, *ns*, $F(1, 460) = 15.4$, $p < .001$. Task engagement explained approximately 7% of the variance in performance beyond the control variables, demonstrating support for hypothesis 3.

Mediation analysis on combined sample

When task engagement was included simultaneously with transformational leadership in the regression model, the strength of the relationship between transformational leadership and task performance dropped: β = .09, $t(460) = 1.85$, p = .07 in the model excluding engagement, as compared to β = .04, $t(459) = 0.75$, p = .45 in the model with engagement (see Table 8). A Sobel test performed using Preacher and Leonardelli's (2001) macro confirmed that the relationship between the perceived level of transformational leadership style and subsequent task

performance was mediated by the level of engagement on the task ($z = 3.49$, $p < .001$). Therefore, the results indicate full mediation rather than the partial mediation model proposed in hypothesis 4. Figure 4 displays the mediation model with standardized regression weights for each path tested.

Differences between conditions in combined sample

Hypothesis 5 stated that participants who were exposed to the transformational leadership condition would report higher task engagement and would exhibit greater task performance than those who were exposed to the non-transformational condition. To test for differences in task engagement and task performance between the leadership conditions, a multivariate analysis of covariance (MANCOVA) was conducted.

Before running the MANCOVA analysis, a Box's M test was run to check the assumption of homoscedasticity. The results were not significant: Box's M = 1.1, $F(3, 47789796) = .37$, $p = .78$, and the assumption of homoscedasticity was upheld. The assumption of homogeneity of error variances between conditions was upheld by Levene's test of equality of error variances being non-significant for both engagement $F(1, 464) = 2.51$, $p = .11$ and performance $F(1, 464) = .61$, $p = .44$.

Results of the MANCOVA revealed no main effect for condition on the dependent variables of engagement and performance: Wilks' $\lambda = 1$, $F(2, 459) = 0.1$, $p = .91$. The univariate main effects for condition (shown in Table 9) were non-significant for both dependent variables of engagement, $F(1, 460) = 0$, $p = .99$ and performance, $F(1, 460) = 0.19$, $p = .67$. Overall engagement scores were very similar for participants in the transformational ($M = 67.55$; $SD = 12.23$) and the non-transformational conditions ($M = 67.16$; $SD = 12.16$). The same pattern was revealed with regard to performance for participants in the transformational ($M = 6.26$; $SD =$

1.75) and non-transformational condition (M = 6.18; SD = 1.74). Therefore, hypothesis 5 was rejected, as there were no significant differences in overall engagement or performance between leadership conditions.

DISCUSSION

The purpose of the present study was to better understand the relationship between transformational leadership and task performance by testing a model in which task engagement mediated this link. The results support this model in the student and combined samples, but not the MTurk sample (most likely due to the small sample size). In general, those who rated the fictional CEO as having high transformational qualities were more engaged in the task than those who did not rate the CEO as transformational, and those who were more engaged in the task subsequently performed better on the task than those who were not as engaged. These results indicate that transformational leaders may very well elicit greater performance in their followers through increasing their followers' engagement on the task.

Additionally, the results from this study suggest that one's engagement on a task explains performance beyond his or her inherent interest in the task as well as his or her level of conscientiousness. This is an important finding from a theoretical standpoint, as much of the research on employee engagement has been focused on differentiating it from other, related constructs (Shuck & Wollard, 2010).

Explanations for Findings

Results showed that being the recipient of transformational leadership did not affect engagement or performance levels of participants. This comes as a surprise, considering that research has shown that higher ratings of the CEO's transformational style correspond with greater levels of task engagement and task performance, as well as the evidence in the current study of a successful leadership manipulation between conditions.

The lack of noteworthy differences between the leadership conditions on the engagement and performance metrics may suggest that the relationships between transformational leadership

and these outcomes were not as strong as what previous research has shown or suggested. In the present study, perceived transformational leadership only added one percent in the variance explained for performance and two percent in variance explained for engagement, beyond the control variables. The significant results found between perceived transformational leadership and task engagement likely have more to do with the large sample size, thus decreasing the practical significance of the findings.

A potential explanation for the lack of engagement and performance differences between the two leadership conditions may have been the content of the leadership manipulation itself. The leader interaction was a relatively informal memo from a fictional CEO in a scenario in which the participants were to act as though they were employed by a fictional company. Participants had little stake in the scenario, and their brief interaction with the CEO may not have been adequate enough to warrant the strong physical, cognitive, and emotional reactions that are said to elicit engagement (Kahn, 1990). However, the vignette upon which the leader memo was heavily based elicited several attitudes within participants that are closely aligned with the components of engagement, such as trust in the leader (linked to safety), intellectual stimulation (linked meaningfulness), and inspiration, which is associated with availability (Kirkpatrick & Locke, 1996). These conflicting findings suggest that the leader manipulation may not have been the issue.

An alternative explanation behind the absence of large effect sizes and a lack of differences between conditions may be explained by the nature of the task that was chosen for this experiment. Although the task was designed to require a considerable amount of thought and effort while performing, it may have lacked importance to the participants, thus negating any effects of the leader memo. Research has shown that intrinsic motivation and job characteristics

such as meaningfulness and importance play a positive role in the relationship between transformational leadership and task performance (Piccolo & Colquitt, 2006; Purvanova, Bono, & Dzieweczynski, 2006; Shin & Zhou, 2003), but the anagram task used in the present study may not have elicited feelings of meaning for the participants. In other words, although participants in the transformational condition did *recognize* the CEO as being more transformational, they were not *influenced* by the CEO due to the lack of meaning and interest that they derived from the task. However, there is a possibility that participants were impacted in a way that was not measured in the present study.

Practical and Theoretical Implications

Despite the low effect sizes between transformational leadership and engagement and performance, the present study adds to the extant literature by examining the mediational merits of task engagement in explaining the relationship between transformational leadership and performance. It is likely, however, that engagement works in conjunction with many aspects of the work environment, personal characteristics, and motivations to influence workplace behaviors. The present study did not take all of these aspects into consideration, but it is interesting to note how engagement fits in with past findings on the transformational leadership – performance link. For instance, one's confidence in completing a task, or self-efficacy, is strongly related to one's performance on that task (Chen, Casper, & Cortina, 2001; Eden & Kinnar, 1991). Transformational leaders have been shown to increase their followers' self-efficacy (Kirkpatrick & Locke, 1999; Walumbwa & Hartnell, 2011), although much is unknown regarding what methods the leaders use to influence follower self-efficacy.

Bandura (1997) suggested that self-efficacy is increased through modeling behavior; that is, followers practice effective behaviors that are displayed by their leader. However, recent

research has shown that followers who relationally identify with their leaders display greater levels of self-efficacy than those who simply mimic behavior (Walumbwa & Hartnell, 2011). Relational identification refers to the extent to which an individual defines him or herself in terms of a given role–relationship (Sluss & Ashforth, 2007); followers who relationally identify with their leader tend to expand their own identity in order to display positive workplace behaviors, rather than merely exhibiting the behaviors. It is possible that self-efficacy and relational identification are precursors to feelings of engagement, as self-efficacy corresponds with psychological availability (having a necessary amount of physical, emotional, and psychological resources) and relational identification is elicited through feelings of trust and psychological safety (being able to immerse oneself into work without fear of negative consequences). Thus, a leader's attempts at eliciting follower engagement may only foster task performance if the follower identifies strongly with the leader.

Additionally, several personality characteristics may play a role in engagement and performance outcomes for followers of transformational leaders. For example, Ehrhart and Klein (2001) discovered that followers who reported greater levels of achievement orientation, self-esteem, and risk taking behaviors were more likely to be drawn to the influence of transformational leaders. Followers with a low need to achieve may never allow themselves to become engaged by a transformational leader's message, as the message might not fit with their goals and motivations. Felfe and Schyns (2010) found that followers who were high in agreeableness and extraversion and low in neuroticism tended to view their leaders as more transformational that those who were on the other extreme in regard to the three personality characteristics. Felfe and Schyns proposed that since transformational leaders usually display similar personality patterns, those who are high in agreeableness and extraversion but low in

neuroticism are more likely to perceive their leaders in a positive, transformational light. Finally, in a study that directly tested the effects of follower personality on the relationship between transformational leadership and engagement, Zhu et al. (2009) found that follower innovativeness, willingness to take risks, active learning, and independent thinking moderated the relationship between transformational leadership and engagement. Based on the results of these studies, it appears as though followers are more than passive recipients of leadership styles – follower characteristics matter because they play a role in how transformational leadership is perceived.

From a more practical perspective, results from the present study indicate that one's level of engagement can be influenced by the extent to which one perceives his or her leader to exhibit the transformational style, even on a somewhat menial task such as the one used in the present study. This has important implications for managers at any level within an organization, as the results support the contention that leaders shape their followers' environments through specific interactions, rather than through dramatic, sweeping gestures meant to fit under a particular leadership style (Larsson & Lundholm, 2010). Trust and authenticity are key to relationships between leaders and followers (Bass, 1985), as well as followers' feelings of engagement (Kahn, 1990), and leaders can better foster feelings of trust through seemingly minor interactions in which they exhibit transformational qualities.

The differences between the two samples collected results raise questions regarding the use of student samples in studying leadership, as well as how these constructs may vary between individuals on the basis of demographics such as age and work experience. There were meaningful differences between the two samples collected in the present study on the basis on engagement, performance, perceived transformational leadership, need for cognition, task

interest, and conscientiousness. Participants from the MTurk sample were more engaged, performed better, perceived the CEO to be more transformational, were more interested in the task, and were higher in need for cognition and conscientiousness than the student sample. Participants from the MTurk sample were compensated with a small amount of money, whereas students were granted extra credit for their class. It could be that the monetary compensation was valued more than what the students valued their extra credit. Additionally, work performed on the MTurk website can be rejected by the work requestor, whereas psychology students are extensively briefed as to their rights as a research participant. The MTurk workers may have been under additional pressure to act more professional and perform better than the students due to the ability of work requestors to reject work on the MTurk website, indicating a potential social desirability effect. Future research could investigate the merits of these explanations.

Participants from the MTurk sample were older and had more work experience than the student participants. Age has been shown to be related to employee engagement, with a general increase in engagement as the employee ages (James, McKechnie, & Swanberg, 2011). More specifically, individuals in their prime working age range (40-54 years old) were significantly more engaged than those in the emerging adult age range (24 years old and younger). The average age of the MTurk sample was approximately 40, which fits the 'prime working age' category, and the average age of the student sample was approximately 20 years old, which fits the 'emerging adult' category. However, the results from the James et al. study came from employees working within the same company, and so any age-based conclusions must take the myriad organizational factors into consideration.

Likewise, any comparisons between samples based on employment status are tenuous at best, as one's current employment status may not indicate their overall work experience. Still, it

is likely that the MTurk sample had significantly more work experience due to their older age, and they would perhaps be more comfortable with being assigned a task via memo, as was the case in the present study. Additionally, students may not have taken the study as seriously as the MTurk workers given their familiarity with the research process and their understanding that they would not be penalized in any way for shoddy or incomplete work. In any case, the many differences between the two samples necessitated running the analyses separately for both groups. The results were very similar in terms of effect sizes and overall patterns, but the MTurk sample failed to reach significant results for the engagement to performance link of the mediational model. However, this non-significant finding was likely due to the smaller sample size rather than a fundamental difference between the two samples in terms of the relationships under investigation.

Strengths and Limitations

The present study makes use of two distinct samples to understand the complex relationships between transformational leadership, engagement, and task performance. Although the patterns between these variables did not differ to a great extent between samples, it is useful to understand whether the theoretical model has merit across different groups. That the relationship patterns between perceived transformational leadership, task engagement, and task performance were similar for both groups (workers and students) suggests that these patterns are likely to be found in other samples. The addition of the worker (i.e., MTurk) sample provided a group that had significantly more work and life experience than the college sample, which could be considered as a strength of this study. An additional strength was the use of several controls for each of the steps involved in the mediation analyses. By considering effects of personality, interest in the task itself, and need for cognition, all variables for which organizations have little

ability to change and that have been previously shown to influence performance levels, the effects of engagement itself were teased out. Thus, one can have greater confidence that the conclusions draw about the effects of engagement on performance were not effects due to other constructs. Lastly, the use of a task that was not known to differ between subjects was an important facet of this study. Performance on the anagram task was not shown to confound with subject variables (Hicks et al., 1969), which allowed for an accurate and fair comparison between subjects and groups.

Despite the strengths of the study, there are several limitations that should be addressed. First, all measures were self-report and were thus subject to common method bias, which refers to correlations between constructs being artificially inflated or deflated simply because they were all assessed using the same method (in this case a single survey; (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Second, the study was completed entirely online and was predicated upon a scenario involving the participant acting as an employee at a fictional company. As such, this study may have suffered from a lack of realism that may have affected participant responses. On a related note, the leader interaction in this study was very brief, and also required the participant to read carefully to understand the fictional CEO. This brief interaction may not have been entirely realistic, as an employee in an actual organization would likely be able to ask questions and obtain feedback. This lack of realism may explain the lack of significant differences between the two leadership conditions on the basis of engagement and performance. However, the manipulation check was successful, indicating that participants responded to the leadership conditions appropriately; they simply may not have been influenced by the contents of the memo.

The most evident limitation to this study was the testing of a mediational model with cross-sectional data. As Maxwell and Cole (2007) explain, the results of analyses based on cross-sectional data are unlikely to accurately reflect longitudinal mediation effects due in large part to the fact that retrospective measures tend to be biased. The present study used retrospective measures in asking participants to reflect on the CEO's transformational leadership behavior, as well as their own engagement and interest with the task. Mediational models are intended to be causal, with the independent variable leading to the mediator, which in turn influences the dependent variable. This study did not make use of such an approach for many practical reasons, and therefore the merits of the causal relationships are somewhat suspect.

Conclusions and Recommendations for Future Research

Explanations abound as to how transformational leaders elicit above average performance from their followers. The present study investigated the merits of task engagement as a mediator in this relationship, and found that one's engagement with a task does indeed mediate the link between perceived transformational leadership and task performance. Though these results are intriguing, future research should move out of a controlled environment and into organizations, where longitudinal analyses can be conducted and where real-life constraints exist. Future studies could consider the strength of the relationship between leader and follower, perhaps by measuring the quality of the leader-member exchange relationship (LMX; Dansereau, Graen, & Haga, 1975) and determining which aspects of this relationship result in follower feelings of psychology availability, safety, and meaningfulness. The medium through which leaders delegate the task may have an impact upon their followers' engagement – this concept is becoming increasingly important with the ubiquity of email correspondence in the workplace, and would fit in nicely with the budding stream of literature on e-leadership (Avolio & Kahai,

2003). Additionally, leadership, engagement, and performance could be considered at the group level of analysis to determine if the relationships hold and whether leaders can have a similar impact on a work team. Lastly, engagement could be studied to understand how transformational leaders obtain contextual performance, or work behavior that goes beyond prescribed job roles, from their followers (Borman & Motowidlo, 1993).

The findings from this study have potential implications for expanding previous models of transformational leadership that clarify the role that engagement plays in contributing to the outcomes of leader-follower interactions. For example, the results from this study suggest that one's engagement on a task explains performance beyond his or her inherent interest in the task as well as his or her level of conscientiousness. Future research could determine whether situationally-dependent emotional states such as engagement can have a greater impact upon employee performance than stable personality traits. This differentiation is crucial, as leaders can manipulate their followers' environment in order to elicit engagement and performance on a task, but leaders cannot change their followers' personality. For instance, conscientiousness is widely considered to be one of the strongest personality predictors of job performance (Barrick & Mount, 1991), but it is unfortunately outside of the realm of leader influence. By understanding the power of a situational variable such as engagement, we may better understand how those individuals who are lacking in such desirable personality traits perform in their jobs. Additionally, we could view the interaction between engagement and stable personality traits. Bakker, Demerouti, and ten Brummelhuis (2012) have recently shown a moderating effect of conscientiousness on the relationship between engagement and task and contextual performance. Future research could expand upon this study as well as investigate the moderating merits of other personality traits.

Since Bass's (1985) introduction of transformational leadership into the organizational realm, researchers and business leaders alike have attempted to explain how and why this particular leadership style leads to above average performance. The current study brings engagement into the discussion, and the findings suggest that this explanation may hold some merit. This study also views leadership from a micro-perspective by displaying how leaders elicit follower engagement and performance simply by delegating a task in a manner that is consistent with the transformational leadership style. In closing, leaders are largely responsible for shaping the environment in which their followers work. By creating an environment that is conducive to feelings of engagement, leaders, followers, and organizations all stand to benefit.

TABLES AND FIGURES

Table 1

Ranges of Scores, Means, Standard Deviations, and Reliabilities for All Variables

	Range of Scores				
Variables	Possible	Actual	M	SD	Cronbach's α
Transformational Leadership	19 – 133	43 – 133	95.56	15.00	.91
Engagement	18 – 90	18 – 90	67.34	12.19	.95
Performance	0 - 163	5 - 138	41.90	22.97	N/A
Squared Performance	0 - 12.77	2.24 - 11.75	6.23	1.76	N/A
Conscientiousness	9 - 45	21 - 45	34.27	5.01	.82
Agreeableness	9 - 45	18 - 45	35.06	5.02	.80
Need for Cognition	18 - 162	34 - 160	106.14	19.86	.92
Task Interest	2 - 10	2 - 10	7.14	1.92	.75

Table 2

Intercorrelations between All Study Variables

Variables	1	2	3	4	5	6
1. Transformational Leadership						
2. Engagement	.37**					
3. Performance	.14**	.35**				
4. Conscientiousness	.29**	.27**	.07			
5. Agreeableness	.29**	.20*	-.03	.42**		
6. Need for Cognition	.17**	.34**	.10*	.32**	.09	
7. Task Interest	.29**	.60**	.25**	.16**	.14**	.27**

Note. $N = 466$; *$p < .05$; **$p < .01$

Table 3

Differences between MTurk and Student Samples on Study Variables

	MTurk M (SD)	Students M (SD)	df	t
Anagrams answered	54.52 (23.07)	40.04 (22.39)	466	4.66***
Need for cognition	114.28 (24.51)	104.93 (18.81)	466	3.44**
Conscientiousness	35.68 (4.93)	34.06 (4.99)	466	2.36**
Interest in the Task	8.25 (1.87)	6.97 (1.88)	466	4.93***
Engagement	77.98 (10.22)	65.77 (11.67)	466	7.68***
Perceptions of transformational leadership	100.93 (16.14)	94.77 (14.68)	466	2.99*

Note. * $p < .01$, ** $p < .05$, *** $p < .001$

Table 4

Multiple Regression Analyses for MTurk Sample

Equation	Independent	Dependent	β	se b	F	R2	ΔR2
1	Control variables[a]	Task Performance			0.87	.06	
	Transformational Leadership		.19	.02	1.02	.09	.03
2	Control variables[a]	Task Engagement			20.13**	.59	
	Transformational Leadership		.29**	.06	20.30**	.65	.06**
3	Control variables[a]	Task Performance			0.87	.06	
	Transformational Leadership		.11	.02	1.02	.09	.03
	Task Engagement		.28	.03	1.14	.11	.03

Note. $N = 60$, [a]Control variables included interest in task, agreeableness, need for cognition, and conscientiousness. β = standardized regression coefficients after all variables have been entered into the regression equation, se b = std error, ΔR^2 = change in R^2

** $p < .01$

Table 5

Summary of Univariate Main Effects for MTurk Sample

	Condition					
	Transformational		Non-Transformational			
Dependent Variable	*M*	*SD*	*M*	*SD*	df	*F*
Task Engagement	78.83	10.07	77.13	10.47	1, 54	0.68
Squared Performance	7.53	1.57	6.89	1.59	1, 54	1.92

Note. $N = 60$.

Table 6

Summary of Multiple Regression Analyses for Student Sample

Equation	Independent	Dependent	β	se b	F	R2	ΔR2
1	Control variables[a]	Task Performance			6.27**	.06	
	Transformational Leadership		.06	.01	5.28**	.06	.00
2	Control variables[a]	Task Engagement			56.90**	.36	
	Transformational Leadership		.14**	.03	48.76**	.38	.02**
3	Control variables[a]	Task Performance			6.27**	.06	
	Transformational Leadership		.02	.01	5.28**	.06	.00
	Task Engagement		.29**	.01	8.53**	.11	.05**

Note. $N = 406$, [a]Control variables included interest in task, agreeableness, need for cognition, and conscientiousness. β = standardized regression coefficients after all variables have been entered into the regression equation, se b = std error, ΔR^2 = change in R^2

** $p < .01$

Table 7

Summary of Univariate Main Effects for Student Sample

	Condition					
	Transformational		Non-Transformational			
Dependent Variable	*M*	*SD*	*M*	*SD*	df	*F*
Task Engagement	65.80	11.61	65.75	11.73	1, 400	0.00
Squared Performance	6.07	1.69	6.08	1.74	1, 400	0.19

Note. $N = 406$.

Table 8

Summary of Multiple Regression Analyses for Combined Sample

Equation	Independent	Dependent	β	se b	F	R2	ΔR2
1	Control variables[a]	Task Performance			9.80**	.08	
	Transformational Leadership		.09	.01	8.56**	.09	.01
2	Control variables[a]	Task Engagement			81.30**	.41	
	Transformational Leadership		.17**	.03	71.35**	.44	.02**
3	Control variables[a]	Task Performance			9.80**	.08	
	Transformational Leadership		.04	.01	8.56**	.09	.01
	Task Engagement		.32**	.01	12.92**	.14	.06**

Note. $N = 466$, [a]Control variables included interest in task, agreeableness, need for cognition, and conscientiousness. β = standardized regression coefficients after all variables have been entered into the regression equation, se b = std error, ΔR^2 = change in R^2,
* $p < .05$
** $p < .01$

Table 9

Summary of Univariate Main Effects for Combined Sample

	Condition					
	Transformational		Non-Transformational			
Dependent Variable	*M*	*SD*	*M*	*SD*	df	*F*
Task Engagement	67.55	12.23	67.16	12.16	1, 460	0.00
Squared Performance	6.26	1.75	6.18	1.74	1, 460	0.19

Note. $N = 466$.

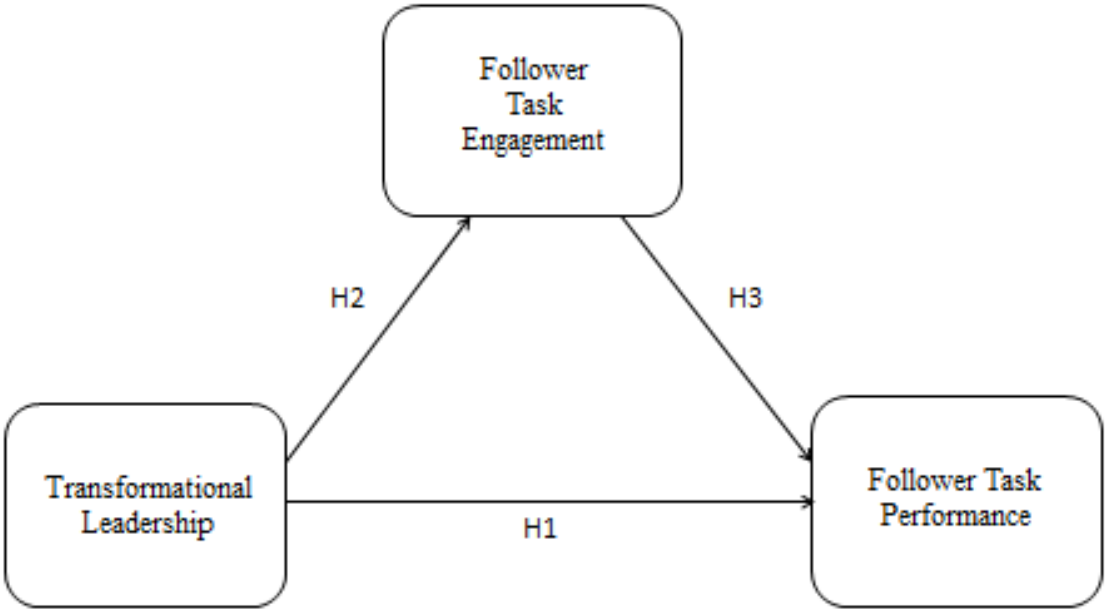

Figure 1. Hypothesized partial mediation model.

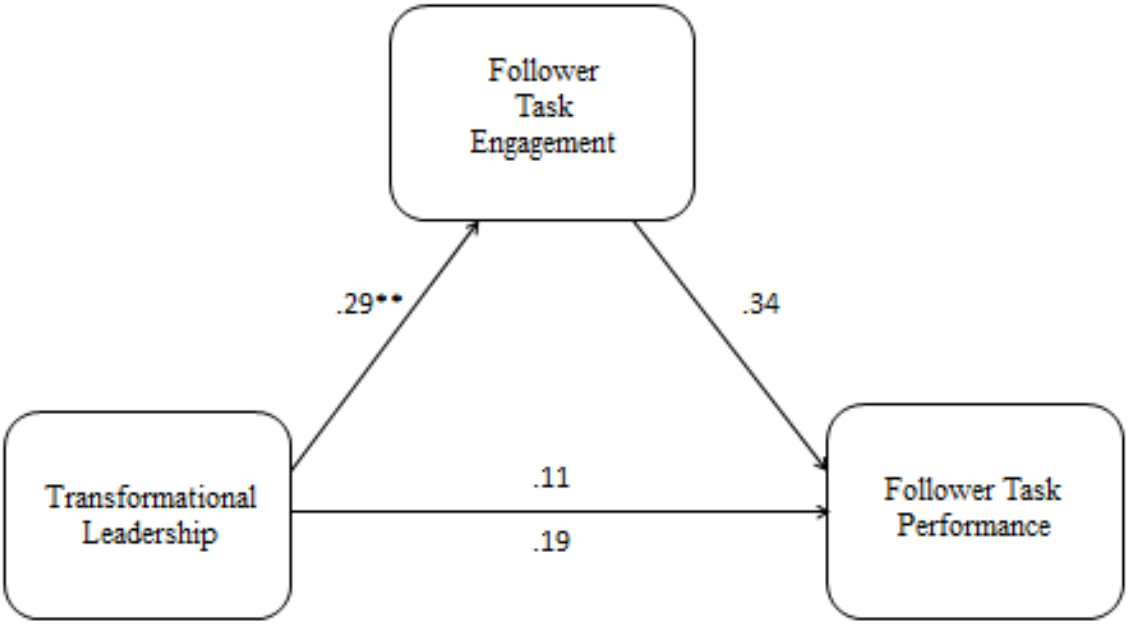

Figure 2. Path diagram of the relationships between transformational leadership, task engagement, and task performance within the MTurk sample (n = 60). Coefficients are standardized regression weights. The coefficient below the path from transformational leadership to follower task performance represents the direct effect without the mediator in the model, and the coefficient above the path represents the effect when the mediator is included in the model.

** $p < .01$

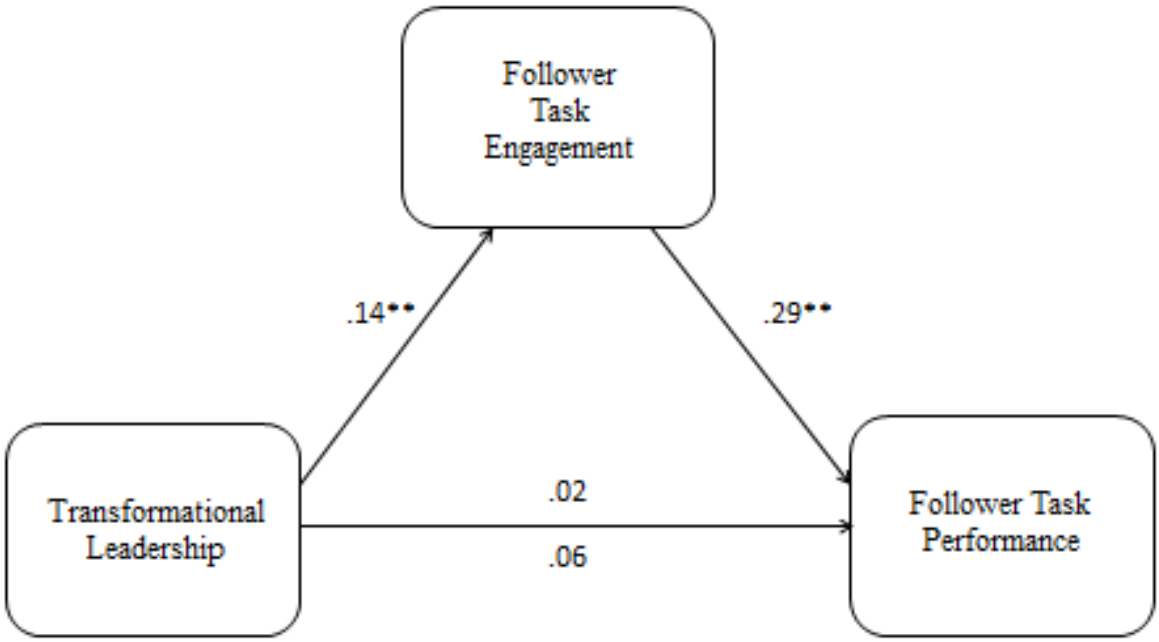

Figure 3. Path diagram of the relationships between transformational leadership, task engagement, and task performance within the student sample (n = 406). Coefficients are standardized regression weights. The coefficient below the path from transformational leadership to follower task performance represents the direct effect without the mediator in the model, and the coefficient above the path represents the effect when the mediator is included in the model.

** $p < .001$

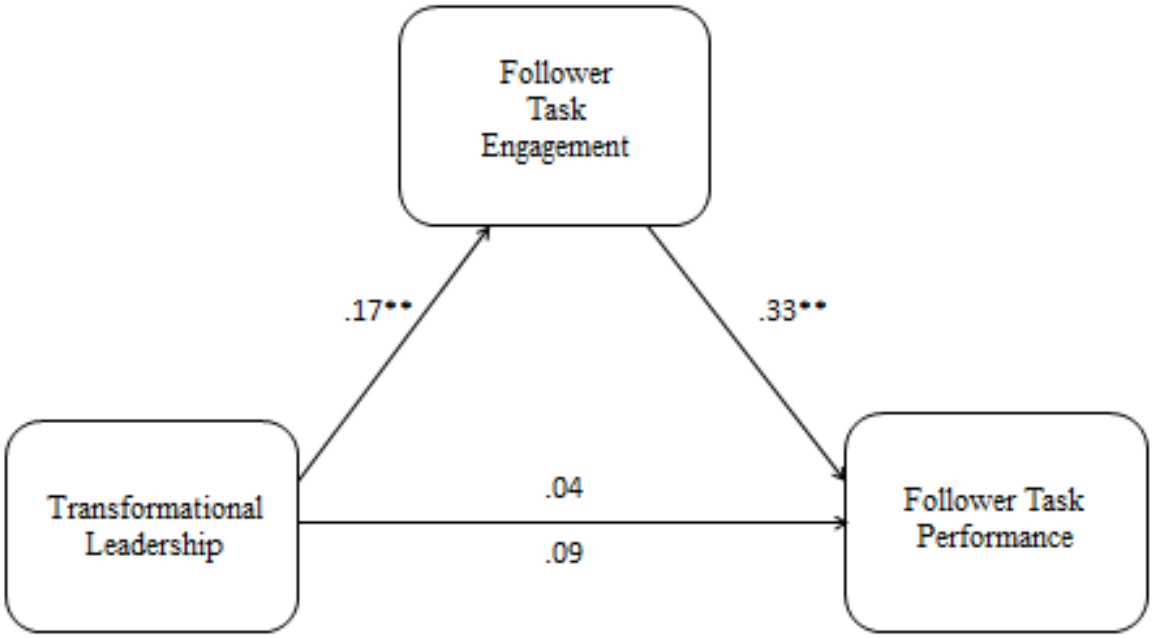

Figure 4. Path diagram of the relationships between transformational leadership, task engagement, and task performance within the entire sample (n = 466). Coefficients are standardized regression weights. The coefficient below the path from transformational leadership to follower task performance represents the direct effect without the mediator in the model, and the coefficient above the path represents the effect when the mediator is included in the model.

** $p < .001$

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APPENDIX A

Please pretend that you are the Vice President of the Human Resources Department for a large packaging plant called A+ Packaging. As the VP of the Human Resources Department, one of your jobs is to oversee the recruitment and selection of new employees. This is a difficult job, as it requires you to stay up to date on the various tests and methods that will best predict which job applicants your company will eventually hire.

A+ Packaging is thinking about including an anagram, or word scramble, exercise in their application packet since research has shown that individuals who score well on this type of task typically perform well in their jobs. The CEO of A+ Packaging, Jonathon Fitzgerald, would like you to do a test-run of the anagram task before A+ Packaging includes it in their job application packet. Please select “next” to view the memo that was sent to you from the CEO regarding this task. Please read the memo carefully, as it includes some important information about the task. The next page is timed so that the "next" button that allows you to continue will show up only after you spend at least 3 minutes reading the memo, so take your time and read carefully.

APPENDIX B

TO: Vice President of Human Resources

FROM: Jonathon Fitzgerald, CEO, A+ Packaging Company

SUBJECT: New Selection Procedure – Trial Run

Greetings! By now you have probably heard that we are implementing a new task to give to our job applicants as part of our selection procedure. Because you have proven to be a model employee as our VP of Human Resources, I would like you to pilot this new task so that we can gather information as to what to expect from our incoming applicants. However, I would first like to explain why your help in piloting this task is so important and how it fits in with my vision of this company as a whole.

At A+ Packaging, we make a pledge that our customers will receive high-quality packaging for all their business needs. From the first day of business, I have prided myself on the fact that A+ strives to give the customer a sense of comfort and satisfaction that cannot be found with any other packaging company. In the early days of the company when I had only a handful of employees, I would often help design and create the packages on our larger orders. One time we had completed an entire order when the customer called and told us that they had reconsidered the package design. They needed us to redesign their entire order right away. We were under a lot of pressure with other orders, so I explained to my employees that A+ is here to design quality packaging and that we will do whatever the customer wants. The customer was amazed that we made the changes so quickly and accurately.

In fact, just a few months ago, a large order of 30,000 packages was due to be shipped out one Friday afternoon. While getting the shipment ready, a supervisor found that several of the packages had errors. Well, the supervisor got together with the employees, and they decided that

they would work into the night and even come in over the weekend to fix the mistakes. These are the kinds of employees that exemplify the dedication that has turned this company into one of the premier packaging companies in the U.S.

When A+ began to grow quickly, I realized that I needed a way to tell each employee that we are in business to produce top-quality products. So, I developed the following company vision of where we are heading:

A+ Packaging Company is in the business of providing both national and international packaging services. We pledge to our customers that every order will be perfect; that their vision for their product will come to life with the help of the packaging that we provide. In order to have high-quality products we are constantly striving to develop new techniques and methods of producing and delivering perfect packaging. We are on the road to providing the highest quality products through continual striving for improvement.

To sum up in a vision statement: “A+ is the complete package!”

This is where you come into play. In order to meet these lofty standards and continue to provide the best services for our customers, we need to hire the best workers. I am a firm believer that “the people make the place,” so in order to accomplish the goals that I have set for this company, it is essential that we get the most qualified, brightest people on board. Our research shows that in order to distinguish which applicants would make the best employees at A+, we must include a list of anagrams to solve. Although this task may seem irrelevant, our research has shown that those who score well on this anagram task tend to display higher job performance and creativity, along with a number of other positive outcomes that we encourage here at A+.

I would like you to complete a list of anagrams that we are thinking about including in our application packet. It is vitally important that you read the directions carefully and that you take the task very seriously – the more accurate information we get regarding this task, the easier it will be to select the best applicants, thus helping this company as a whole. While you should take the task seriously, I encourage you to get creative in solving these anagrams – use a variety of methods that you think will work and see which works best for you. After all, there's more than one way to skin a cat! I'll also note that there are two separate lists of anagrams; the second page is a bit shorter than the first. I completely understand that you're busy doing other great things for this company, so you only need to complete the first page. However, it would be great if you could complete the second page as well, just for informational purposes. The more you can do the better, but I understand if you just want to stop after the first page so you'll have the option to keep going or to stop.

I know that you will do your best to help us with this process, as you have proven time and time again to be one of our best employees. Please feel free to provide me with any feedback you have regarding the task itself – I will take your comments very seriously and I do sincerely encourage your input. We're counting on you to complete this important task and I think you'll do a super job. With your help, I know we can bring in the best employees and fulfill our mission of becoming the #1 packaging company in the world. Just remember: "A+ is the complete package!"

APPENDIX C

TO: Vice President of Human Resources

FROM: Jonathon Fitzgerald, CEO, A+ Packaging Company

SUBJECT: New Selection Procedure – Trial Run

By now you have probably heard that we are implementing a new task to give to our job applicants as part of our selection procedure. Because you are our VP of Human Resources, I would like you to pilot this new task so that we can gather information as to what to expect from our incoming applicants.

Although this task may seem irrelevant, research has shown that those who score well on this anagram task tend to display higher job performance and creativity, along with a number of other positive outcomes. Therefore, I would like you to complete a list of anagrams that we are thinking about including in our application packet. It is vitally important that you read the directions carefully and that you take the task very seriously – the more accurate information we get regarding this task, the easier it will be to select the best applicants, thus helping this company as a whole.

I'll also note that there are two separate lists of anagrams; the second page is a bit shorter than the first. I know you're busy, so you only need to complete the first page. However, it would be great if you could complete the second page as well, just for informational purposes. The more you can do the better, but I understand if you just want to stop after the first page so you'll have the option to keep going or to stop.

Thank you for your time and attention to this matter.

APPENDIX D

You have 15 minutes to come up with as many words as you can for the 34 word scrambles below. After these 15 minutes are up, you will be directed to the next page. Good luck!

1. apres
2. arcte
3. selat
4. netso
5. baset

APPENDIX E

Transformational Leadership Inventory (TLI)
Please respond to the following questions regarding Jonathon Fitzgerald, the CEO of A+ Packaging. Please base your answers off of the memo that he sent to you.
1 – Strongly Disagree
2 – Disagree
3 – Slightly Disagree
4 – Neither Agree nor Disagree
5 – Slightly Agree
6 – Agree
7 – Strongly Agree

The CEO of A+ Packaging seems to…
1. show that he expects a lot from me
2. act without considering my feelings
3. paint an interesting picture of the future
4. lead by "doing," rather than simply by telling
5. show respect for my personal feelings
6. provide a good model for me to follow
7. behave in a manner thoughtful of my personal needs
8. insist on only the best performance
9. treat me without considering my personal feelings (R)
10. have a clear understanding of where the company is going
11. not settle for second best
12. inspire by sharing his plans for the future
13. challenge me to think about problems in new ways
14. be able to get me to commit to his dreams
15. ask questions that prompt me to think
16. stimulate me to rethink the way I would do things
17. always seek new opportunities for the organization
18. lead by example
19. have ideas that challenge me to reexamine some of my basic assumptions about work

Engagement Scale
Please indicate the extent to which you agree with each of the following statement about the word scramble task that you completed earlier.

1 – Strongly Disagree
2 – Disagree
3 – Neither Agree nor Disagree
4 – Agree
5 – Strongly Agree

1. I worked with intensity on this task.
2. I exerted my full effort to this task.
3. I devoted a lot of energy to this task.
4. I tried my hardest to perform well on this task.
5. I strived as hard as I could to complete this task.
6. I exerted a lot of energy on this task.
7. I was enthusiastic about this task.
8. I felt energetic during this task.
9. I was interested in this task.
10. I am proud of my work on this task.
11. I felt positive about this task.
12. I was excited about this task.
13. My mind was focused on this task.
14. I paid a lot of attention to this task.
15. I focused a great deal of attention on this task.
16. I was absorbed by this task.
17. I concentrated on this task.
18. I devoted a lot of attention to this task.

Interest Scale
Please indicate the extent to which you agree with each of the following statements.

1 – Strongly Disagree
2 – Disagree
3 – Neither Agree nor Disagree
4 – Agree
5 – Strongly Agree

1. I found the word scramble task to be very interesting.
2. I am not interested in word games such as the word scramble task.

Need for Cognition Scale
Please indicate the extent to which you agree with each of the following statements.

+4 = very strong agreement
+3 = strong agreement
+2 = moderate agreement
+1 = slight agreement
0 = neither agreement nor disagreement
-1 = slight disagreement
-2 = moderate disagreement

-3 = strong disagreement
-4 = very strong disagreement

1. I would prefer complex to simple problems.
2. I like to have the responsibility of handling a situation that requires a lot of thinking.
3. Thinking is not my idea of fun.
4. I would rather do something that requires little thought than something that is sure to challenge my thinking abilities.
5. I try to anticipate and avoid situations where there is likely a chance I will have to think in depth about something.
6. I find satisfaction in deliberating hard and for long hours.
7. I only think as hard as I have to.
8. I prefer to think about small, daily projects to long-term ones.
9. I like tasks that require little thought once I've learned them.
10. The idea of relying on thought to make my way to the top appeals to me.
11. I really enjoy a task that involves coming up with new solutions to problems.
12. Learning new ways to think doesn't excite me very much.
13. I prefer my life to be filled with puzzles that I must solve.
14. The notion of thinking abstractly is appealing to me.
15. I would prefer a task that is intellectual, difficult, and important to one that is somewhat important but does not require much thought.
16. I feel relief rather than satisfaction after completing a task that required a lot of mental effort.
17. It's enough for me that something gets the job done; I don't care how or why it works.
18. I usually end up deliberating about issues even when they do not affect me personally.

Big Five Inventory

Here are a number of characteristics that may or may not apply to you. Please indicate the extent to which you agree or disagree with each statement.

1 – Strongly Disagree
2 – Disagree
3 – Neither Agree nor Disagree
4 – Agree
5 – Strongly Agree

I see myself as someone who…

1. Tends to find fault with others
2. Does a thorough job
3. Is depressed, blue
4. Is helpful and unselfish with others
5. Can be somewhat careless
6. Is relaxed, handles stress well
14. Tends to be lazy
15. Is emotionally stable, not easily upset
16. Can be cold and aloof
17. Perseveres until the task is finished
18. Can be moody
19. Is considerate and kind to almost everyone

7. Starts quarrels with others
8. Is a reliable worker
9. Can be tense
10. Has a forgiving nature
11. Tends to be disorganized
12. Worries a lot
13. Is generally trusting
20. Does things efficiently
21. Remains calm in tense situations
22. Is sometimes rude to others
23. Makes plans and follows through with them
24. Gets nervous easily
25. Likes to cooperate with others
26. Is easily distracted

Demographic Questionnaire

Demographic Variables - these questions are for informational purposes only and help us describe, in general and aggregate terms, who participated in the study (for example, 40% females, 60% males, average age 42 years, etc.)

The information that you provide here will not be linked to you in any way and cannot be used to identify you. No individual responses are reported - this information is reported in aggregate form only.

1. What is your age as of your last birthday?

2. Gender: Male Female

3. Race (choose the one that best captures your race):

Hispanic or Latino	Asian
White American	Indian or Alaska Native
Black or African-American	Two or more races
Native Hawaiian or other	Pacific Islander

4. What is your current employment status?

Unemployed (but not retired)
Retired
Working part-time (under 40 hours per week)
Working full-time (40 hours or more per week)
Other