Stereotype Threat and Women Leaders' Performance: The Moderating Role of Positive Gender Identity

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ACADEMIC ABSTRACT

The "think leader, think male" phenomenon continues to persist in terms of implicit conceptualizations that people hold about leaders (Schein, 1973; Offermann & Coats, 2018). Men are often perceived as more suitable occupants of leadership roles than women, resulting in women leaders facing stereotype-based expectations. Being in a situation where the stereotype about women applies (i.e., leadership) has been found to be an antecedent to experiencing stereotype threat—the psychological threat of validating a stereotype about the individual's social group, which can have detrimental effects on performance and self-perceptions. This research focuses on how women leaders' positive gender identity (i.e., the favorable regard that a woman holds for her gender identity) may buffer against stereotype threat. We hypothesized that the more positive a woman's gender identity, the better she would cope with identity-threatening experiences in terms of better performance, better perceived performance, and reduced identity separation. To examine the impact of stereotype threat on female participants' performance on a leadership task, 72 female participants were primed with a blatant stereotype threat before completing a managerial in-basket task. Contrary to our predictions, the results revealed that stereotype threat vulnerability did not have a direct negative impact on women's performance on the leadership task, or their perceptions of how well they performed. However, our findings confirmed a significant interaction between positive gender identity and stereotype threat vulnerability on identity separation, revealing that the association between stereotype threat vulnerability and identity separation was weaker at higher levels of positive gender identity. In

other words, positive gender identity buffered against the negative effect of stereotype threat on women's identity separation. The unexpected results and the failure of stereotype threat to evoke vulnerability responses suggest that further investigation of stereotype threat boundary conditions, situational cues, and effect sizes is needed. Limitations and future research directions are discussed.

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GENERAL AUDIENCE ABSTRACT

Stereotype threat, a psychological phenomenon where individuals fear confirming negative stereotypes about their social group, can negatively impact performance and self-perceptions. This study aimed to understand if a positive gender identity (a woman's favorable regard for her gender) could help counter stereotype threat among female leaders.

The results showed that stereotype threat did not directly impact the participants' task performance or their perception of their performance. However, positive gender identity helped buffer against the negative effect of stereotype threat on women's identity separation.

The findings suggest that more research is needed to understand the boundaries, situational cues, and effect sizes of stereotype threat.

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Table of Contents

List of Tables

List of Figures

Introduction

Although significant progress has been made in recent years to increase women's access to managerial and supervisory positions, there is still work to be done to address the underrepresentation of women in leadership roles across political, academic, and business sectors (Hill, Miller, Benson & Handley, 2016). While women represent nearly half of the U.S. labor force at 47%, they only held 40% of managerial positions in 2019 (U.S. Bureau of Labor Statistics 2019), 6% of CEO positions at S&P 500 companies, and a mere 8.1% of all Fortune 500 CEO roles (Catalyst, 2021; Hinchliffe, 2021).

When examining the underrepresentation of women in leadership roles, it is crucial to consider the potential impact of stereotypes and gender roles on women's self-perception and leadership aspirations. Previous explanations for the underrepresentation of women in leadership roles have largely centered on the "pipeline problem" - the notion that there are simply not enough qualified women to fill these positions (Eagly & Karau, 2002). However, given the substantial advancements in women's educational attainment and workforce participation over the past few decades, this explanation has become less plausible. A pertinent factor to consider is the influence of stereotypes associated with women leaders (Eagly & Carli, 2007).
These stereotypes are often rooted in gender role expectations about how men and women should behave, which are closely tied to the concepts of agency and communion. Agency emphasizes assertiveness and competence, while communion focuses on harmony and nurturing (Simon & Hoyt, 2013). According to social role theory (Eagly, 1997), women are expected to be caretakers, while men are expected to take charge. Deviations from these expectations can lead to negative evaluations (Eagly, 1997; Eagly et al., 2000; Heilman, 2001). By shifting the focus of the introduction to the role of stereotype threat and its potential impact on women's self-

perception and leadership aspirations, we can better understand and address the complex factors contributing to women's underrepresentation in leadership roles.

Since men's gender role expectations and the characteristics that describe them are comparable to those used to describe effective leaders, men are perceived as a better "fit" with the leader role than women (Koenig et al., 2011). Several theoretical perspectives support this explanation including Heilman's (1983) Lack of Fit model, Eagly and Karau's (2002) Role Congruity Theory, and Schein's (1975) think manager–think male paradigm. Those theories support the notion that women do not fit with the leadership role, and that prejudice against female leaders stems from the mismatch between the agentic stereotype associated with leadership and the communal stereotype associated with women. In other words, female gender stereotypes are generally incongruent with the leadership role (Eagly & Karau, 2002). As such, perceived lack of fit with the leadership role makes it more difficult for women to attain leadership roles, leads to biased evaluations of women leaders, and makes it more difficult for them to be recognized as effective leaders (Eagly & Karau, 2002).

Gender stereotypes can also negatively influence the *psychological experience* of women, who can often feel marginalized and anxious about confirming gender stereotypes in many professional contexts (Cortland & Kinias, 2019). They can have injurious effects on women's self-perceptions, motivation, engagement, well-being, and behavior in leadership roles (Hoyt & Blascovich, 2007; Hoyt, Johnson, Murphy, & Skinnell, Hoyt & Blascovich., 2010; Hoyt & Simon, 2011). For instance, Hoyt and Simon (2011) found that when gender stereotypes were activated (due to exposure to stereotypical role models) women reported lower perceived performance and leadership aspirations than those who were exposed to stereotype-disconfirming role models. These negative self-perceptions can also lead to reduced participation

in the domain in which women are negatively stereotyped (Hoyt & Blascovich, 2007), as well as reduced intention for future participation (Davies, Spencer, & Steele, 2005).

Perceptions of incongruity between leadership and gender roles can also affect women's self-evaluations. For example, a meta-analysis revealed that although women were evaluated by others as more effective than men in middle and senior management roles, when solely examining self-ratings, men evaluated themselves as considerably more effective than women evaluated themselves (Paustian-Underdahl, Walker, and Woehr, 2014). This perspective has been highlighted by Steele and colleagues (Steele & Aronson, 1995), who asserted how people are likely to respond negatively when they are the target of a stereotype. In stereotype-relevant situations where individuals face performance expectations, they are threatened by the possibility of validating a stereotype regarding their own social group (Steele & Aronson, 1995). This is referred to as "*stereotype threat*", and it can affect any stigmatized group.

In addition to implications for self-perceptions, experiencing stereotype threat can also negatively affect women's performance in leadership-relevant situations, such as negotiation tasks (Kray, Thompson, & Galinsky, 2001) and managerial and leadership activities (Bergeron, Block, & Echtenkamp, 2006; Hoyt & Blascovich, 2010). In their review, Schmader, Johns, & Forbes (2008) highlight how performance is impaired due to physiological stress, enhanced performance monitoring, and active suppression of negative thoughts. It can also elicit feelings of "belonging uncertainty", thereby diminishing women's confidence and adoption of a leader identity (Hoyt & Murphy, 2016; Cohen & Garcia, 2008). This study will rely on stereotype threat theory (Steele, 1997; Steele & Aronson, 1995) to understand its negative effects on women's performance in the leadership domain.

A number of recent studies have investigated the buffering effect of individual-level variables on the relation between stereotype threat and performance, and variables that help reduce negative threat reactions. Those individual-level variables are often related to the extent to which women perceive themselves as having the ability to be effective leaders, or being able to cultivate leadership skills, including leadership self-efficacy, gender identification, and mindsets about the malleability of leadership (Hoyt & Murphy 2016). For example, Burnette, Pollack & Hoyt (2010) found that women with low levels of leadership self-efficacy and who believed leadership ability to be fixed (rather than malleable) reported lower self-evaluation after a stereotype threat (Burnette et al., 2010). The positive evaluation of one's social identity has also been highlighted in social psychology research as a buffer against perceived discrimination (e.g., Corning, 2002), and has been found to be associated with positive organizational outcomes (Dutton, Roberts, & Bednar., 2010). Social identity evaluation identifies subjective feelings of self-regard as a member of a social group, i.e., social identity, which plays a significant role in enhancing a sense of self-worth (Dutton et al., 2010; Gecas, 1982). Based on that premise, this study investigates *positive gender identity* as a potential factor that can help buffer women against negative stereotype threat effects on their performance.

Thus, in the current research, I investigated whether the positivity of a woman's gender identity could have a buffering effect against stereotype threat, and its negative effects on her performance on a leadership task. Specifically, it was predicted that under conditions designed to evoke stereotype threat, women with positive gender identity would perform better than women with negative gender identity on a leadership task. Furthermore, it was predicted that women with positive gender identity would rate their performance more favorably (higher perceived performance).

Literature Review

Gender and Leadership: Lack of Fit

Gender stereotypes are socially shared general expectations about how men and women do and should behave (Burgess & Borgida, 1999). Gender stereotypes include both descriptive norms of gender roles (i.e., describing women's characteristics and the consequent ascription of female-stereotypical qualities to them) and prescriptive norms (i.e. beliefs about how women ought to behave (Eagly & Karau, 2002; Hoyt & Murphy, 2016). According to Eagly's (1987) social role theory, gender stereotypes develop from the gendered division of labor that characterizes a society, which gives men and women differentiated skills and particular roles that require particular behaviors. Historically, men had greater participation in paid positions of higher status, while women were assigned nurturing domestic roles. This explains why the communal role characterized by attributes such as nurturance and emotional expressiveness is associated with women, while the agentic role characterized by attributes such as assertiveness and independence are associated with men (Eagly, 1987). In addition, social role theory (Eagly, 1987) suggests that when an individual behaves in a way that is inconsistent with their gender expectations, it results in negative evaluations. Thus, when men exhibit agentic behavior, it should result in positive evaluations whereas when women exhibit that same behavior it may result in negative evaluations.

Similar to gender stereotypes, people have shared expectations about how a leader does and should behave. These expectations are often referred to as *leader prototypes* (Lord & Maher, 1991). According to Leader Categorization Theory, also referred to as Implicit Leadership Theories (ILTs), people develop cognitive categories, or prototypes, for how leaders should behave, and they evaluate actual and potential leaders against these expectations (Forsyth & Nye,

2008; Lord & Maher, 1991). Perceivers believe that primarily agentic qualities (e.g., assertive, competitive, strength, masculinity) are required to succeed as a leader (Eagly & Carli, 2007; Epitropaki & Martin, 2004). Also, a robust effect of the masculinity of the cultural stereotype of leadership was established in a meta-analysis (Koenig, Eagly, Mitchell & Ristikari, 2011). Consequently, there is a perceived "fit" between people's expectations for men and their expectations for leaders (Eagly & Karau, 2002). This creates a stereotype-based mismatch between women's attributes, skills and aspirations and the ones perceived as necessary for effective leadership (Heilman 1983; Hoyt & Simon, 2017). Eagly & Karau (2002) also highlight how stereotypes can result in prejudice against female leaders; a theory referred to as "role congruity theory". They argued that prejudice against female leaders stems from the perceived *incongruity* between characteristics of women and the requirements of leader roles, and the dissimilarity of the female gender role to the expectations that perceivers typically have about leaders. More specifically, gender role stereotypes associate women with communal traits, such as nurturance and caregiving, while men are associated with agentic traits that emphasize dominance, assertiveness and confidence (Eagly & Carli, 2007). Hence, the bias against female leaders stems from the perceived mismatch (Heilman, 1983) between the assertive (i.e., agentic) traits typically associated with leaders and the nurturing (i.e., communal) characteristics traditionally attributed to women. The consequences of this cultural mismatch, or lack of fit, between gender roles and the perceived demands of the leadership role involve two types of disadvantages: perceiving women as possessing less leadership ability than men, (and therefore as less qualified than men for leadership), and evaluating behavior that fulfills a leadership role less favorably when it is enacted by a woman (Eagly & Karau, 2002). The first disadvantage explains the less favorable evaluation of women's *potential* for leadership than men. It is

consistent with leadership categorization theory, which suggests that leaders who exhibit salient characteristics and behaviors that are congruent with leadership prototypes are perceived more positively than leaders whose behaviors and characteristics do not (Lord, Foti, & De Vader, 1984; Smith & Foti, 1998). Studies show that men were preferred for positions classified as male sex-typed, while women were favored for roles considered female sex-typed. This is an indication of bias against women in traditionally masculine sex-typed roles, such as leadership (Eagly & Carli, 2003).

The second disadvantage highlighted in the role incongruity theory emphasizes that women who exhibit agentic traits often received more negative evaluations than men because they are seen to deviate from their gender roles. In their meta-analysis, Eagly, Makhijani & Klonsky (1992) revealed that people tend to rate female leaders somewhat less favorably than their male counterparts, albeit the tendency was weak. However, their results suggest that women leaders were more likely to be devalued relative to their male counterparts when their evaluators were men, when women are leading in male-dominated roles, or when their leadership style was stereotypically masculine (e.g., autocratic leadership). Similarly, studies found that people show prejudice against female candidates for a leadership position, especially when applying in a domain incongruent with the female gender role (Garcia-Retamero, & López-Zafra, 2006). Rutherford (2001) also found that women were likely to receive negative evaluations when they displayed leadership behaviors that are predominantly ascribed to men (i.e., task oriented, directive or autocratic behaviors). Research also shows that women tend to be less liked than their male counterparts when they are evaluated as effective in roles traditionally associated with men (Eagly, 2007; Heilman, 2001). This means that whether women exhibit agentic or communal traits, both situations negatively affect their likelihood to emerge as leaders; an issue

referred to as a "double bind". Johnson, Murphy, Zewdie & Reichard (2008) found indications of both descriptive and prescriptive biases related to gender when rating leaders. For example, female leaders who lacked sensitivity or male leaders who lacked strength received negative evaluations. Their study concluded that when all else is equal, a man is more likely to be perceived as an effective leader than a woman. Accordingly, role congruity theory contends that such lack of fit with the leadership role makes it more difficult for women to attain leadership roles, leads to biased evaluations of women leaders, and makes it more difficult for them to be recognized as effective leaders (Eagly & Karau, 2002).

There are some moderators that determine the extent of prejudice female leaders face. For example, Carli (2001) suggests that women who couple their agentic behavior (e.g. dominance) with communal behaviors (e.g. warmth) can be perceived as more influential than agentic women. Similarly, Johnson and colleagues (2008) concluded that to be perceived as effective, female leaders must display both masculine and feminine leadership attributes, whereas male leaders only need to exhibit masculine leadership attributes. This poses yet another double standard that female leaders have to face, having to display both agentic and communal traits, while their male counterparts who exhibit agency alone are rewarded both socially and economically (Rudman & Phelan, 2008).

Another potential moderator suggested by Phelan and Rudman (2010) is the evaluator's gender. They suggest that being male is often associated with perceived managerial effectiveness not only in the minds of men, but often in the minds of women, as they both share the, 'Think Manager, think Male' stereotype (Schein, 1975). For example, Garcia-Retamero, & López-Zafra, (2006) found that women and older participants were more biased against female leaders compared to men and younger participants. Similarly, Rudman and Kilianski (2000) found that

gender authority beliefs influenced conscious and subconscious biases against female leaders, and that even though women exhibited less explicit bias than men, their implicit bias was equally negative (Rudman & Kilianski, 2000). However, whether women devalue women leaders as much as men is still a grey area of mixed findings, where some research shows that men are significantly more likely to show prejudice against women leaders (e.g., Eagly & Karau, 2002; Jogulu & Wood, 2008).

Stereotype Threat

Stereotype threat is defined as the psychological threat of confirming a negative stereotype about one's group, and the fear that their behaviors could be judged on the basis of negative stereotypes about their social group (Steele, 1997). Female leaders, as well most members of stigmatized social groups, are often aware of the stereotypes associated with them, and they are aware that others potentially interact with them based on those stereotypes (Hoyt & Murphy, 2016). Such awareness is likely to cause a psychological burden, resulting in a cognitive, affective and behavioral depletion due to stereotype threat (Dwivedi, Misangyi & Joshi, 2021; Schmader, Johns, and Forbes, 2008). The negative impact of stereotype threat on performance could potentially be attributed to a number of mediating factors, including arousal levels, self-consciousness, over-cautiousness, and increasing task- relevant apprehensions (Steele & Aronson, 1995), which can lead to "processing inefficiency" through depleted executive control (Schmader et al., 2008).

Stereotype Threat Activation

Stereotype Activation Theory implies that making relevant stereotypes cognitively accessible in a particular situation, or the exposure of stigmatized individuals to cues that signal social identity contingencies, can influence attitudes and behaviors (Marx, Brown, & Steele,

1999; Wheeler & Petty, 2001). Stereotype threat activation cues can be blatant, or subtle (Kray et al.; Fujita, & Gray, 2002; Aronson et al., 1999). Blatant threats emphasize a social group's inferiority in a particular evaluative situation, or the comparison social group's superiority (Nguyen & Ryan, 2008) They often involve explicit exposure to stereotypical information, such as marking participants' race before a test or giving them stereotype-consistent facts (Aronson et al. 1999; Cadinu et al. 2003). For example, Hoyt, Johnson, Murphy and Skinnell (2010) found that that when women leaders were exposed to evidence about the gender disparity in upper-level leadership positions before leading a mixed-gender group, their self-efficacy, perceived leadership performance, and self-esteem were adversely affected. Blatant stereotypes are also often made salient through the media. For example, women who are exposed to gender stereotypic commercials experienced negative threat responses pertaining to leadership aspirations (Davies et al., 2002; Davies et al., 2005). Similarly, exposure to media images, which often portray women and men engaging in stereotypical gender role activities, can further strengthen gender stereotypes and can have significant effects on how women perceive themselves (Simon & Hoyt, 2013).

Subtle threats are more "in the air", such as asking women to perform in a domain where there is a well-established stereotype like math or leadership (Spencer, Steele, & Quinn, 1999; Hoyt & Murphy, 2016). In one of their studies, Steele & Aronson (1995) found that even when a GRE test was labeled as "non diagnostic" of intellectual abilities, asking subjects to indicate race was enough to prime the stereotype and make it salient to Black students, and consequently hindering their performance on the test. Solo or minority status in group contexts may also elicit stereotype threat for women (e.g., Murphy, Steele & Gross, 2007), such as attempting leadership in teams or organizations where women are the minority, or by being reminded of the scarcity of

women within an organization or a domain (von Hippel, Walsh, & Zouroudis, 2011). Murphy et al.'s (2007) cue hypothesis indicates that women face a gender identity threat in a gender-unbalanced setting. Their results show that women primed with a gender-unbalanced manipulation reported a lower sense of belonging and less desire to participate in a STEM conference. An even more extreme notion was proposed by Inzlicht & Ben-Zeev (2000), where they found that the mere presence of males, even when women are in the majority of a mixed-sex group, created a threatening intellectual environment for women, and lead to significant stereotype threat effects on their intellectual performance on a math test. Another practice that can trigger stereotype threat in organizations was theorized by Dwivedi, Misangyi, and Joshi (2021), where they found that, although well-intentioned, leadership endorsements and succession announcements of incoming female CEOs may violate prescriptive gender stereotypes associated with women, thereby eliciting social disapproval for female CEOs by stakeholders.

Some researchers suggest that subtle stereotype threat activation can lead to more stereotype-consistent behavior, while blatant activation can lead to reacting against the stereotype. Kray et al. (2001) argue that blatant stereotype threat activation might be perceived by stigmatized individuals as a limit to their freedom and ability to perform, thus provoking behaviors that are inconsistent with the stereotype to "prove it wrong". In support of this theory, in their meta-analysis Nguyen & Ryan (2008) found that for women, subtle threat-activating cues had a larger effect on performance deficits, compared to blatant cues.

However, the main hypothesized outcome of stereotype threat is *performance interference*, or the prediction that members of the stereotyped group will perform worse on an evaluative task in a context where stereotype threat is salient, than they would when it is not

(Ngyuen & Ryan, 2008). This performance interference has been well documented in the literature, demonstrating the power of stereotypes on the performance of numerous stigmatized social groups. The majority of stereotype threat research over the past two decades has focused on academic contexts, namely academic test performance of women and racial minorities. Generally, stereotype threat has been found to negatively affect women's performance and self-perceptions in STEM, given the underrepresentation of women in these domains (Murphy, Steele & Gross, 2007).

For example, a number of studies demonstrate its association with performance deficits for female students on math tests (e.g Spencer, Steele, & Quinn, 1999; Brown & Josephs, 1999; Inzlicht & Ben-Zeev, 2000; Schmader & Johns, 2003). A study that investigated stereotype threat effects on double-minority status found that Latino women's math and spatial ability performance was negatively affected by a gender-based and an ethnicity-based stereotype-threat effect (Gonzales, Blanton, & Williams, 2002). Women were also found to perform worse than men on an engineering test when stereotype threat was primed. When the stereotype threat was reduced (by characterizing the test as not producing gender differences), they performed as well as men (Bell, Spencer, Iserman & Logel, 2003). Similar performance-impairing effects have been found among other stereotyped groups such as children of low socioeconomic status (Croizet & Claire, 1998), and Black students (Steele & Aronson, 1995) as well as Hispanics (Gonzales, Blanton, & Williams, 2002) on standardized tests. In those studies, when the relevancy of the stereotypes was removed by deemphasizing the diagnostic quality of the test, Black students performed as well as White students (controlling for initial differences in scores on the SAT). Even White men's performance was found to be affected by stereotype threat when undergoing a test of ''natural athletic ability'' (Stone, Lynch, Sjomeling, & Darley, 1999), and a

test of a feminine ability called social sensitivity (Koenig & Eagly, 2005). In managerial domains, stereotype threat can result in women's performance decrements on negotiation tasks (Kray et al., 2001), managerial tasks (Bergeron et al., 2006), and leadership tasks (Hoyt & Blascovich, 2010).

Beyond Performance: Other Responses to Stereotype Threat

Although there is an emphasis on performance interference in the stereotype threat literature, there are other potential psychological and behavioral consequences of stereotype threat. Recent research on *stereotype threat spillover* proposes that the negative consequences of stereotype threat might extend further than was previously thought. (Inzlicht & Kang, 2010; Inzlicht et al., 2011; Casad & Bryant, 2016). Inzlicht & Kang (2010) describe stereotype threat spillover as a situational predicament whereby stigmatized group members are left in a depleted volitional state caused by having to cope with the negative stereotype. They suggest that stereotype threat can have lingering effects on behavior caused by the stress of working against the stereotype threat even after leaving the threatening environment in domains unrelated to the stereotype, especially in tasks requiring effortful self-control (Inzlicht & Kang, 2010). For example, stereotype threat was found to negatively affect women's unhealthy eating behaviors, obesity (Inzlicht & Kang, 2010), decision making (Carr & Steele, 2009; Inzlicht & Kang, 2010) and self-regulation (Inzlicht et al., 2006) accounted for by loss of self-control.

Stereotype threat can also affect career and leadership aspirations. For example, exposure to gender-stereotypic commercials was found to undermine women's aspirations on a leadership task (Davies, Spencer, & Steele, 2005). Stereotype threat was also found to affect women's financial aspirations in negotiation tasks (Kray et al., 2002) and their entrepreneurial intentions when masculine traits were subtly associated with the leadership task (Gupta, Turban & Bhawe,

2008). In their study, von Hippel and colleagues (2011) found that female employees exposed to stereotype threat were less confident in their abilities to reach career goals, had negative workplace attitudes, and increased turnover intentions (von Hippel, Issa, & Stokes, 2011). Another defensive mechanism proposed by Steele & Aronson (1995) is *self-handicapping,* which serves to provide an alternate explanation for poor performance to protect self-esteem (Steele & Aronson, 1995; Keller, 2002). In their review, Casad & Bryant (2016) identified a number of negative consequences of stereotype threat that are relevant to the workplace, including reduced openness to and utilization of critical feedback (Roberson et al., 2003; Cohen & Steele, 2002).

Other than reduced performance, motivation, and belongingness, Steele (1997) hypothesized that stereotype threat responses can also include making the stereotype less self-relevant, by separating their sense of self-worth from their performance in that domain. He proposed that chronic experiences of stereotype threat can reduce domain identification via a process of disengagement from the stereotyped domain over time (Steele, 1997; Major et al., 1998). Disengagement serves as a psychological defense mechanism to protect self-esteem against chronic threat by detaching from a particular domain and can reduce job satisfaction and commitment. Although situational disengagement may help facilitate motivation and persistence, chronic disengagement can ultimately hinder career and performance goals (Kray & Shirako, 2011; Major et al., 1998), as well as motivation and persistence (Nussbaum & Steele, 2007). Similar to disengagement is identity disidentification, whereby female leaders may choose to distance themselves from their female identity altogether, or disidentify from selective feminine traits that are linked to the stereotypes. This is also referred to as identity bifurcation (Pronin, Steele, & Ross, 2004). For example, Pronin, Steele & Rosee (2004) found that women who

strongly identified with mathematics responded to stereotype threat by disavowing feminine characteristics strongly associated with the relevant stereotypes (e.g., flirtatious, emotional).

Stereotype threat continues to affect women in organizations and executive positions, with evidence showing that it negatively impacts women's social and psychological experiences (Dwivedi et al., 2021) entrepreneurial aspirations (BarNir, 2021), and decision making (Villanueva-Moya & Exposito, 2021). Despite recent debates on the magnitude of stereotype threat, and claims of publication bias, there is still clear evidence (as well as theoretical reasons) for moderator effects on the underperformance of stereotyped groups when under threat (Ryan & Nguyen, 2017; Zigerell, 2017).

Identity Separation

Another strategy that threatened individuals may use when exposed to stereotype threat is separating their threatened identity from their performance-based, or professional, identity (Settles, 2004). That is, because they perceive their gender identity and their leader identity as conflicting, or incongruent. For example, a number of studies by von Hippel and colleagues (2011, 2015) show that female leaders who experienced stereotype threat were likely to experience identity separation; that is, they separated their feminine identities and professional (i.e., more masculine) identity. Despite being an ego-protective strategy, identity separation can cause adverse mental health issues such as greater depression and lower life satisfaction (Settles, 2004). Moreover, as a form of disengagement from work, identity separation is associated with a range of negative job attitudes (Saks, 2006), reduced job satisfaction, and increased turnover intentions (von Hippel et al., 2011). However, Karelaia & Guillen (2014) found that positive gender identity reduced women leaders' identity conflict. Extending their research, this study posits that the more positive regard women leaders have for their gender and leader identities, the

less likely they are to suppress any of the two, and the more likely they are to ‘‘integrate” both rather than separate them. Eventually, this integrative process could potentially allow women leaders to cognitively reframe their leader and gender identities to be compatible (Karelaia & Guillen, 2014; Rothbard & Ramarajan, 2009). Therefore, it is hypothesized that positive gender identity may have a moderating role on women leaders’ engagement in identity separation after experiences of stereotype threat.

Vulnerability vs. Reactance Responses to Stereotype Threat

Despite the abundant evidence of Steele's (1997) theory of stereotype vulnerability responses, i.e., its negative consequences on task performance, more recent evidence proposes that stereotype threat activation can sometimes result in counter-stereotypical behaviors or can even enhance performance rather than hinder it; that is, they exhibit stereotype reactance (Hoyt & Murphy, 2016). Psychological reactance theory (Brehm, 1966) posits that when an individual is exposed to a threat to his/her freedom, they reassert their sense of freedom by reacting against the threat. Based on that line of reasoning, evidence suggests that when women leaders are confronted with a stereotype that questions their leadership ability, they may regard these biased expectations as a threat (Kray et al., 2001; Hoyt & Blascovich, 2010). Thus, they may react against the threat by demonstrating counter-stereotypical behavior.

Evidence suggests that the manner in which the stereotype is activated may influence people’s responses to the threat. Kray and colleagues (2001) have found that when stereotype threat was activated implicitly (subtle threat), women were less effective negotiators than men (Kray et al., 2001; Kray, Galinsky & Thompson, 2002). However, when the stereotype was explicitly activated (blatant threat), women exhibited stereotype reactance; meaning they behaved in a manner inconsistent with the stereotype. This resulted in women opening

negotiations with more extreme offers, which lead women to outperform men (Krayet al., 2002). This contradicts previous research demonstrating that people tend to exhibit stereotype-consistent behavior when experiencing stereotype threat (e.g., Steele & Aronson, 1995; Levy, 1996; Pittinsky, Shih, & Ambady, 1999). The performance enhancing response to blatant stereotype threat activation has also been reported by women in entrepreneurship (Gupta, Turban, & Bhawe, 2008). Their results show that when entrepreneurship was explicitly presented as linked to masculine characteristics, women reported greater entrepreneurial intentions compared with when it was implicitly linked with the same characteristics (Gupta, Turban & Bhawe, 2008). Other studies found that, in a leadership context, the effects of explicit stereotype threat activation on women were moderated by leadership self-efficacy, such that high efficacy leaders, as opposed to low efficacy, exhibited responses consistent with reactance processes such as higher identification with the leadership domain (Hoyt, 2005; Hoyt & Blascovich; 2007), higher perceived performance, higher rated performance, and higher well-being (Hoyt & Blascovich, 2007; 2010). This suggests that women who are highly confident in their leadership abilities (i.e., high leadership self-efficacy) are more likely to blatant stereotype threat activation with positive "I'll show you" responses (Hoyt & Murphy, 2016). By the same token, in the current research the positivity of women's regard towards their gender identity is predicted to moderate women's responses to blatant stereotype threat activation in the leadership context, such that women with a positive gender identity will demonstrate reactance responses, while women with a negative gender identity will demonstrate vulnerability responses.

von Hippel and colleagues (2011) argue that stereotype reactance can also occur when the outcome is more malleable/adaptable, such as communication skills as opposed to math abilities. The argument is that if individuals possess sufficient resources to adjust their behavior,

they might react against a stereotype. In their study, they found that women who experienced stereotype threat regarding their leadership abilities reacted against the stereotype by adopting a more masculine communication style (von Hippel, Wiryakusuma, Bowden & Socket, 2011). However, consistent with the "double-bind" issue highlighted earlier, when women under stereotype threat adopt a more masculine communication style, they are rated as less warm and likeable (von Hippel et al., 2011). Therefore, stereotype reactance, albeit potentially advantageous to performance, but may come with a social cost (Hoyt & Murphy, 2016).

Moderators to Stereotype Threat

Despite the large body of research supporting performance interference of stereotype threat, some researchers have found conflicting results (e.g., Oswald & Harvey, 2000; Stricker & Ward, 2004). For example, an experiment by Stricker and Ward (2004) that activated stereotype threat by inquiring about ethnicity and gender of students found that the stereotype threat activation did not have any effects on the performance of Black or female students on standardized tests. Such mixed findings suggest that there are moderating effects for stereotype threat. For example, a number of studies suggest that domain identification; which refers to the identification of the individual with the relevant domain of achievement, can make the individual more vulnerable to stereotype threat (e.g., Aronson et al., 1999; Leyens, Désert, Croizet, & Darcis, 2000; Stone, 2002). Similarly, in their meta-analysis Nguyen & Ryan (2008) found that women with low identification with the math domain were the least vulnerable to stereotype threat compared to those with moderate and high identification. This is because the extent of the negative effects of stereotype threat is contingent upon the extent to which an individual's self-regard relies on the outcome (Steele et al., 2002). Test difficulty is another potential moderator of stereotype threat effects for ethnic minority test takers, as well as for women albeit to a less

certain extent, where more challenging tests predict underperformance beyond women's and ethnic minorities' true abilities (Nguyen & Ryan, 2008).

Other individual differences have been found to buffer against the effect of stereotype threat or make some women less susceptible to stereotype threat. For example, Schmader (2002) investigated how gender identification impacts the effect of stereotype threat on women's math test performance. Results show that when primed with stereotype threat, women with high levels of gender identification reported lower performance than male participants, while women with low levels of gender identification had equivalent performance to male participants. Similarly, Leicht and colleagues (2017) found that when counter-stereotypes are salient, women with high gender-identification and strong identification with feminism had higher leadership aspirations than those who were not. Moreover, research shows that a masculine gender role identity moderated the relation between sex-typing of a job and women's work performance (Bergeron et al., 2006). Brown and Pinel (2003) proposed stigma consciousness as another moderator for the impact of gender stereotypes on women's performance on a math test. Their results show that women who were more conscious of the stereotype/stigma associated with their gender performed worse than women who were less conscious of being stigmatized.

Research shows that individuals with Internal Locus of Control are at greater risk for performance deficits when exposed to stereotype threat (Cadinu, Maass, Lombardo, and Frigerio, 2006). On the other hand, research shows that self-monitoring moderated the effects of stereotype threat activation on performance, where female high self-monitors performed better on a math test in the face of a minority-status manipulation than low-self monitors (Inzlicht, Aronson, Good, & Mckay, 2017). Leadership self-efficacy is another individual-difference that is seen to reduce women's susceptibility to stereotype threat. For example, Hoyt & Blascovich

(2007) found that when stereotype threat was activated, women with high leadership efficacy performed better on a leadership task and demonstrated greater domain identification and increased well-being relative to those with low leadership self-efficacy (Hoyt & Blascovich, 2007). In the current research, the focus is on individual differences in the positivity of one's gender identity as a relevant construct for understanding who overcomes stereotype threat.

Social Identity Theory & Gender Identity

In Social Identity Theory (SIT), there are two main aspects to the self: personal identity and social (or collective) identity (Tajfel, 1982; Tajfel & Turner, 1986; Luhtanen & Crocker, 1992). A personal identity is the set of meanings that are uniquely tied to the self as an individual and is relatively independent of group memberships (Stets & Burke, 2000; Sedikides & Brewer, 2001). A social identity is defined as "that part of an individual's self-concept which derives from his/her knowledge of his/her membership of a social group together with the value and emotional significance attached to that membership" (Tajfel, 1978 p. 63). As individuals take on various social roles, they *categorize* themselves as belonging to various social groups. Therefore, their self- concept may include various social identities such as gender, religion, or social class categories (Tajfel, 1982; Crocker & Luhtanen, 1994). Through *social comparison,* individuals then evaluate the groups they feel they belong to (in-groups) and groups they do not consider themselves a member of (out-groups) and compare their value. Through this process, individuals attempt to make their in-group distinct from the out-groups, and strive to make that difference favorable (i.e. positive). This is referred to as *positive distinctiveness*. A positive social identity is then rewarded with positive self-esteem, while a negative social identity may be followed by protective cognitive strategies to create a more positive image for the in-group.

Tajfel and colleagues (e.g, Tajfel & Turner, 1986) note that for social groups to contribute to the individuals' self-concepts, they must have an emotional significance to the individuals. Therefore, social identity is characterized by a combination of self-categorization and its evaluation, and an identification with the social group, all of which influences an individual's self-esteem (Trepte & Loy, 2017). In this study, we focus on one social identity: being a woman. Using Tajfel's (1982) definition of social identity, gender identity then refers to the aspect of an individual's self-concept that is shared with others who identify with the same gender. It reflects the self-categorization as female or male based on cultural definitions, and the significance of this classification for one's self-concept (Wood & Eagly, 2015; Zhen, Kark & Meister, 2018). This differs from sex identity, which is indicated by an individual's biological attributes (Karelaia & Guillen, 2014).

Positive Gender Identity

According to social identity theory, an individual inherently strives to preserve a positive social identity, and consequently a positive self-image (Lutanen & Crocker, 1992; Gecas 1982). By "conceptualizing social identities as varying on a dimension of positive to negative evaluation or favorability" (Ashmore, Deaux & McLaughlin-Volpe, 2004, p. 86), evaluation refers to the positive or negative attitude that a person has towards his/her social group. Thus, Karelaia & Guillen (2014, p. 205) describe the positivity of one's social identity in terms of how "positive or negative is an individual's affective and evaluative judgment of their social group". This definition infers that the more positive evaluation a woman holds for her social group, the more positive her gender identity, and the more self-esteem she derives from it (Karelaia & Guillen, 2014).

Evaluation of one's social identity is conceptually independent of its emotional significance to the person (Ashmore et al., 2004). Thus, a woman might acknowledge her gender identity as being centrally important to the definition of self without putting an entirely positive face on the identity, and vice versa (Ashmore et al., 2004). It is also important to distinguish between two sources of evaluations of a given social identity. Especially for negatively stereotyped individuals, one's own evaluation of a social identity is not always positively correlated with evaluations by others (e.g., Crocker, Luhtanen, Blaine, & Broadnax, 1994; Seller et al., 1998), thus the two forms of evaluation are: (1) the positivity of one's own judgments about their own social identity (e.g. I feel good about being a woman) and (2) the positivity of judgments that one perceives others to hold about their own social identity (e.g., being a woman is considered good by others) (Ashmore et al., 2004; Lutanen & Crocker, 1992). Luhtanen & Crocker distinguish between the two forms of evaluation by referring to them as private and public subscales.

Positive Gender Identity as a Buffer to Stereotype Threat

The evaluative nature of both personal and social identities, as posited by Social Identity Theory, is regarded as an important source of an individual's self-esteem. In addition to the traditional focus on personal identity in the assessment of self-esteem, Luhtanen and Crocker (1992) highlight the importance of the social aspect of self-esteem, or as they refer to it; "collective self-esteem". More specifically, an individual's social (collective) identity is manifested in their collective self-esteem (Crocker & Luhtanen, 1990; Luhtanen & Crocker, 1992). Similarly, Corning (2002) found that collective self-esteem moderated perceived discrimination and distress. Block et al. (2011) identified positive distinctiveness as a "resilience" strategy in the face of stereotype threat, whereby stigmatized individuals generate

positive social value for their identity group by making his or her group distinct and stressing the importance of that distinction. In their studies, Karelaia & Guillen's (2014) found that positive gender identity reduced women leaders' identity conflict, thereby reducing stress, increasing life satisfaction, and affecting their motivation to lead. Their results suggest that positive gender identity can play a protective role for their advancement in organizations and leader identity development. In particular, since positive gender identity reduces woman/leader identity conflict, both identities can be viewed as compatible, which could lead to positive emotion, and ultimately broadening one's cognitive capacity (Greenhaus & Powell, 2006; Rothbard & Ramarajan, 2009).

Research also shows that the positivity of one's social identity increases access to self-affirmational resources (Dutton, Roberts, & Bendar, 2010). Self-affirmation theory (Steele, 1988) emphasizes that focusing on important aspects of one's identity that are irrelevant to the threat can protect the individual's self-worth and perceived integrity of the self. Accordingly, in an identity-threatening situation, individuals who have a positive regard towards their social identity in question will respond more openly and less defensively (Dutton et al., 2010; Sherman & Cohen, 2006). Indeed, a number of studies show that self-affirmation reduces stereotype threat (Martens et al., 2006, Schimel et al., 2004). Based on the above findings, holding a positive gender identity could potentially influence women's stress reactions, and coping; how they respond and choose to behave in identity-threatening situations, and how they rate their own performance. Thus, this study aims to investigate whether a positive social identity of being a woman (i.e. gender identity) would serve as a protective function against stereotype threat, as it could potentially buffer some of the negative responses associated with it.

Summary

One factor that potentially contributes to women's underrepresentation in elite leadership positions is the bias and prejudice that stem from the cultural mismatch between their gender role expectations and leader prototypes. In addition to the negative perception of women as less qualified for leadership positions, as well as the biased devaluation of their performance, such incongruity between female gender role and leadership role has also been found to affect women's perceptions of themselves as leaders (Hoyt, 2005). That is because when women are in a situation where they are blatantly or subtly exposed or reminded of the stereotypes associated with their gender identity, they become vulnerable to stereotype threat. Given the perceived masculinity of the leadership role, women leaders often find themselves in situations where they must deal with the possibility of being judged or treated stereotypically, or of doing something that would confirm the stereotype" (p. 401; Steele & Aronson, 1998). However, research shows some women are more susceptible to stereotype threat than others; others may be mostly unaffected or may exhibit reactance responses.

A number of moderating individual-level differences can buffer against performance deficits such as leadership self-efficacy, low-gender identification, and masculine gender role identification. For example, when a negative female-leader stereotype was explicitly activated, women high on leadership efficacy exhibited reactance responses that ameliorated the negative effects of stereotype threat on performance (Hoyt, 2005; Hoyt & Blascovich, 2007). That is, because leadership self-efficacy is relevant to women's perception regarding their general capabilities to lead (Murphy, 1992), and therefore plays a role in coping with adversity. Expanding on this line of reasoning, holding a positive gender identity can potentially result in hindering the negative responses to stereotype threats given the protective effect of positive gender identity against identity conflict (Karelaia & Guillén, 2014). Having a positive social

identity is associated with maintaining a higher collective self-esteem, and overall self-perceptions of worth (Hogg et al., 2004). Moreover, the more positive a woman's gender identity, the more access to self-affirmational resources she will have, thereby enabling her to better cope with identity-threatening thoughts and experiences (Karelaia & Guillen, 2014; Dutton et al., 2010; Steele, Spencer, & Lynch, 1993).

Study Overview

In the current study the relationship between stereotype threat and women's behavioral responses was examined, with positive gender identity as a possible moderator. More specifically, stereotype threat was activated in a blatant manner to explore whether positive gender identity would interact with stereotype threat on the following responses: task performance and perceived performance on a leadership task. The study also aimed to extend the literature on women's engagement in identity separation as a response to stereotype threat (e.g., von Hippel et al., 2011). These relationships were examined in the context of an in-basket task, which simulated a managerial decision-making activity.

Based on the above, it was predicted that women leaders with high positive gender identity would report higher levels of task and perceived performance than women with negative gender identity when stereotype threat is activated. It was also hypothesized that women with positive gender identities would be less likely to separate their leader and female identities (i.e., reduced identity separation). Based on the stereotype reactance literature, I predicted that positive gender identity would moderate responses to blatant stereotype threat. As such, there will be interaction effects between stereotype threat and positive gender identity, where women with positive gender identity would report higher task and perceived performance, and lower identity separation (i.e., higher reactance responses) when experiencing stereotype threat.

Conversely, women with negative gender identities would report lower task and perceived performance (i.e., higher vulnerability responses), and higher identity separation when experiencing stereotype threat. The Hypothesized relationships are summarized in Figure 1.

As established earlier in our review of the literature, self-efficacy has been shown to play an important role in the leadership process and is one the individual-level variables that moderate the relation between stereotype threat and performance and help reduce negative threat reactions. It has also been found to correlate with positive gender identity (Karelaia & Guillén, 2014). Therefore, leadership self-efficacy was included in the study as a potential control variable to account for its potential impact on task performance, perceived performance, and identity separation, and to allow for a more accurate assessment of the unique effects of positive gender

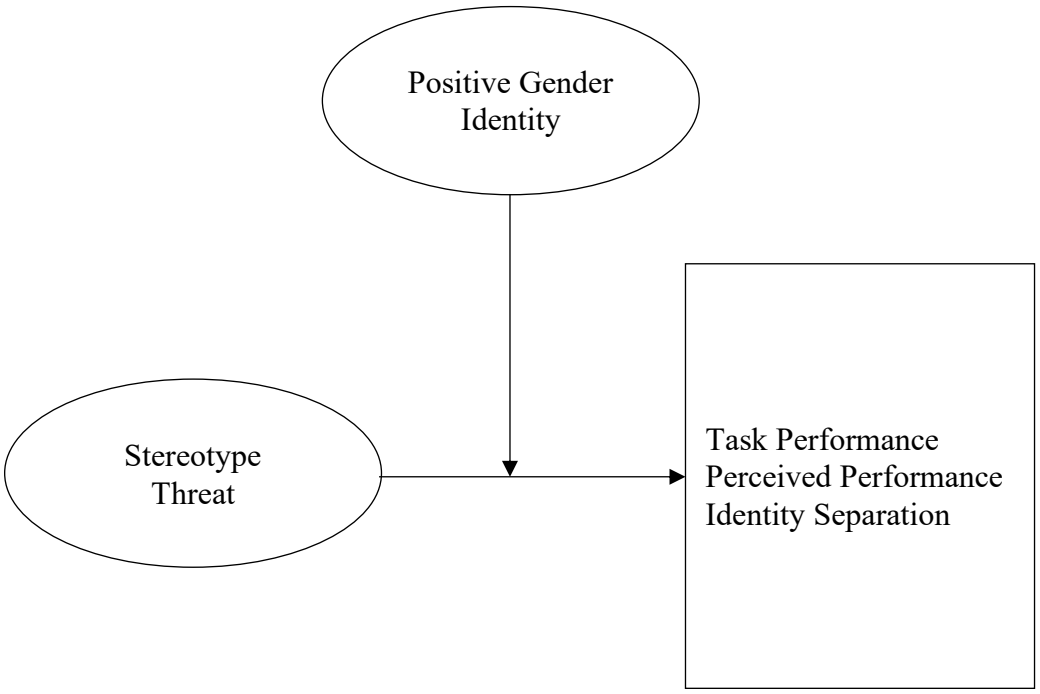


Figure 1: Moderation Model

identity.

Hypothesis 1

There will be a two-way interaction between Stereotype Threat and Positive Gender Identity for Task Performance, such that:

1a: Stereotype threat will have a simple main effect on task performance for women with positive gender identity, such that there will be higher task performance in the stereotype threat condition relative to the no threat condition.

1b: Stereotype threat will have a simple main effect on task performance for women with negative gender identity, such that there will be lower task performance in the stereotype threat condition relative to the no threat condition.

Hypothesis 2

There will be a two-way interaction between Stereotype Threat and Positive Gender Identity for Perceived Performance, such that:

1a: Stereotype threat will have a simple main effect on perceived performance for women with positive gender identity, such that they will report higher perceived performance in the stereotype threat condition relative to the no threat condition.

1b: Stereotype threat will have a simple main effect on perceived performance for women with negative gender identity, such that they will report lower perceived performance in the stereotype threat condition relative to the no threat condition.

Hypothesis 3

There will be a two-way interaction between Stereotype Threat and Positive Gender Identity for Identity Separation, such that:

1a: Stereotype threat will have a simple main effect on identity separation for women with positive gender identity, such that they will report lower identity separation in the stereotype threat condition relative to the no threat condition.

1b: Stereotype threat will have a simple main effect on identity separation for women with negative gender identity, such that they will report higher identity separation in the stereotype threat condition relative to the no threat condition.

Hypothesis 4

3a: Women with positive gender identity will report higher task performance than women with negative gender identity when stereotype threat is activated.

3b: Women with positive gender identity will report higher perceived performance than women with negative gender identity when stereotype threat is activated.

We also aimed to extend the literature on women's engagement in identity separation as a response to stereotype threat (e.g., von Hippel et al., 2011). Given the hypothesized protective role of positive gender identity against stereotype threat effects, we postulated that women leaders will be less likely to feel that their work self and feminine self are in conflict and, therefore, will not feel like they have to switch back and forth between these two selves. Therefore, we hypothesized the following:

Pilot Study

The primary purpose of the pilot study was to evaluate the efficacy of the experimental manipulations. Participants completed the entire experiment in the pilot study because secondary goals were to ensure participants understood the in-basket task and could complete the in-basket task within the amount of time given. It employed a 2 (Stereotype Threat: Blatant Threat or No

Threat Condition) × 2 (Gender Identity: Positive or Negative) experimental design. Participants were randomly assigned to one of the four groups.

Method

Participants

Data was collected from female undergraduate psychology students (*N*=23) who were recruited through the Virginia Tech Psychology Experiment Management System (SONA). Participants were required to be at least 18 years of age, female, and proficient English speakers. They received extra credit as compensation for participation. The study was conducted online, over Zoom.

Procedures

Participants were recruited through SONA. Participants filled a pre-screen survey to determine their eligibility. Participants who signed-up for the study were sent a Zoom link on their allocated timeslots. Upon signing in to Zoom, participants were given a brief overview of the study and were told that their performance on an in-basket exercise will be evaluated. Participants were then asked to give informed consent (APPENDIX A). Stereotype threat was blatantly activated to prime the gender-leader stereotype in the experimental group, in which participants were informed of the domain of the task (managerial), the diagnostic nature of the task (i.e., to understand gender differences in leadership), and were given a stereotype-consistent statement regarding the task (details on stereotype threat are described below). Participants in the no threat condition were just told the task would measure planning and decision-making skills. Then, participants were randomly assigned to receive the gender identity manipulation: either positive gender identity condition or a negative gender identity condition. To control for

potential moderator variables not investigated in this study, all experimenters facilitating both the manipulated group and the control group were female experimenters.

Participants were then given detailed instructions on the in-basket task. They were informed that their performance on the tasks would be monitored and scored. All participants were sent a Qualtrics link over Zoom with access to the in-basket task instructions, which they could read and ask any questions. The Qualtrics link also gave the participants access to the in-basket task materials, including a set of memos. Each memo had a text box under it to allow participants to take notes. The experimenter informed the participant that she will have 30 minutes to complete the task.

After completing the in-basket, the manipulation checks were administered. Participants were first asked to complete the positive gender identity manipulation check, then the stereotype threat manipulation check. Participants were then thoroughly debriefed, thanked, and given course credit later on SONA. The Debriefing form is in Appendix B.

In-Basket Task

The in-basket assessment is a commonly used assessment and training tool which represents an individual work sample designed to simulate important aspects of the managerial and leadership roles. The in-basket task (APPENDIX C) used in this study was developed by Holmes (2010) and adopted from Jaffee's (1968), During the in-basket task, participants were presented with a hypothetical situation and were asked to assume the role of a plant manager at the Geometric Manufacturing and Development Company, tasked with addressing a set of 28 items in the in-basket in 30 minutes. They were asked to review each item in the in-basket and record their notes and intended actions in relation to each item.

Manipulations

Stereotype Threat Manipulation

Stereotype threat was manipulated by attempting to activate participants' gender/leader stereotype, i.e., stereotype threat activation was used to operationalize stereotype threat. Participants were told that the in-basket exercise is a managerial exercise that "had shown gender differences in the past", which is a characterization that should explicitly activate the stereotype about women's leadership/management related skills. To enhance the salience of the stereotype threat, the experimenter informed participants in the experimental condition that "the research is aimed at better understanding gender differences in leadership abilities". Participants in the no threat condition were informed that the research aims to better understand planning and decision-making skills.

Positive Gender Identity Manipulation

The positivity of women's gender identity was manipulated through a verbal prompt by the experimenter. The questions used in the prompt were adopted from Karelaia & Guillen (2014). Participants in the positive gender identity condition were asked to "think about specific reasons that make them and/or others think positively of women, and how they relate to their personal experience". Participants in the negative gender identity condition were asked to list ''reasons that made them and/or others think negatively of women".

Manipulation Checks

Stereotype Threat Manipulation Check

To evaluate the effectiveness of the stereotype threat manipulation, participants were asked to rate the following statements adopted from Hoyt & Blascovich (2007, 2010) 'In leadership roles, individuals of my gender often face biased evaluations', "Some people think I

have less leadership ability because of my gender", and "The experimenter expected me to do poorly because of my gender" Each item was rated on a 7-point Likert type scale.

Positive Gender Identity Manipulation Check

To test the efficacy of the manipulation, the positivity of the participants' gender identity was measured using an 8-item scale (APPENDIX D) derived from the Collective Self-Esteem Scale (CSES; Luhtanen & Crocker, 1992) that evaluates any given social identity. The scale items were reworded to be in terms of gender identity. A sample item is ''In general, I'm glad to be a woman". The scale items used a 7-point Likert-type scale ranging from 1 = strongly disagree and 7 = strongly agree as used in the original CSES.

Measures[1]

Perceived Performance. Participants were asked to rate their own performance in the in-basket on 6 items adapted from the Individual Workplace Performance Questionnaire (IWPQ) by Koopmans et al. (2013, 2016) (APPENDIX E). IWPQ is a multi-factor scale, so only items with strong factor loadings with Task Performance (>0.6) were selected, and they include "I performed well on the leadership task I just completed" and "I was able to set priorities".

Identity Separation. To assess participants' identity separation, a 6-item scale was used (APPENDIX F) adopted from Benet-Martinez and Haritatos' (2005) Bicultural Identity Integration Scale-Version 1 (BIIS-1) and Huynh's (2009) BIIS-2. The items are rephrased to fit with the nature of this study. Only items with factor loadings larger than 0.5, made sense after rephrasing, and fit with the construct of interest in were included in the measure. An example of the items is: "I am conflicted between the "feminine" and "leader-like" ways of doing things".

[1] Those measures were included in the pilot study. However, due to the failure of the manipulations, these measures were not analyzed.

Participants rated their agreement with each item on a scale that ranges from 1 (strongly disagree) to 5 (strongly agree).

Control Variable

Leadership self-efficacy. Leadership self-efficacy was measured as a control variable using a 9-item leadership efficacy scale (APPENDIX G), adapted from Hoyt et al.'s (2010) Self-Efficacy Measure. Example items include "I am confident of my ability to influence a work group that I lead," "Overall, I believe that I can lead a work group successfully," and "I have the abilities to complete this leadership task successfully". In their study, the scale reported a Cronbach's alpha of 0.85 (Hoyt et al., 2010).

Demographics Measure

Additionally, participants were asked a series of demographic questions including age, race, major, and leadership experience (APPENDIX H).

Pilot Study Results and Discussion

Two-way ANOVAs were conducted to test the effectiveness of the stereotype threat and the positive gender identity manipulations. Results indicated that neither manipulation was effective in the pilot study. Analyses revealed the main effects of the manipulations on stereotype threat $F\,(1, 21) = 1.47, p = 0.24$, and positive gender identity $F\,(1, 21) = 0.15, p = 0.70$, were not significant.

One potential explanation for the failure of the stereotype threat manipulation in the current study could be related to differences in sample characteristics compared to prior research. The current study recruited female undergraduate students, while previous studies examining stereotype threat in leadership contexts have typically included working women with more diverse age and work experience. It is possible that the unique social context of being a female

student may not elicit the same level of stereotype threat as being a working woman in a leadership role. Furthermore, the manipulation of the leadership situation itself may not have been strong enough to fully activate stereotype threat in this sample. More possible reasons are highlighted in the discussion section.

Following the unsuccessful manipulation checks in the pilot study, the study design was revised, and I opted for a correlational design instead of an experimental design study. Researchers have often utilized stereotype threat vulnerability, which is the extent to which individuals are susceptible to the negative consequences of stereotype threat, as a proxy for stereotype threat. In a series of studies evaluating the mathematical abilities of male and female students, stereotype threat vulnerability proved to be a valuable predictor of performance (Spencer, 1993; Aronson & Inzlicht, 2004). When a math test was depicted as having gender relevance, women indicated higher levels of stereotype threat vulnerability and achieved significantly lower test scores compared to their female peers in a gender-neutral context. Furthermore, when there was an improvement in math test performance across different settings, women in these experimental situations subsequently exhibited decreased levels of stereotype threat vulnerability. Thus, in the focal study Stereotype Threat was operationalized as Stereotype Threat Vulnerability (STV). This approach allowed us to measure the subjective experience of stereotype threat and examine its effects on various behavioral outcomes in a leadership context. In the focal study, we were interested in the potential moderating role of positive gender identity (PGI) on the negative effects of stereotype threat vulnerability.

Focal Study

In the hypothesis section above, predictions were framed in terms of experimental design, e.g., testing for simple main effects. The hypotheses for the focal study have not changed; rather the

analytic strategy has changed from an ANOVA framework to a regression-based framework. Below, the original hypotheses based on manipulated antecedents have been converted to measured antecedents.

Hypothesis 1

There is a significant interaction effect between STV and measured PGI on task performance, such that the negative relationship between stereotype threat vulnerability and task performance is weaker for women with high PGI than low PGI.

Hypothesis 2

There is a significant interaction effect between STV and measured PGI on perceived performance, such that the negative relationship between STV and perceived performance is weaker for women with high PGI than low PGI

Hypothesis 3

There is a significant interaction effect between STV and measured PGI on identity separation, such that the positive relationship between STV and identity separation is weaker for women with high PGI than low PGI.

Hypothesis 4

There is a significant positive correlation between measured PGI and task performance, as well as perceived performance.

Method

Participants

Data was collected from 72 female undergraduate psychology students from Virginia Tech, recruited through Virginia Tech Psychology Experiment Management System (SONA).

Participants were required to be at least 18 years of age, female, and proficient English speakers. They received 1.5 extra credits as compensation for participation. The study was conducted online over Zoom. A power analysis was computed through the G*power 3.1 program for a multiple regression analysis. For a medium effect (f2=0.15), power of 0.8 and $\alpha = 0.05$, a total sample size of 66 participants was estimated. Participants ranged from the ages 18 to 22 (M = 19.21, SD =1.04). The racial breakdown was 55 Whites (76.4%), 5 Asians (6.9%), 4 African Americans (5.6%), 6 Multiracial (8.3%) participants, and 2 others (2.8%). The sample consisted of 25 Freshmen (34.7%), 27 Sophomores (37.5%), 10 Juniors (13.9%), and 10 Seniors (13.9%). Out of the 72 participants, 39 had a job, of which 22 (56%) had a team leadership role.

Design

All participants were exposed to a blatant stereotype threat to reinforce stereotype threat. To assess the effect of stereotype threat, Stereotype Threat Vulnerability (STV) was measured and treated as a continuous variable. Participants then completed an in-basket task designed to simulate a managerial decision-making activity, which served as the primary measure of task performance. The task required participants to prioritize, delegate, and make decisions on a variety of issues typically encountered in a leadership role.

Procedure

The study employed the same procedure as the pilot study. Prior to the manipulation, participants were asked to complete a self-report questionnaire on Qualtrics that measured self-efficacy and positive gender identity. In order to obscure the nature of the study, they were also asked to complete a big-five personality questionnaire as part of the pre-test questionnaires. To reinforce the gender-leader stereotype threat, participants were informed of the domain of the task (managerial), the diagnostic nature of the task (i.e., to understand gender differences in

leadership), and were given a stereotype-consistent statement regarding the task (details on stereotype threat are described below). To control for potential moderator variables not investigated in this study, all three experimenters were female.

The in-basket task was administered to participants as described previously in the pilot study. Upon completion of the leadership in-basket exercise, participants were asked to complete the stereotype threat vulnerability, perceived performance, and identity separation measures. Participants were thoroughly debriefed, thanked, and given course credit later on SONA. The Debriefing form is in Appendix B.

To reinforce the gender/leader stereotype threat, participants were told that the in-basket exercise is a managerial exercise that had shown gender differences in the past, which is a characterization that should explicitly bolster the stereotype about women's leadership/management related skills. To make the stereotype more salient, participants were also told by the experimenter that the research is aimed at better understanding gender differences in leadership abilities. Finally, before starting the in-basket task, participants were asked to indicate their gender.

In-Basket Task

Participants were asked to complete the same in-basket task described in the pilot study (APPENDIX C).

Measures

Measured Variables

Measured Positive Gender Identity (PGI). In the focal study, the positive gender identity scale that was used as a manipulation check in the pilot study was used as the operational definition of PGI. (See APPENDIX D)

Stereotype Threat Vulnerability. Participants' susceptibility to stereotype threat was measured using an 8-item "Stereotype Threat Vulnerability Scale" (Spencer, 2005) (APPENDIX I). The scale items were originally used to measure stereotype vulnerability and its effects on women and ethnic minorities' academic (e.g., math) performance. A modified version of the scale was used to measure stereotype threat for female employees in organizations (e.g., von Hippel et al., 2011). The items have been rephrased to fit the leadership context. Sample items include "1 doubt that others would think that I have less leadership ability because of my gender" and "People of my gender rarely face unfair evaluations in leadership positions". The measure asked participants to rate each item on a Likert-type scale ranging from (1) strongly disagree to (7) strongly agree. Items 2, 3, 5, and 7 were reverse scored to maintain consistency across the scale's underlying construct. In previous studies, this measure showed reliability ranging from 0.84 to 0.92 (Cadaret et al., 2017; Woodcock, Hernandez, & Schultz, 2016; Zhao et al., 2019). However, here, Cronbach alpha was 0.49. In order to increase the internal consistency of the scale, the decision was made to drop the items with the lowest item total correlation. Thus, items 2 and 3 were removed from the analysis. Following this action, the internal consistency of the scale increased ($\alpha = 0.61$). Further deletion of any other items did not result in additional improvements to the reliability of the scale.

Dependent Variables

Task Performance. At the end of the exercise, each participant's performance was evaluated and scored by the researcher based on their responses and decisions made regarding each in-basket item. Their response to the in-basket items was evaluated on a variety of leadership related competencies pre-determined as relevant to the items. Those competencies capture good task performance based on the leadership task and are adapted from the Scoring

Decision Aid developed by Holmes (2010), including: effective leadership, prioritizing issues, resolving conflicting requests, and efficient use of meetings (APPENDIX J). The in-basket task was scored by four raters using the standardized scoring aid, which assessed participants' performance on the previously mentioned leadership competencies. To measure performance, each participant was given a score (from 0 to 5) for each in-basket item. Scores for in-basket items were aggregated to obtain a single score for each participant that was used in subsequent analyses. Three raters independently scored the performance of all 72 participants. The fourth rater then independently scored all 72 in-basket responses, resulting in a second scoring of the performance of all participants. Interrater reliability was assessed using the intraclass correlation coefficient (ICC). The ICC was calculated using a two-way mixed effects model, where the raters were treated as fixed effects and the subjects were treated as random effects. The ICC result was 0.95 (95% CI [0.79, 0.98]), indicating a high level of agreement between the two scores. The F-test for the ICC was statistically significant (F (66, 6.25) = 61.7, p<0.01).

Perceived Performance. Participants were asked to rate their own performance in the in-basket on 6 items adapted from the Individual Workplace Performance Questionnaire (IWPQ) by Koopmans et al. (2013, 2016) (APPENDIX E). This measure was described in the pilot study. Cronbach's alpha for the measure was 0.81.

Identity Separation. To assess participants' identity separation, a 6-item scale was used (APPENDIX F) adopted from Benet-Martinez and Haritatos' (2005) Bicultural Identity Integration Scale-Version 1 (BIIS-1) and Huynh's (2009) BIIS-2. This measure was described in the pilot study. Cronbach's alpha was 0.81.

Control Variable

Leadership self-efficacy. Leadership self-efficacy was measured as a control variable using a 9-item leadership efficacy scale (APPENDIX G), adapted from Hoyt et al.'s (2010) Self-Efficacy Measure. This measure was described in the pilot study. Cronbach's alpha was 0.80.

Demographics Measure

Additionally, participants were asked a series of demographic questions including age, race, major, and leadership experience (APPENDIX H).

Results

Descriptive Statistics, Reliability and Correlations

During data collection, towards the end of the survey a few participants asked the researcher to clarify the anchors for some of the scales (i.e., 1=Strongly Disagree, 7=Strongly Disagree). The researcher asked the participants if and why they could not see all the scale anchors. It was discovered that those participants were not using a full screen while completing the survey (due to using zoom simultaneously), which resulted in those participants not being able to see the scale labels on the screen. These participants were flagged by the researcher for investigation during data analysis.

Before beginning the analyses, the box plot method was utilized coupled with the interquartile range (IQR) rule, to detect potential outliers in the data. Eight participants were detected as potential outliers. A detailed inspection was conducted to determine the cause and nature of these outliers. Specifically, I focused on the completion time of the study, as this metric provided insights into the participants' engagement and attentiveness. It was found that the average completion time was 45 minutes. Three of the potential outliers finished the study in less

than 24 minutes, which was significantly below the average completion time, suggesting careless responding. Therefore, the decision was made to exclude these three outliers. Inspection of the other outliers revealed that three of them were flagged as participants who experienced confusion regarding the scale anchors due to the restricted screen view. As a result, those three outliers were removed from the dataset as their responses may have been unreliable or inaccurate. Inspection of the last two outliers did not reveal any disqualifying issues; there was variability in response patterns across all measured variables. Therefore, the final sample size used in the analysis was 72.

Table 1 presents the descriptive statistics and the correlations for the variables of interest in this study. Measured PGI was significantly positively correlated with perceived performance ($r = .24, p < 0.05$), and task performance ($r = .31, p < 0.01$). This moderate linear relationship supports evidence that associates positive gender identity with protective effects on women's self-perceptions (Karelaia & Guillen, 2014). Perceived performance was also significantly correlated with Leadership self-efficacy ($r = .38, p < 0.01$), which is consistent with the stereotype reactance literature (Hoyt & Blascovich, 2010). However, contrary to what was expected, measured PGI was not significantly correlated with identity separation, or leadership self-efficacy. Reliability coefficients for the dependent variables studied are reported in the methods section.

Demographics including race, major, academic standing, employment status, leadership experience, and major were individually analyzed for all variables; stereotype threat vulnerability, positive gender identity, task performance, perceived performance, and identity separation using Multivariate Analysis of Variance (MANOVA) to identify any potential differences between group means. The Topics Studied variable originally contained six response

options or a combination of options (Business, Management, Leadership, Industrial/Organizational Psychology, HR, Social Psychology) and was collapsed into two groups: "Yes" for students who studied one or more of those topics ($N = 42$) and "No" for students who did not ($N = 30$). The MANOVA results showed no significant difference in participants' responses based on race, major, academic standing, leadership experience, or topics studied. However, there was a significant difference in STV based on employment status (F (1, 70) = 5.14, $p = 0.03$). A post-hoc test using Tukey's HSD revealed that participants who had a job had significantly higher levels of STV (M= 4.43, SD = 0.77) compared to those who did not (M = 3.42, SD = 1.04) and the difference in STV between the two groups was 0.36 ($p = 0.03$, 95% CI [0.043, 0.676]). Box's test of equality of covariance matrices was not significant, Box's M = 23.301, F (21, 150) = 0.79, $p = 0.328$, which shows that the assumption of homogeneity was not violated.

Testing for Experimenter Differences

A MANOVA was conducted to rule out the impact of experimenter differences on participants' responses. Results indicated there was no significant experimenter effect on any of the dependent variables, F (6, 65) = 1.11 $p = 0.37$, Pillai's Trace=0.09.

Hypothesis Testing

The purpose of this study was to investigate the relationships between stereotype threat vulnerability, perceived performance, identity separation, and the moderating role of positive gender identity. Multiple linear regression analyses were conducted to examine the effects of stereotype threat vulnerability and positive gender identity and their interactions on the dependent variables. Data analysis was conducted using the R statistical software, using the built-in "stats" package for linear regression modeling.

Checking Assumptions

To check for violations of regression assumptions, the linearity of relationships between independent and dependent variables were examined. The assumption of homoscedasticity was assessed by visually inspecting residual plots (Figures 2a, 2b, 2c) for any signs of a non-constant variance pattern. The assumption of normality of residuals was evaluated using Q-Q plots (Figures 3a, 3b, 3c) and the Shapiro-Wilk test. Overall, our analyses did not reveal any violations to the fundamental assumptions of linear regression.

Hypothesis 1

Our first hypothesis was that positive gender identity was a potential moderator determining whether stereotype threat vulnerability has a stronger or weaker effect on female leaders' task performance. To test this hypothesis, a stepwise regression analysis was conducted with task performance as the dependent variable, and positive gender identity, stereotype threat vulnerability, and their interaction term as predictors to test moderation effects. First, the main predictors, measured PGI and STV, were entered into the regression model to assess their main effects on participants' task performance. Subsequently, their interaction term was entered in a second step to examine the moderation effect of PGI on the relationship between STV and task performance. In the first step, STV was not a significant predictor of task performance (b=2.66, p=0.30). PGI predicted task performance ($b = 6.32, p < 0.01$) and explained 8.28% of its variance. In the second step, which is our final regression model (Table 2), there was no significant interaction between PGI and STV on task performance ($b = -0.1, p = 0.97$). Additionally, there were no significant main effects of PGI ($b = 6.67, p= 0.47$) or STV ($b = 3.19, p = 0.81$) on task performance. Thus, hypothesis 2 was not supported. Subsequent analysis was conducted by including the employment status variable as a potential covariate. Results show

that the covariate of employment status did not have a significant effect on task performance (b = -1.65, p = 0.73). Finally, our analysis revealed that leadership self-efficacy, when included as a control variable, did not have a significant effect on the observed relationships, or on task performance.

Hypothesis 2

Measured PGI and STV were entered first into the regression model to assess their main effects on participants' perceived performance. Subsequently, in the second step their interaction term was entered to examine the moderation effect of PGI. In the first step, STV was not a significant predictor of perceived performance (b = 0.17, p=0.14). PGI, however, predicted perceived performance (b = 0.23, p = 0.03) and explained 5.89% of its variance. Results from the final linear regression model (Table 3) indicated that the interaction between PGI and STV on perceived performance was not significant (b = -0.12, p = 0.29), neither were the main effects of PGI (b = 0.65, p = 0.12) or STV (b = 0.81, p = 0.19) on perceived performance. Subsequent analysis was conducted by including the employment status variable as a potential covariate. Results show that the covariate employment status did not have a significant effect on perceived performance (b = -0.09, p = 0.61). Finally, our analysis revealed that leadership self-efficacy, when included as a control variable, did not have a significant effect on the observed relationships, or on perceived performance.

Hypothesis 3

Measured PGI and STV were entered into the regression model to assess their main effects on participants' identity separation. Subsequently, their interaction term was entered to examine the moderation effect of PGI. In the first step, STV was not a significant predictor of identity separation (b = 0.1, p =0.45), neither was PGI ((b = -0.12, p = 0.30). Results of the final

multiple regression model are shown in table 4, and they confirmed that PGI moderated the effect of STV on identity separation (b = -.26, p = 0.04). That is, the more positive a woman's gender identity is, the more likely she is to demonstrate a stereotype reactance effect (i.e., reduced identity separation). STV also had a significant main effect on identity separation (b= 1.49, p= 0.03). Our model explained a moderate proportion of variance in identity separation, as indicated by the R-squared value of 0.086. To follow-up this interaction, the Estimated Marginal Means (EMMs) of identity separation were calculated at different levels (-1 SD/ mean/ +1 SD) of STV across different levels (-1 SD/ mean/ +1 SD) of PGI. I then tested for the effect of STV at different levels of PGI with simple slopes analysis. Results from the simple slope analysis (Table 5) shows that for those with low PGI (1 SD below the mean of PGI), a one unit increase in STV is associated with 0.31 unit increase in identity separation (95% CI [-0.01, -0.64]); while for those with high PGI (1 SD above the mean of PGI), one unit increase in STV is associated with 0.1 unit decrease in identity separation. These results are shown in figure 4. This supports our hypothesis, indicating that positive gender identity can buffer the negative impact of STV on identity separation, as the association between STV and identity separation is weaker at higher PGI. More specifically, women with more positive gender identity demonstrated a reactance response and were less likely to separate their female and leader identities when they experienced stereotype threat. On the other hand, women with low PGI were the most likely to report high identity separation when they experienced stereotype threat. Subsequent analysis was conducted by including the employment status variable as a potential covariate. Results show that the covariate employment status did not have a significant effect on identity separation (b= -0.004, p= 0.98). Finally, our analysis revealed that leadership self-efficacy, when included as a

control variable, did not have a significant effect on the observed relationships, or on identity separation.

Hypothesis 4

Results shown in table 1 revealed that measured PGI was significantly positively correlated with perceived performance ($r = .24, p < 0.05$), and task performance ($r = .31, p < 0.01$). This moderate linear relationship supports evidence that associates positive gender identity with protective effects on women's self-perceptions (Karelaia & Guillen, 2014). Thus, hypothesis 4 was supported.

Discussion

This study examined the moderating role of positive gender identity on the relationship between stereotype threat vulnerability and women's behavioral responses in a leadership context. Numerous studies demonstrated that merely being reminded of one's membership in a group that typically performs poorly in a specific area of competence can have a detrimental impact on an individual's performance and attitudes (Casad & Bryant, 2016). Although in some studies the effects of stereotype threat on performance have been questioned (e.g., Finnigan & Corker, 2016; Flore &Wicherts, 2015; Stricker & Ward, 2004), the literature continues to suggest that blatant exposure to stereotype threat is likely to result in stereotype threat vulnerability in terms of diminished performance and self-perceptions. On the other hand, some studies show that individual differences may have a buffering effect on stereotype threat vulnerability. These studies demonstrate how some women may exhibit stereotype reactance when they are explicitly told about the masculine stereotype associated with a domain or role and are likely to react in a way that is not consistent with the stereotype (Kray et al., 2001; 2004).

This study investigated positive gender identity as a potential individual difference that may have a buffering effect on stereotype threat vulnerability. More specifically, I wanted to determine the effects of positive gender identity on perceived performance, task performance, and identity separation under a blatantly activated stereotype threat condition. It was predicted that women with a high PGI would perform better on the leadership task, report higher perceived performance, and will be less likely to experience identity separation compared to those with a low PGI when experiencing stereotype threat.

First, our results showed that stereotype threat vulnerability did not have a direct negative impact on women's performance on the leadership task, or their perceptions of how well they performed as expected. Stereotype threat vulnerability was not directly associated with how much women separated their leadership and female identities. Our findings also did not support the hypothesized buffering effect of positive gender identity on task performance or perceived performance, as there were no significant interaction effects or main effects of positive gender identity and stereotype threat vulnerability on either behavioral response.

Boundary Conditions of Stereotype Threat Vulnerability

An unexpected result that persisted through this study was that stereotype threat vulnerability did not yield the anticipated effects on women's performance in the leadership task even though the gender stereotype was blatantly activated. These results are not the first to question the magnitude of the stereotype threat effects on women's performance (Flore & Wicherts, 2015; Finnigan & Corker, 2018). There are numerous boundary conditions within which stereotype threat occurs, and situational contingencies that can potentially mitigate it. For instance, stereotype threat effects are more pronounced when the person is a token group member (Sekaquaptewa & Thompson, 2002). When solo status is experienced in a mixed-group

setting, women tend to perform significantly worse than those in a same-gender group. Additionally, experiencing both solo status and stereotype threat has more injurious effects on women's performance than experiencing one or the other (Sekaquaptewa & Thompson, 2002; Inzlicht & Ben-Zheev, 2000). Whether performance is private or not has also been found to elicit a more negative reaction to stereotype threat, which has been noted by Inzlicht & Ben-Zheev ''It is possible that if participants were required to take an oral test, instead of a written test, they would have experienced greater self-consciousness in both the stereotyped and the non-stereotyped domains" (p.369). This study was conducted in a virtual lab environment where individual participants performed the leadership task on their computers privately. Thus, it is possible that the absence of male participants, as well as the nature of the task (i.e., written) made the stereotype threat effects less salient.

Identifying with the task, task difficulty and personal task investment have also been shown to influence the manifestation of stereotype threat vulnerability (Roberson & Kulik, 2007; Steinberg, Okun & Aiken, 2012). Ideally, stereotype threat is most likely to occur in work settings where there are difficult, complex, and challenging tasks (Roberson et al., 2007). Although the experimenters highlighted the diagnostic nature of the task (i.e., to understand gender differences in leadership), it is possible that the nature of the in-basket task might not have been perceived as highly relevant, difficult, or personally meaningful to the participants, leading to a lower level of engagement or investment in the task. This could have reduced the likelihood of stereotype threat vulnerability. Identification with the stereotyped domain has also been shown to increase an individual's vulnerability to the negative effects of stereotype threat (e.g., Aronson et al., 1999; Leyens et al., 2000; Stone, 2002). Most of the study sample consisted of freshmen and sophomores, and nearly half of them reported they did not have a job or

leadership experience. As relatively new students and without significant exposure to leadership roles, this could potentially explain why the participants did not strongly identify with the leadership domain, rendering them less susceptible to the negative effects of stereotype threat. Our preliminary analysis gives some support to this explanation, where participants who reported having a job had significantly higher levels of STV compared to those who did not.

Furthermore, the degree to which people accept or endorse the stereotype is a predictor of how vulnerable they are to stereotype effects. Women who believe in the legitimacy of status differences between men and women are more likely to endorse the gender stereotype (Schmader, Johns, & Barquissau, 2004). Women's endorsement of gender stereotypes is associated with lower performance self-esteem, and lower self-appraised ability (Schmader et al., 2004). Recent organizational research has highlighted the female leadership advantage (Offermann & Foley, 2020), arguing that women may be more effective leaders than men (Book, 2000; Wilson, 2004). Other research suggests that organizations with more women executives had better financial performance (i.e., Catalyst, 2004; Dezso & Ross, 2012). Recent studies show how the concept of femininity in the workplace has been evolving, combining traditional masculine and feminine traits (Hirst & Schwabenland, 2018). These studies highlight the potential advantages of female leadership by demonstrating possible congruence in female-leader role stereotypes (Koburtay, Syed, & Haloub, 2019). This implies that prejudice against female leaders could be changing. It is plausible that the study sample of female undergraduate students may be cognizant of such research or acknowledge the female leadership advantage. Thus, it is possible that participants did not endorse status legitimizing beliefs or the gender-leadership stereotype. As a result, the stereotype threat manipulation that underscored the gender-leader stereotype might have been ineffective, thereby accounting for the lack of observed STV among

the participants. Results from exploratory analysis are consistent with this hypothesis, as it shows that participants who studied leadership-related subjects (e.g., Business, Management, Leadership, Industrial/Organizational Psychology, HR, Social Psychology) were less likely to experience STV (b= -2.9, p= 0.02), when controlling for positive gender identity. Positive gender identity moderated this effect, where participants with high PGI were less vulnerable to the stereotype threat (b= 0.56, p= 0.01).

Furthermore, from the onset of the Covid-19 outbreak, it has been posited that nations governed by female leaders have experienced better outcomes than their male-led counterparts; a notion that has been featured in publications such as the New York Times, Forbes, Vox, the Harvard Business Review, Stanford Medicine, and NBC News (Anderson, 2020; Chamorro & Wittenberg, 2020; NBC, 2020). Recent academic investigations further indicate that countries with female leadership have experienced a death toll six times lower than those under male governance (Coscieme, Fioramonti, & Trebeck, 2020). Given the timing of the study, the prevalent evidence of the success of female leadership during the pandemic may have contributed to participants' rejection of the notion that women are less capable leaders, and in turn, reduced the impact of stereotype threat on their performance and self-perceptions.

Finally, A meta-analysis by Flore and Wicherts (2015) proposed publication bias as a potential reason for the inconsistency in findings of stereotype threat research, particularly between small sample size and large sample size studies. They also suggested that publication bias exaggerated the effect size of stereotype threat. They have emphasized the importance of conducting large-sample size replications of published research, particularly in social psychology and across different cultures (Flore & Wicherts, 2015; Roediger, 2012) to further understand the magnitude of stereotype threat effects.

Identity Separation

As hypothesized, there was a significant interaction effect between positive gender identity and STV on identity separation. Women with a high PGI were less likely to separate their female and leader identities when they experienced stereotype threat. More specifically, positive gender identity buffered against STV, where women with high PGI demonstrated a reactance response and *integrated* their female and leader identities when stereotype threat was activated. In contrast, women with low PGI demonstrated a vulnerability response and separated their female and leader identities when stereotype threat was activated. Previous research on identity separation asserts that female leaders who experienced stereotype threat separated their feminine identities from their professional identity (von Hippel et al., 2010). These results align with prior studies on the protective impact of positive social identities against women leaders' identity conflict (Karelaia & Guillen, 2014). However, to my knowledge, this is the first study to explore the moderating role of women's positive gender identity in mitigating stereotype threat vulnerability responses. This study contributes to the literature by introducing an individual difference that potentially contributes to why women experience identity separation at different levels. Additionally, the study's findings demonstrate that a positive gender identity could help women leaders integrate their female and leader identities, thereby expanding the body of knowledge on professional identities development (Bartel & Dutton, 2001; Day & Harrison, 2007; Ibarra et al., 2010).

Limitations

One major limitation of this study pertains to the stereotype threat manipulation employed. While this type of manipulation has proven effective in prior research (Spencer et al., 1999; Steele & Aronson, 1995), this study could not replicate the same manipulation effect. It is

possible that the online delivery of the manipulation, as opposed to earlier methods, was less effective in this context (Finnigan & Corker, 2018). The online format might have led to reduced participant attention to manipulation instructions or reduced the fidelity of the leadership task, especially given the absence of the threat of immediate evaluation by the experimenter. The online format inherently lacks the social and interpersonal dynamics typically present in real-world leadership situations, which may have influenced the extent to which participants engaged with the task and experienced the effects of stereotype threat.

Another factor to consider in interpreting our results is the age of our sample. Given that the study participants were predominantly young individuals (ages 18-22), their views on gender and leadership might differ from those of older generations. Contemporary social attitudes and cultural shifts towards gender equality might have contributed to the younger participants being less likely to endorse the stereotypic statement suggesting that women perform worse than men in the leadership task. This difference in perspective could have mitigated the impact of stereotype threat in the sample, as the young participants may not have perceived the stereotype as relevant. Thus, the specific stereotypic statement used in the manipulation might not have resonated with the sample.

One notable limitation of the present study is the low reliability of the Stereotype Threat Vulnerability Scale. Although previous research has demonstrated reliability coefficients ranging from 0.84 to 0.92 (Cadaret et al., 2017; Woodcock, Hernandez, & Schultz, 2016; Zhao et al., 2019), our study yielded a lower Cronbach's alpha of 0.49. Even after the removal of items 2 and 3, which led to a slight increase in the internal consistency ($\alpha = 0.61$), the scale's reliability remained suboptimal. This low reliability may have implications for the validity and

generalizability of our findings, as it potentially weakens the strength of the observed relationships between stereotype threat vulnerability and other variables.

Another limitation is that our sample consisted primarily of undergraduate students, which has implications for the generalizability of our findings, particularly in organizational or professional settings. The use of undergraduate students as participants may limit the validity of our findings, as their experiences with leadership tasks and exposure to stereotype threat might differ from those of individuals working in organizations or holding leadership positions. Moreover, the nature of a student population may also influence the extent to which stereotype threat vulnerability impacts their task performance and perceptions, as their goals, motivations, and self-concepts may be shaped by their academic context.

Another potential limitation of our study is the absence of male experimenters. Previous research has shown that the gender of the experimenter can be considered a subtle cue that influences participants' performance on tasks that are gender-stereotyped (e.g., Stone & McWhinnie, 2008). Therefore, the absence of male experimenters in this study may have inadvertently reduced the salience of the stereotype manipulation.

Implications and Future Directions

The protective role of the positive view of women's gender identity in reducing identity separation, as evidenced by the study findings, has crucial implications for counseling and coaching practices. Separating the gender identity from the professional identity can be a method for women to protect their ego, but it can also have adverse effects on their mental health when they feel they cannot express their feminine identity while performing their work duties (von Hippel et al., 2011). Previous studies have indicated that identity separation is related to a sense

of detachment from the workplace and organization (Settles, 2004), leading to negative job attitudes, such as lower job satisfaction and a greater desire to leave the job (Saks, 2006). Thus, coaching interventions should not solely address specific leadership skills but also examine women's perceptions of how well their gender identity fits within the workplace. Additionally, exploring the impact of organizational culture, policies, and practices on women's perceptions of their gender identity can help identify specific factors within organizations that either facilitate or hinder the development of a positive gender identity. This line of research could inform interventions aimed at fostering inclusive and supportive work environments that promote the integration of women's gender and leadership identities. Future research could also examine the role of peer and mentor support in reinforcing a positive gender identity.

One of the main factors contributing to the experience of stereotype threat is the awareness and endorsement of a negative stereotype (Steele & Aronson, 1995). If a stereotype is no longer deeply embedded in society or endorsed by the stigmatized individual, it is unlikely that the stereotype would be salient enough to evoke threat. Although there is robust evidence of the masculinity of leader stereotypes, research also demonstrated that masculine construal of leadership has diminished over time (Koenig et al., 2011). There is a recent cultural shift that highlights the androgynous nature of leadership, where it increasingly perceived as a combination of both agentic and communal (Hoyt & Murphy, 2016). Although ILTs remain relatively stable despite societal and cultural changes, there are signs that the gendered-ness of leadership may be gradually diminishing, where leadership dimensions have been found to correlate with both masculine and feminine items (Offermann & Coats, 2018). Thus, an important area for future research could involve the re-evaluation of gender stereotypes in the leadership domain. Additionally, there is a potential generational shift in the masculinity of the

leader prototype, with new evidence on the female leader advantage. For example, it was found that in disciplines with higher female faculty representation, teams that have gender diversity and a higher proportion of highly educated females are more productive (Joshi, 2014). Thus, it could prove useful to determine if further examination of stereotype threat in leadership is feasible. Specifically, future studies should determine if prejudice against women's leadership abilities continue to persist. If these stereotypes are still prevalent, assessing people's awareness of them is also crucial. Future research directions could involve conducting longitudinal research to provide insights into the long-term effects of maintaining a positive gender identity on women's career trajectories, job satisfaction, and leadership development. By examining how the interplay between gender identity and stereotype threat vulnerability evolves over time and affects women's career progression, we can gain a deeper understanding of these dynamics and their implications for women's leadership experiences.

The protective role that positive gender identity plays in women's identity separation/integration is still a relatively new area of research. Evidence supports that the positive evaluation of one's social identity is an important source of self-esteem and maintaining a positive self-image (Crocker & Luhtanen, 1994). However, there is much left to be explored in terms of the characteristics and stability of positive gender identity as a construct and an individual difference; is it a stable characteristic that is intrinsic to an individual? Or is it more context-dependent and subject to change over time? In the pilot study, my attempt to manipulate the positivity of participants' gender identity failed. Thus, further research is needed to understand the external and internal factors that may contribute to why some women have a more positive evaluation of their social group than others, and whether positive gender identity can be triggered by situational cues. Future studies could also investigate the role of

intersectionality in shaping women's experiences with positive gender identity, stereotype threat vulnerability and identity separation. By considering the influence of other social identities, such as race, ethnicity, socio-economic status, age, and sexual orientation, in conjunction with gender identity, we can develop a more nuanced understanding of the complex factors that contribute to women's leadership experiences and outcomes.

Since our analysis revealed that participants with a job exhibited significantly higher levels of STV compared to those who were not employed, a valuable direction for future research would be to conduct a study focusing only on students with work experience. This would allow researchers to further explore the potential factors contributing to their higher STV, such as workplace dynamics, role expectations, or work-related triggers of stereotype threat.

Conclusion

This study examined the moderating role of positive gender identity on the relationship between stereotype threat vulnerability and women's behavioral responses in a leadership context. Contrary to our hypotheses, the results revealed that stereotype threat did not have a negative impact on women's performance on the leadership task, their perceptions of their performance, or their separation of leadership and female identities. Although we did not find support for the hypothesized buffering effect of positive gender identity on task performance or perceived performance, our findings indicate that positive gender identity moderated the effect of stereotype threat vulnerability on identity separation. These findings suggest that a favorable regard for one’s gender identity may help overcome identity separation and allow women in a stereotype-inducing situation to express their female identity and their leader identities simultaneously. Finally, the results of this study may call into question the definition and operationalization of stereotype threat in the leadership domain. While I do not conclude that

stereotype threat has no impact on women's performance, the study results suggest that the influence of common threat cues on performance may not be as significant as previously believed.

Table 1

Means, standard deviations, and correlations with confidence intervals.

Variable	*M*	*SD*	1	2	3	4	5	6
1. Stereotype Threat Vulnerability	4.68	0.84						
2. Measured Positive Gender Identity	5.34	0.78	-.12 [-.34, .12]					
3. Task Performance	56.42	15.36	.09 [-.15, .33]	.31** [0.08, .50]				
4. Perceived Performance	3.38	0.69	.14 [-.09, .36]	.24* [.00, .44]	.27* [.04, .47]			
5. Identity Separation	2.49	0.75	.11 [-.13, .33]	-.13 [-.36, .10]	-.12 [-.34, .11]	-.18 [-.40, .05]		
6. Leadership Self-Efficacy	3.76	0.47	-.13 [-.35, .10]	.01 [-.22, .25]	.19 [-.04, .40]	.38** [.16, .56]	-.03 [-.26, .21]	

Note. *N*=72. *M* and *SD* are used to represent mean and standard deviation, respectively. Values in square brackets indicate the 95% confidence interval for each correlation. The confidence interval is a plausible range of population correlations that could have caused the sample correlation (Cumming, 2014). * Indicates $p < .05$. ** indicates $p < .01$.

Table 2

Moderation Analysis: Regression results using Task Performance as the dependent variable.

Predictor	b	95% CI [LL, UL]	Fit
(Intercept)	11.36	[-89.35, 112.07]	
Positive Gender Identity	6.67	[-11.63, 24.96]	
Stereotype Threat Vulnerability	3.19	[-23.83, 30.21]	
Positive Gender Identity X Stereotype Threat Vulnerability	-0.097	[-5.04, 4.84]	
			R^2 = .109 95% CI [.00,.23]

Note. *N*=72. *b* represents unstandardized regression weights. *LL* and *UL* indicate the lower and upper limits of a confidence interval, respectively.
* indicates p < .05. ** indicates p < .01.

Table 3

Moderation Analysis: Regression results using Perceived Performance as the dependent variable.

Predictor	b	95% CI [LL, UL]	Fit
(Intercept)	-0.73	[-5.28, 3.81]	
Positive Gender Identity	0.81	[-0.41, 2.03]	
Stereotype Threat Vulnerability	0.65	[-0.17, 1.48]	
Positive Gender Identity X Stereotype Threat Vulnerability	-0.12	[-0.34, 0.10]	
			R^2 = .100 95% CI [.00,.20]

Note. *N*=72. *b* represents unstandardized regression weights. *LL* and *UL* indicate the lower and upper limits of a confidence interval, respectively.
* indicates $p < .05$. ** indicates $p < .01$.

Table 4

Moderation Analysis: Regression results using Identity Separation as the dependent variable.

Predictor	b	95% CI [LL, UL]	Fit
(Intercept)	-2.24	[-7.24, 2.76]	
Positive Gender Identity	0.81	[-0.10, 1.72]	
Stereotype Threat Vulnerability	1.49*	[0.15, 2.83]	
Positive Gender Identity X Stereotype Threat Vulnerability	-0.26*	[-0.50, -0.01]	
			R^2 = .086 95% CI [.00,.20]

Note. *N*=72. *b* represents unstandardized regression weights. *LL* and *UL* indicate the lower and upper limits of a confidence interval, respectively.
* indicates p < .05. ** indicates p < .01.

Table 5

Simple Slopes Analysis

Positive Gender Identity	Stereotype Threat Vulnerability. Trend	SE	Lower. CL	Upper. CL
4.55	0.3116	0.162	-0.0118	0.635
5.34	0.1085	0.127	-0.1458	0.363
6.12	-0.0945	0.157	-0.4082	0.219

Note. The simple slope table shows three different levels of positive gender identity: low level of positive gender identity (1 SD below the mean of positive gender identity); average level of positive gender identity; and high level of positive gender identity (1 SD above the mean of positive gender identity). Confidence level used: 0.95.

Figure 2a. Scatterplot of the Standardized Residuals against Standardized Predicted Values, for the model with task Performance as the dependant variable.

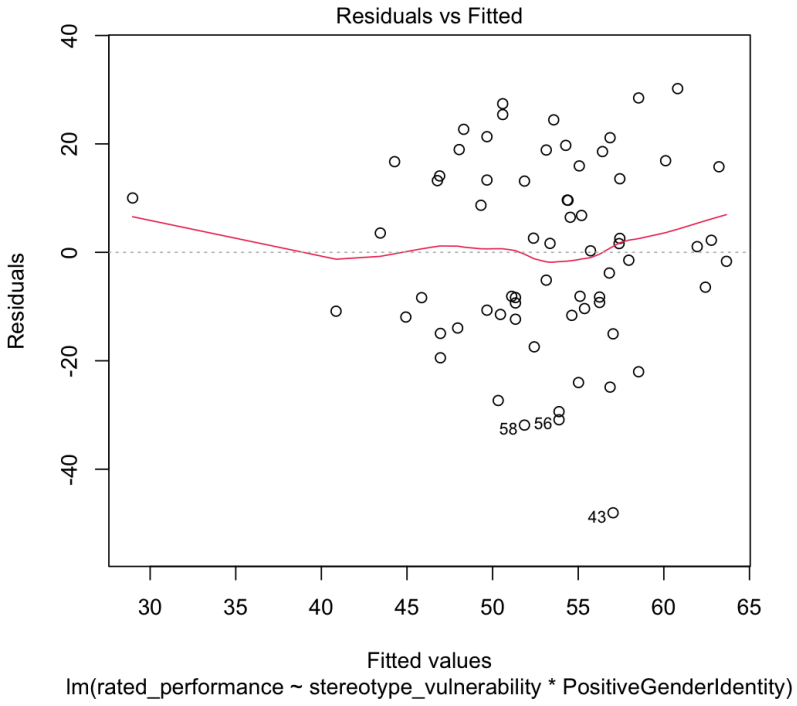


Figure 2b. Scatterplot of the Standardized Residuals against Standardized Predicted Values,

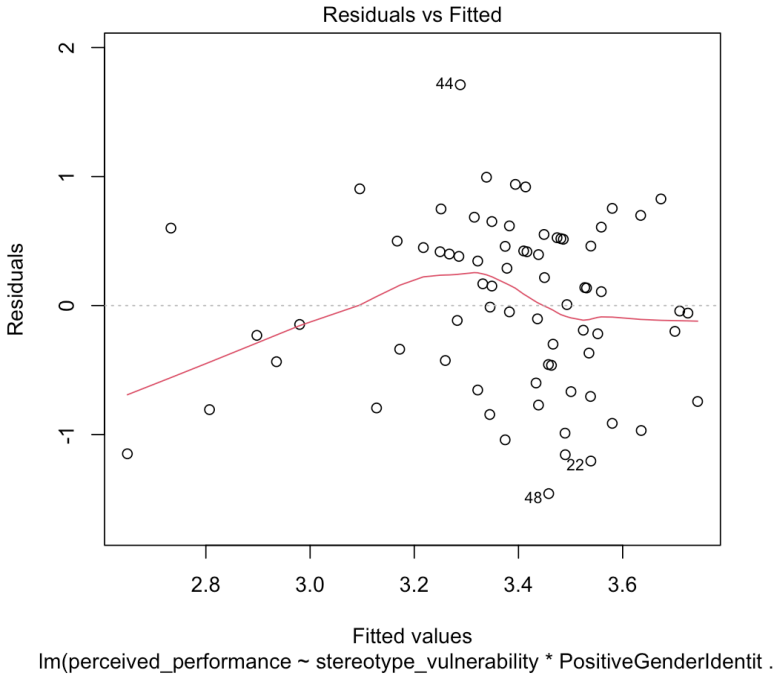


Figure 2c. Scatterplot of the Standardized Residuals against Standardized Predicted Values, using identity separation as the dependent variable.

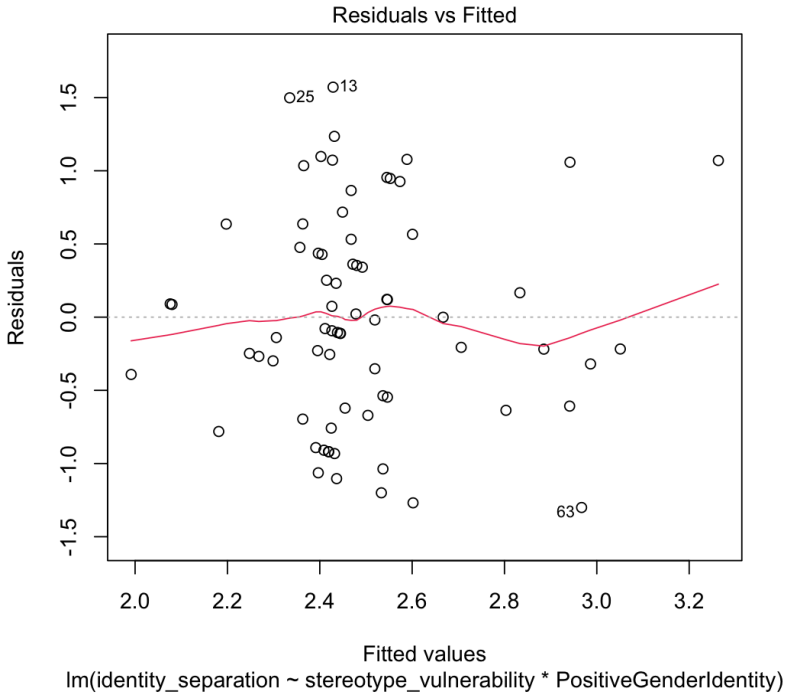


Figure 3a. Normal probability plot of the Standardized Residuals, using task performance as the dependant variable.

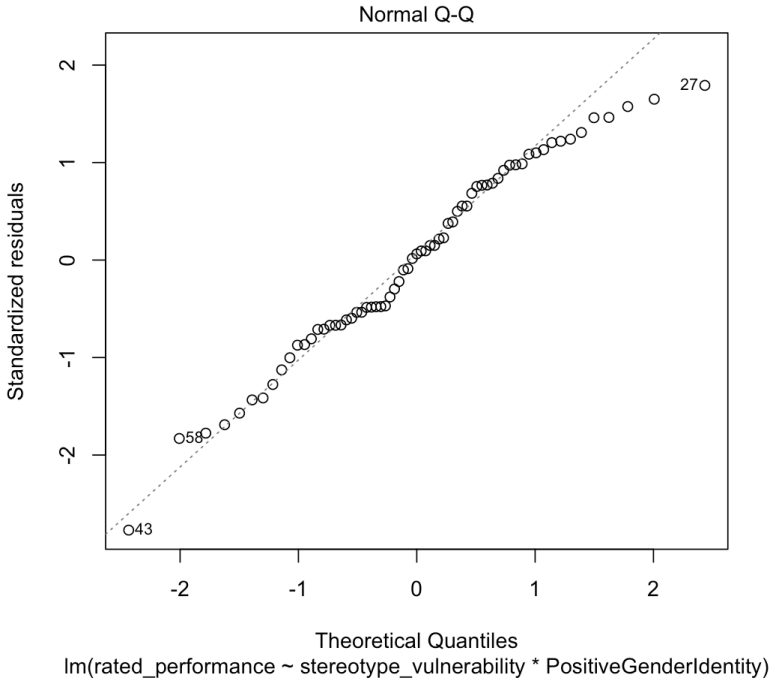


Figure 3b. Normal probability plot of the Standardized Residuals, using perceived performance as the dependent variable

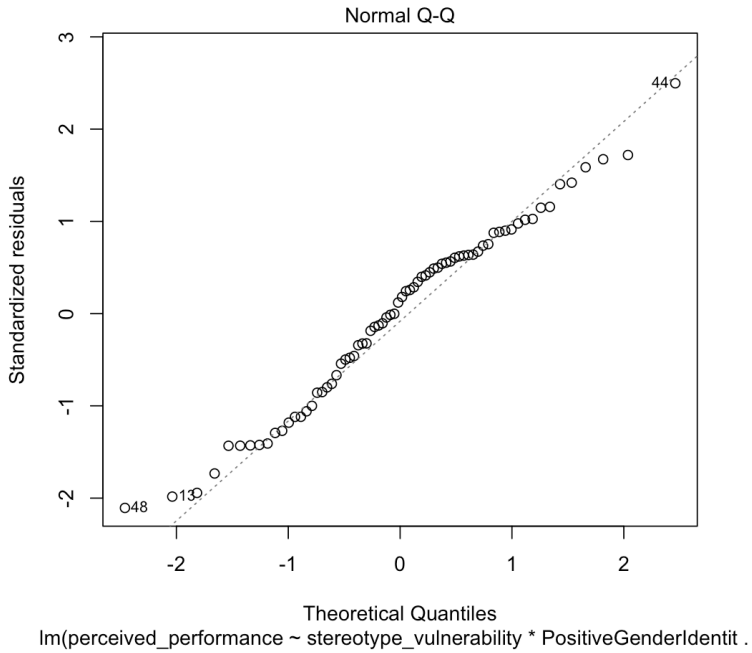


Figure 3c. Normal probability plot of the Standardized Residuals, using identity separation as the dependent variable

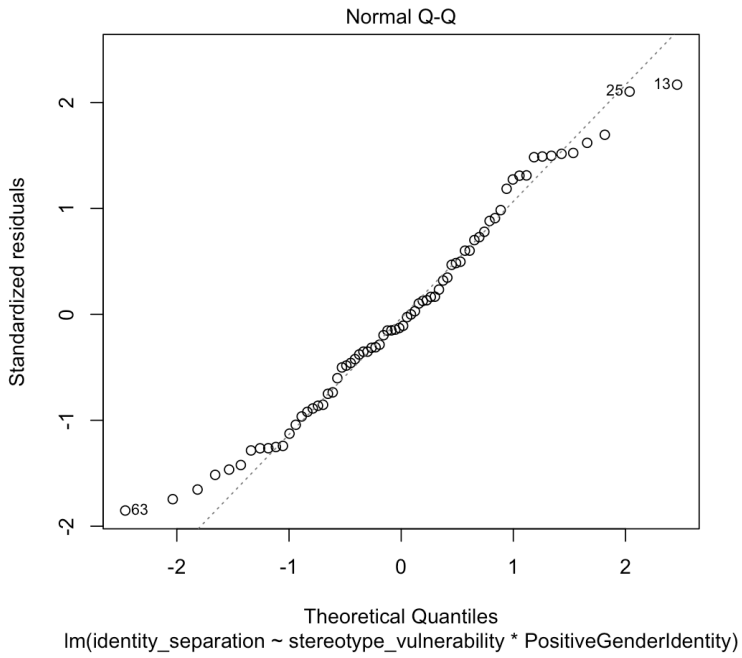
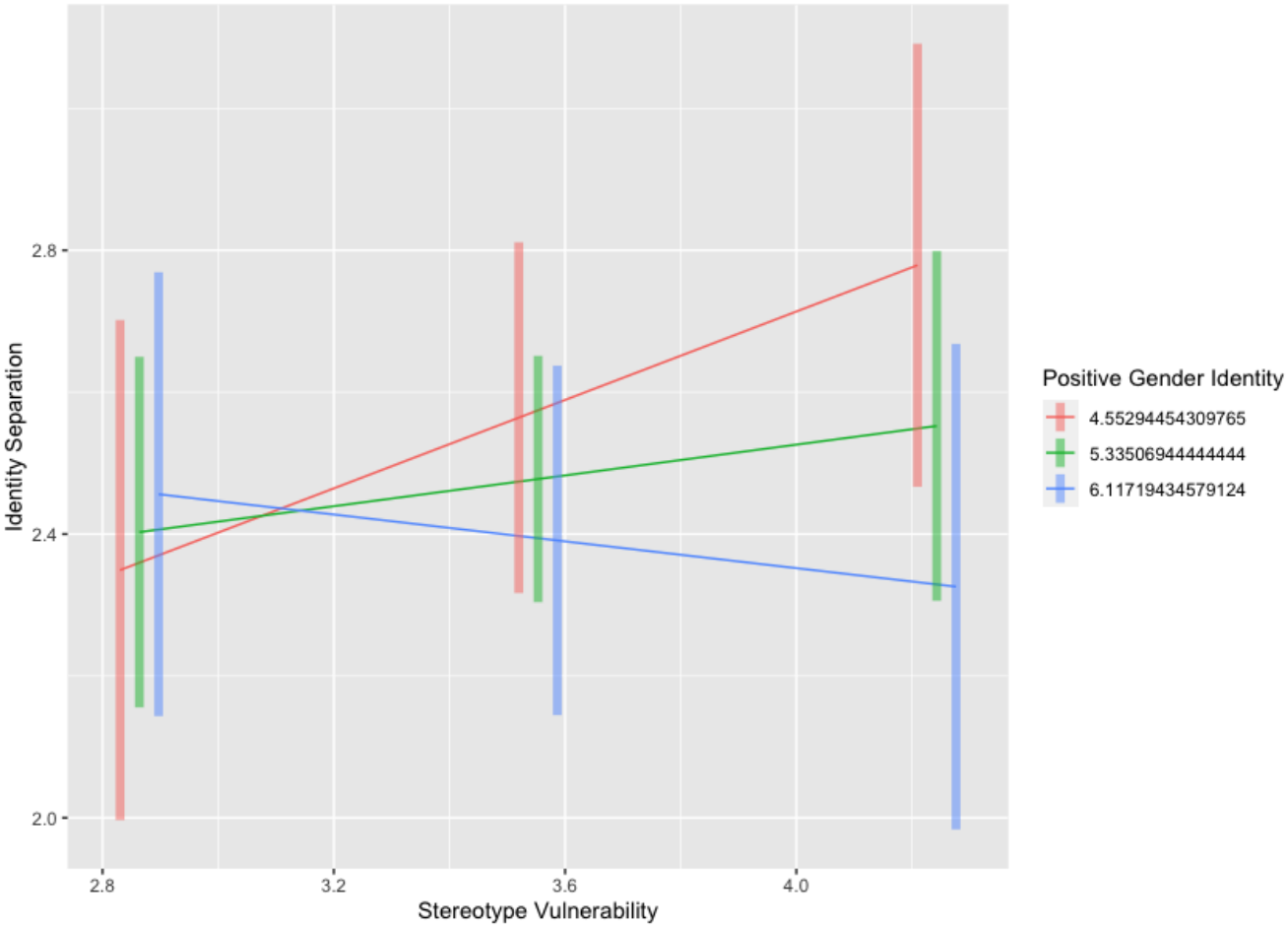


Figure 4. Interaction plot showing the effect of Stereotype Threat Vulnerability on Identity Separation, moderated by Positive Gender Identity



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APPENDIX A

Informed Consent Form

Title of research study: A Managerial In-Basket Exercise

Investigators: Dr. Roseanne Foti, Yasmine Elfeki

I. Purpose of the Study: The purpose of this study is to explore and investigate leadership abilities, individual differences, and leadership performance.

II. Procedures: You will be introduced to a managerial simulation task. You will then be asked to complete this simulation task (45 minutes), after which you will be asked to complete a few brief questionnaires. In all, the total time required to complete this experiment will be approximately 90 minutes. You may choose not to answer any question and may withdraw from the study at any point.

III. Risk:

There are no more than minimal risks involved in participation in this study.

IV. Benefits: The In-Basket exercise is a commonly used assessment and training tool, used by many organizations for training and selection purposes. It represents an individual work sample designed to simulate important aspects of the managerial and leadership roles. Participation in this study may help you practice and experience what an actual in-basket assessment is like. Participants may request a summary of the results of this study by contacting the researcher, Yasmine Elfeki at yelfeki@vt.edu.

V. Extent of Anonymity and Confidentiality: The researchers will not release the results of the study to anyone other than individuals working on the project without written consent. The investigators listed at the top will be given access to the survey results in order to transcribe the data. All information given during this study will remain anonymous. The survey will provide

information from a wide array of students from numerous organizations to ensure a large number of participants; therefore, individuals will not be identifiable from any information submitted in the study.

VI. Compensation Students: Participants will earn 1.5 extra credit point on SONA.

VII. Freedom to Withdraw: Your participation in this study is voluntary; you can leave the research at any time, for any reason, and it will not be held against you. If for any reason you decide that you would like to discontinue your participation, simply quit the survey program.

VIII. Approval of Research: This research has been reviewed and approved, as required by the Institutional Review Board (IRB) for Research Involving Human Subjects at Virginia Tech. You may communicate with them at 540-231-3732 or irb@vt.edu if:

- You have questions about your rights as a research subject
- Your questions, concerns, or complaints are not being answered by the research team
- You cannot reach the research team
- You want to talk to someone besides the research team to provide feedback about this research

IX. Subject's Responsibility: I voluntarily agree to participate in this study.

After reading this document, if you agree to the information stated, agree below and continue with the survey document.

X. Who to Contact for Research Related Questions: For questions about the research itself, or to report any adverse effects during or following participation, contact the researcher, Yasmine Elfeki at yelfeki@vt.edu or principle investigator, Dr. Roseanne Foti at rfoti@vt.edu.

XI. Subject's Permission: I have read and understand the Informed Consent and the conditions of this project. I have had all my questions answered. I hereby acknowledge the above and give my voluntary consent**.**

Name: _____

Date: _____

Signature: _____

APPENDIX B

Debriefing Form

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

Debriefing for study entitled: A Managerial In-Basket Exercise

The study that you have just participated in is meant to examine how the positivity of a woman's own judgments about her gender identity (e.g. I feel good about being a woman) may have a protective role in stereotype-inducing situations against performance deficits.

The data from this study do not contain any individuating information and your right to privacy is guaranteed if the results of this study become public. If you are confused about any aspect of this study, or would like to see the results of this study once completed, please feel free to contact either of the investigators listed below.

Thank you again for your participation. You may withdraw your data if you desire.

WE ASK THAT YOU DO NOT SHARE THE DETAILS OF THIS STUDY WITH ANYONE, AS THIS MIGHT AFFECT OUR DATA.

Contact Information:

Investigator: Yasmine Elfeki, yelfeki@vt.edu

Investigator: Dr. Roseanne Foti, rfoti@vt.edu

APPENDIX C

In-Basket Task

Instructions

Welcome to the in-basket task.

For the purposes of this exercise, you are to assume the role of Alex Judd, plant manager of the Southern Division at the Geometric Manufacturing and Development Company. The Geometric Company has just promoted you to the role plant manager. Although the situation is artificial, with some unrealistic restrictions on the time allowed, the problems are real, obtained from actual situations managers have encountered on their jobs.

You have worked in this new position for some time; however, you have had a number of other responsibilities that have kept you away from your office for a good deal of the time. You must leave your "office" promptly in one hour to catch a plane for an important meeting which you had committed yourself to attend before you learned of your appointment to your present position. This meeting will keep you away both Monday and Tuesday. You are working on Sunday afternoon because you want to take care of anything that might need your attention before Wednesday.

Now that you have a brief background of your new position, you are ready to go on with the exercise. Remember, the day is Sunday, July 11.

Your work documents consist of a calendar, and an in-basket containing the materials your secretary, Sam Butler, has left on your desk for your attention. These materials include emails, reports, memos, etc. **You have 30 minutes** to do as much as you can toward taking care of the problems present in your work documents. Please indicate on each item why you are taking the steps you have chosen and what you hope to accomplish.

You must take notes on everything you decide or do. The blank text boxes below each memo provide you with enough room to record this information. Make memos to yourself about things you want to do when you get back. Draft letters or emails, if appropriate, for your secretary to prepare. Record (in the form of notes) what you will say on the phone, and say directly to your secretary and others, and what your intentions are as well as your actions. Create agenda for meetings you may want to call. Sign papers if appropriate. Everything you decide or do should be in writing.

July						
Sunday	**Monday**	**Tuesday**	**Wednesday**	**Thursday**	**Friday**	**Saturday**
					1	**2**
3	**4**	**5**	**6**	**7**	**8**	**9**
10	**11**	**12**	**13**	**14**	**15**	**16**
17	**18**	**19**	**20**	**21**	**22**	**23**
24	**25**	**26**	**27**	**28**	**29**	**30**

The Geometric Company

125 Anderson Street Allandale, New York

July 9th, 2022

Alex,

Let me be the first to congratulate you on your new promotion. Leadership thinks you have a lot of potential and I couldn't agree more. I think it's imperative that we meet to discuss your new position as soon as possible. I want to give you an overview of what we expect from you and answer any questions you might have regarding your new responsibilities. This is a very important position and there is a lot of work that needs to be done. I'm very busy this month and the only time I'm available is on July 16th from 9:30 a.m. to 11:00 a.m., so please be sure to stop by my office then.

Brooks Felton

Operating Vice President

Electronic Mail Message

Date: 7/8/22 7:14 AM

Sender: Brooks Felton

To: Alex Judd

Priority: Normal

Subject: Safety Inspection

I want to give all of the plant managers a heads up regarding the state safety inspector who will be visiting the production plant three months from now on October 7th. Please review the state safety guidelines and ensure that all of your employees are in compliance.

Brooks Felton

Operating Vice President

Electronic Mail Message

Date: 7/8/22 7:14 AM

Sender: Brooks Felton

To: Alex Judd

Priority: Normal

Subject: Safety Inspection

I want to give all of the plant managers a heads up regarding the state safety inspector who will be visiting the production plant three months from now on October 7th. Please review the state safety guidelines and ensure that all of your employees are in compliance.

Brooks Felton

Operating Vice President

Electronic Mail Message

Date: 7/8/22 10:20 AM

Sender: Chuck Hale

To: Alex Judd

Subject: Quarterly Sales Figures

Alex,

Just wanted to let you know that our very own Sue Martin was named employee of the month, not just for the Southern plant, bur for the entire company! Sue has done a fantastic job here at Geometric Company for over 10 years and consistently earns “excellent” performance ratings. Just thought you might like to know.

Sincerely,

Chuck Hale

Sales Manager

The Geometric Company

125 Anderson Street

Allandale, New York

INTRANET ANNOUNCEMENT

To: All Southern Plant Employees

From: Herb Milton

Just wanted to let everyone know that we will be celebrating August birthdays on August 30th at 12:00 p.m. in the plant break room. We will be having cake and ice cream to celebrate, so be sure to come and join us!

Thanks,

Herb Melton

The Geometric Company

125 Anderson Street

Allandale, New York

INTER-OFFICE MEMORANDUM

PROFICENCY RATING OF NON MANAGEMENT PERSONNEL

Name	**Rating**
Cooper	Poor
White	Excellent
Sutton	Poor
Long	Good
Jackson	Poor
Martin	Excellent
Gasta	Good
Fox	Poor
Bruner	Poor
Melton	Good
Johnson	Good
Hale	Good
Smith	Excellent
Hudson	Poor
Jones	Good
Thompson	Good
Brown	Good

Electronic Mail Message

Date: 7/8/22 10:20 AM

Sender: Wes Jones

To: Alex Judd

Subject: Personnel

Please let me have this form back at your earliest convenience. I‘ve been having a look over your people and I want to promote Joe Sutton to that foreman‘s opening and I need your signature.

I recommend the promotion of Joe Sutton to Foreman.

_____

Shift Supervisor

Electronic Mail Message

To: J.J. Sharp, Paul Quick, Alex Judd

From: Michael Thompson

Simplex will be testing the fire alarm systems in the following plants during the month of July 2022: Southern, Eastern, Western

The fire alarm horns/speakers will be sounding and the strobe lights will be flashing at times during this testing.

July 6th --Southern

July 14th -- Eastern

July 16th-- Western

Please notify your people accordingly.

Michael Thompson

Geometric Company

Facilities Services/Building Systems Coordinator

The Geometric Company

VOICE MAIL

July 8, 2022

Mr. Judd, call Dr. Franz regarding the vacuum tube.

Jane Butler

Administrative Assistant

Electronic Mail Message

Date: 7/2/22 10:20 AM

To: Alex Judd

From: John Pushing

Subject: Acme Manufacturing Company

Dear Mr. Judd,

I‘m going to be visiting clients in your area on July 16th to discuss our newest line of production machinery and I would love to have the opportunity to stop by and talk with you about the advantages that our newest products have to offer.

Would you be available to meet with me on the morning of the 16th from 9:00 a.m. to 11:00 a.m.? Please let me know at your earliest convenience.

Sincerely,

John Pushing

Regional Sales Manager

Acme Manufacturing Equipment Company

Electronic Mail Message

Date: July 2, 2022

To: Alex Judd

From: Joe Sutton

Subject: Merit bonuses

Mr. Alex Judd,

We think Mr. Miller is incapable of handling this issue, so we are bypassing him and coming directly to you. We the undersigned are strongly against the policy of giving merit bonuses. We think it is political, and an unfair way to bribe workers. We plan to take this up with the union unless it is stopped.

Sutton

Jackson

Fox

Cooper

Electronic Mail Message

Date: 7/1/22 10:20 AM

To: Alex Judd

From: John Simmons

Subject: Complaint

Dear Mr. Judd:

I‘m writing to you in regards to Ryan Bruner. Though the quality of the work that your design team has produced for us in the past has always been of the highest quality, my interactions with Mr. Bruner over the past several months have been highly contentious. He has been very curt in his communications with us and becomes very defensive whenever we present him with requests for changes in the design plan. In several cases he even suggested that we don‘t know what we‘re talking about and has refused to make the changes we have requested of him.

Our firm has been doing business with The Geometric Company for over 7 years. On the whole we have enjoyed our relationship with your company. However, if this matter is not resolved ASAP I am afraid we will have to consider taking our business elsewhere.

John Simmons

John Simmons, President

BARTELSON COMPANY

Electronic Mail Message

Date: 7/1/22 10:20 AM

To: Alex Judd

From: Joe White

Subject: Community Relations

Dear Will,

It has come to my attention that some of your people have been seen in some questionable areas of town. You know how important community relations are for us. I wish you would talk to some of them and straighten this out. Their names are:

Cooper

Sutton

Long

Jackson

Fox

Electronic Mail Message

Date: 7/1/22 10:20 AM

To: All Southern Plant Employees

From: Herb Melton

Subject: Flu-shots

Flu-season is fast approaching and the company health care provider will be sending representatives out to each plant to provide flu-immunization shots. Although employees are not required to have the shot, we want to ensure that everyone who would like to get the shot is able to participate. The representatives will be visiting the Southern plant facility on September 10th. Please plan accordingly.

Thanks!

Herb Melton

Personnel Supervisor

The Geometric Company

INTER-OFFICE MEMORANDUM

ABSENCES DURING THE MONTH OF JULY

Name	Days	Name	Days
Felton	0	Martin	1
Gasta	2	Jackson	6
Rogers	3	Melton	0
Fox	0	Bruner	3
Hale	1	Johnson	2
Mason	7	Smith	0
Hudson	1	Sutton	8
Jones	0	Brown	1
Thompson	1	Cooper	0
White	1		

Electronic Mail Message

Date: 7/6/22 10:50 AM

To: Alex Judd

From: Walter Black

Congratulations on your promotion. You are in an important job and we have great faith in you ability to handle it. If there is anything I can do to be of assistance to you while you‘re getting settled please don‘t hesitate to ask. Oh, by the way, my wife and I would like you to join us for dinner on Wednesday, July 14, at the country club. We‘ll expect you around 7 p.m. at the house, 419 West Haven drive.

Walter

WILKERSON COMPANY

1 EAST WAY

WILCOX, VIRGINIA

July 7, 2022

Plant Superintendent

Geometric Company

Wilcox, Virginia

Dear Mr. Judd:

Your handling of the design plans for my job has been very poor in my estimation. Your use of manpower has been especially faulty, and I am of the opinion that you don‘t use your people very effectively. Unless there is a substantial improvement, we may very well terminate your services and go to another company.

I am sending to you (on Monday) the specifications for the new designs which must be completed and received by Wednesday, 5 p.m.

Ed Lasting

Ed Lasting, President

WILKERSON COMPANY

Will,

Make sure you get your design team on this project right away. This needs to be taken care of immediately.

Brookes Felton

Operating Vice President

The Geometric Company

Eastern Division

INTER-PLANT MEMORANDUM

July 8, 2022

Mr. Alex Judd:

Will, I'll need four of your design people from Monday until Thursday for a special work-up on the motor for the drainage system for the township of Allandale.

Paul Quick

Eastern Plant Superintendent

Electronic Mail Message

Date: 7/7/22 10:50 AM

To: Alex Judd

From: Brookes Felton

Will,

Just wanted to let you know that I met with Walter Black the other day and he mentioned how impressed he is with the performance of your plant, especially in regard to marketing. He has heard nothing but positive comments from members of the community in Wilcox regarding the new plant there. People seem to be genuinely excited and I'm sure our marketing team down there has a lot to do with that. Just thought you should know.

Keep up the good work!

Brookes Felton

Operating Vice President

Electronic Mail Message

Date: 7/8/22 1:20 PM

To: Alex Judd

From: J.J. Sharp

Will, I'll need those two design men on Monday and Tuesday to get the X-5507 engine job completed on time. I appreciate in advance your willingness to help.

J.J. Sharp

Western Plant Superintendent

Electronic Mail Message

Date: 6/28/22

To: Alex Judd

From: Carl Ryan

Qualitech Corporation

Wilcox, Virginia

I was in Washington the other day and I overheard something that may be of interest to you. It seems that as of July 2nd, many of the government offices are planning to switch to small inter-communication systems that will increase the adaptability of their communication networks. The interesting thing from your point of view their possibly using the 4X-Model put out by the Geometric Company. If you could ―catch the proper ears‖ they might hold off on the switch until your company‘s system could be installed.

Good luck.

Sincerely,

Carl Ryan

Qualitech Corporation

City of Wilcox, Virginia

July 8, 2022

Plant Manager

Southern Area

The Geometric Company, Wilcox, Virginia

Dear Sir,

It is with great eagerness that we have looked forward to the completion of your plant. It will be a significant factor in the growth of the area. I would like to take this opportunity to welcome you and invite you to a meeting of the local business committee. Traditionally, we discuss topics of mutual interest, affecting local and national business, and use this as an opportunity to socialize which in you case would afford an opportunity for you to meet with us. Looking forward to seeing you on Wednesday, the 14th, 7 p.m. at the Elks Club.

Cordially,

W.W. Weston

Mayor

Wilcox, Virginia

Electronic Mail Message

Date: 6/29/22

To: Alex Judd

From: Steve Thompson

Below is the requisition form for that special drawing layout. It's expensive, but it's really a beauty.

Steve Thompson

I approve the special drawing layout.

_____

Electronic Mail Message

Date: 7/6/22

To: Alex Judd

From: Steve Hudson

Please add the following names and numbers to your phone lists:

Carla Epperly, our new Personnel secretary – 261-8874

Sam Jones, a new employee in market research – 261-7741

Thanks,

Steve Hudson

Electronic Mail Message

Date: 7/9/22

To: Alex Judd

From: Steve Thompson

Mr. Judd,

I‘m planning to release three of my men on a temporary loan to the Eastern Plant. You‘ve been away and Quick‘s request came to me and we can spare the men now, far as I know. I‘ll see you next week.

Steve

Design Supervisor

Allied Sheet Metal

1204 EASTERN LAKE ROAD

BEAUMONT, KANSAS

July 9, 2022

Plant Superintendent

Geometric Company

Wilcox, Virginia

Dear Sir,

The supplies promised for July 12 cannot be delivered. I sincerely regret the delay but a power breakdown has about paralyzed my operation. I will get the material to you just as soon as possible. Please bear with me.

Sincerely,

Ed Hunter

President, Allied Sheet Metal

P.S. If you could contact me on Monday I could let you know about some material being stored by the AAMCO Co. in Sanford, Virginia. If you need it very badly they might be able to loan you some, as the union strike has temporarily shut down their operation.

Electronic Mail Message

Date: 7/9/22

To: Alex Judd

My wife and I have a garden at home and we seem to have more squash and zucchini than we know what to do with. I‘ve left a grocery bag full of the extra squash and zucchini on the table in the break room. Could you please let the rest of the employees know that they are free to help themselves?

Thanks,

Simpson

Electronic Mail Message

Date: 7/1/22

To: Alex Judd

From: Ronald Cooper, Don Jackson, Peter Fox

Subject: Promotions

It seems as if those employees past 50 years of age are being bypassed for promotion in favor of so-called ―potential management‖ but yet untried college people of about 30. Doesn‘t experience and years of faithful service deserve some consideration? We plan to take this up with the union unless we hear from you shortly about this policy.

INTRANET ANNOUNCEMENT

Date: 6/2/22

To: All Geometric Company Employees

From: Walter Black

Subject: Company Picnic

Greetings,

Just a reminder that the annual company-sponsored Barbeque picnic will be taking place on June 12th at Regal Park here in Wilcox. All Geometric Company employees and their families are invited to attend.

Festivities will begin at 12:30 p.m. Hotdogs, Hamburgers, and all the Fixin's (ketchup, mustard, tomatoes, etc…) will be provided, along with an assortment of non-alcoholic beverages. Please be sure to bring your favorite side dish to share.

We look forward to seeing everybody there!

Walter Black

Geometric Company President

Electronic Mail Message

July 5, 2022

Mr. Judd

Geometric Company

Wilcox, Virginia Tech

Dear Mr. Judd:

As Chairman of the highway beautification committee, I wish to thank you for making Don Jackson available to work on the committee. He has been an important factor in the success of the drives so far by his untiring and enthusiastic efforts.

The committee was especially pleased last week when Mr. Jackson assured us that the Geometric Company would make a $1,500 contribution to this worthy project. It is nice to know that your company recognizes the value of community projects.

We plan to print an article in the Journal on July 19th, announcing the corporate gifts to date.

Thank you again for your community spirit.

Sincerely,

E.E. West

Editor, Wilcox Journal

Electronic Mail Message

Date: 7/8/22

To: Alex Judd

From: Peter Fox

I want to lodge a formal complaint regarding the vacation policy of this company. As a loyal employee of 15 years plus, I deserve more than two weeks of paid vacation, especially when you consider the fact that other employees with less than ten years of experience at Geometric are given just as much vacation time as I am! This is unfair and I plan to take the matter up with union if it‘s not addressed soon.

Peter Fox

Shift 4 Production Supervisor

The Geometric Company

INTER-OFFICE MEMORANDUM

Mr. Alex Judd,

I need your signature for our new T.V. ad campaign. Please provide your approval as soon as possible so that we can start up our needed marketing push.

Bill Johnson

I approve the new T.V. ad campaign.

_____

Southern Plant Supervisor

Electronic Mail Message

Date:7/2/22

To: Alex Judd

From: Robert Long

Mr. Alex Judd,

We have gotten air time on Channel 5 for a five-minute interview with the typical assembly line worker. I must have the name of the man in my office by July 15th. Let‘s have a pleasant looking, personable, and above all, upstanding individual. Somebody suggested Joe Sutton and unless I hear otherwise, I‘ll use him.

Robert Long

T.V. Manager

_____

Southern Plant Supervisor

Electronic Mail Message

Date:7/6/22

To: Alex Judd

From: Martha Brown

Mr. Judd,

I hate to be the one to have to do this, but I'm afraid I don't know what else to do. I'm concerned that one of the employees in the accounting department may be stealing company money. I can't be absolutely sure, but I have a strong suspicion that this individual is dishonest and has been taking company money for the past several months. What should I do?

Sincerely concerned,

Martha Brown

Statistical Clerk

The Geometric Company

INTER-OFFICE MEMORANDUM

July 7th, 2022

The vacation of Jane Butler will commence July 13th through the 29th.

Approved by: _____

Plant Supervisor

APPENDIX D

Manipulation Check (Positive Gender Identity)

Adapted from Luhtanen & Crockers's (1992) CSES

Rate your agreement with each item on a scale that ranges from 1 (strongly disagree) to 7 (strongly agree).

- I often regret that I am a woman
- In general, I'm glad to be a woman
- Overall, I often feel that being a woman is not worthwhile
- I feel good about being a woman
- Overall, being a woman considered good by others
- Most people consider women, on the average, to be more ineffective than men
- In general, others respect women
- In general, others think that being a woman is unworthy

APPENDIX E

Perceived Performance Measures

Adapted from the Individual Workplace Performance Questionnaire (IWPQ) by Koopmans et al. (2013, 2016)

Rate your agreement with each item on a scale that ranges from 1 (strongly disagree) to 5 (strongly agree).

1. I performed well on the leadership task I just completed
2. I managed to plan my work so that I finished it on time
3. I was able to set priorities
4. I was able to carry out my task efficiently
5. I managed my time well
6. I am satisfied with my overall performance on this task

APPENDIX F

Identity Separation Measure

Adapted from Benet-Martinez and Haritatos' (2005) Bicultural Identity Integration Scale (BIIS-1), and Huynh's (2009) BIIS-2

Rate your agreement with each item on a scale that ranges from 1 (strongly disagree) to 5 (strongly agree).

Conflict/Harmony subscale

1. I feel conflicted between the "feminine" and "leader-like" ways of doing things (.62)
2. *I feel that my female identity and leader identity are incompatible (.56)*
3. I feel like someone moving between my gender and leader identities. (.7)
4. *Being a female leader means having two forces pulling on me at the same time. (.66)*

Distance/Blendedness subscale

5. I keep my female and leader identities separate (.58)
6. I feel like I can combine my female and leader identities (-.79)

BIIS-2 items are in *italics*. Brackets indicate factor loadings.

APPENDIX G

Self-Efficacy for Leadership

Murphy, (1992)

Rate your agreement with each item on a scale that ranges from 1 (strongly disagree) to 5 (strongly agree).

1. I feel that I know a lot more than most leaders about what it takes to be a good leader.
2. I know what it takes to make a work group accomplish its tasks.
3. In general, I am very good at leading a group of my peers.
4. I am confident of my ability to influence a work group that I lead.
5. I know what it takes to keep a work group running smoothly.
6. I know how to encourage good work group performance.
7. I feel comfortable allowing most group members to contribute to the task when I am leading a work group.
8. Overall, I believe that I can lead a work group successfully.

APPENDIX H

Demographics Measure

Please answer the following questions:

Please indicate your age: _____

Please indicate your major: _____

Please indicate your race:

- White
- Black or African American
- Asian
- Hispanic
- More than one race
- Other

Academic Standing

- Freshman
- Sophomore
- Junior
- Senior

Are you enrolled (or did you enroll in the past) in any courses that involve any of the below topics? (choose all that apply)

- Business
- Management
- Leadership
- Industrial/Organizational Psychology

- HR
- Social Psychology

Do you have a job?

- Yes
- No

If Yes, does it involve a team leadership role?

- Yes
- No

Are you involved in any volunteer activities/student organizations? (*Circle one*)

Yes **No**

If Yes, briefly describe the activities you are involved in: _____

APPENDIX I

Stereotype Threat Vulnerability Scale (Spencer, 1993)

The following questions are about how you feel about being a woman, and about how these feelings may affect your perceptions of your leadership ability. For some people their gender is a major concern; for others it is less important. We would like you to consider your gender and respond to the following statements. There are no right or wrong answers to any of these statements; we are interested in your honest reactions and opinions.

Rate your agreement with each item on a scale that ranges from 1 (strongly disagree) to 7 (strongly agree).

1. The experimenters expected me to do poorly on the task because of my gender.
2. Success in the task may have been easier for people of my gender.
3. 1 doubt that others would think that I have less leadership ability because of my gender.
4. Some people feel I have less leadership ability because of my gender.
5. People of my gender rarely face unfair evaluations in leadership positions.
6. In leadership positions, people of my gender often face biased evaluations from others.
7. My gender does not affect people's perception of my leadership ability.
8. In leadership positions, I often feel that others look down on me because of my gender.

APPENDIX J

Scoring Decision Aid

(Used to measure task performance)

Item #1 (Related to Item 8)

Resolve Conflicting Requests

Communicate to affected parties that there is a conflict

i. Brookes Felton's request conflicts w/ sales rep. request to meet on the same date and time (item 8). Should let whomever they decide to turn down the reason for being unable to meet.

Pro*vided rationale for regarding how conflict will be resolved*. (4)

i. Should say why they either chose to meet with Brooks Felton or with sales rep.

Prioritize Issues

Prioritize requests from superiors

i. Should choose to meet with Brookes Felton rather than sales rep.

Item #2

Prioritize Issues

Ignore issues that are non-time sensitive

i. This item should be placed aside as the deadline is too far away to be dealt with right now.

Item #3

Effective Leadership

Personally praise an employee who does something positive.

i. Write Sue Martin a personal note commending here excellent work or

ii. Plan to meet w/ or call Sue Martin personally to commend her

Public recognition of an employee or a team who does something outstanding.

i. Send a note out to everyone in the plant or her area recognizing her outstanding performance.

Item #4 (Related to items: 9, 11, 13, 26, 28)

Resolution of critical issues

Specify what action(s) will be taken

i. This is a serious problem that needs to followed up on. Should plan to meet with production personnel in the near future to see how things are going and if issues have been resolved.

Designate who is responsible for the success of the action

i. Should note that production supervisor needs to take care of issues in his division

Specified date(s) that you will personally revisit this issue with those involved.

i. Should set a specific date in the near future to meet with production personnel, see how things are going and if issues have been resolved.

Efficient use of meetings

Meeting with supervisors to discuss issues that exist at the divisional level

i. There are some serious performance issues in the production area that need to be addressed. Should meet with production supervisors to find out what is going on and get things sorted out.

Disseminating a meeting agenda to all attendees.

i. If meetings are scheduled, should plan an agenda, such as:

1. Why is chain of command being broken?

2. Why is performance low and absences high in production?

3. What are we going to do about this?

Specifying all employees who will attend each meeting

i. If meeting is scheduled, should make a list of who all they would like to attend the meeting.

Effective Leadership

Soliciting strategic advice from your boss

i. Should try to meet with Brookes Felton to discuss production issues and get advice from him.

Soliciting operational advice from other plant managers

i. Should try to meet with other plant managers to discuss your issues and get suggestions from them on how to address this issue.

Item #5 (Related to item 4)

Resolve Conflicting Requests

Communicate to affected parties that there is a conflict

i. Need to be assertive in letting Herb Melton know that he has:

1. Made a bad decision

2. Violated the chain of command

3. Let him know that this is unacceptable.

Pro*vided rationale for regarding how conflict will be resolved*. (4)

i. Joe Sutton is a poor performer and somewhat of a trouble maker. The evidence from items 4, 9 and 11 suggest that this promotion should not be approved.

ii. Should provide rationale to Herb Melton explaining why Joe Sutton should not be approved for promotion.

Effective Leadership

Informing subordinates that they should follow the chain of command.

i. Need to let Herb Melton that he has violated chain of command by going above the production supervisors head to request a promotion for Joe Sutton.

Being willing to say "no' if a request does not provide a tangible benefit.

i. The evidence from items 4, 9 and 11 suggest that this promotion should not be approved. Joe Sutton is a poor performer and somewhat of a trouble maker.

Item #6

Prioritize Issues

Ignore issues that are non-time sensitive

i. This item is out-dated and should be tossed in the ignore basket.

Item #7

Prioritize Issues

Delay taking action if you need more information

i. Don‘t know who Dr. Franz is, how to contact him, or why the vacuum tube is important.

Actively Manage Information.

Making requests for further information.

i. Should ask Jane Butler who Dr. Franz is, how to contact him, and why vacuum tube is important

Item #8 (Related to item 1)

Prioritize Issues

Prioritize requests from superiors

i. This request conflicts with Brookes Felton‘s request to meet (item 1). Should turn down this request and meet with Felton instead.

Resolve Conflicting Requests

Communicate to affected parties that there is a conflict.

i. Need to let sales rep know of conflict and explain that is why they must decline offer to meet with him.

Provided rationale regarding how the conflict will be resolved.

i. Should indicate that meeting w/Brookes Felton is more important and that is why this request will be turned down.

Item #9 (Related to items: 4, 11, 13, 26, 28)

Resolution of critical issues

Specify what action(s) will be taken

i. This is a serious problem that needs to followed up on. Should plan to meet with production personnel in the near future to see how things are going and if issues have been resolved.

Designate who is responsible for the success of the action

i. Should note that production supervisor needs to take care of issues in his division

Specified date(s) that you will personally revisit this issue with those involved.

i. Should set a specific date in the near future to meet with production personnel see how things are going and if issues have been resolved.

Efficient use of meetings

Meeting with supervisors to discuss issues that exist at the divisional level

i. There are some serious performance issues in the production area that need to be addressed. Should meet with production supervisors to find out what is going on and get things sorted out. For this item, should find out why subordinates are breaking chain of command and why they are dissatisfied.

Disseminating a meeting agenda to all attendees.

i. If meetings are scheduled, should plan an agenda, such as:

1. Why is chain of command being broken?

2. Why is performance low and absences high in production?

3. What are we going to do about this?

Specifying all employees who will attend each meeting

i. If meeting is scheduled, should make a list of who all they would like to attend the meeting.

Effective Leadership

Informing subordinates that they should follow chain of command.

i. These employees should not have come to you directly; they should have taken these issues up with production area supervisor James Miller. Need to communicate to these employees that breaking chain of command is unacceptable.

Soliciting strategic advice from your boss

i. Should try to meet with Brookes Felton to discuss production issues and get advice from him.

Soliciting operational advice from other plant managers

i. Should try to meet with other plant managers to discuss your issues and get suggestions from them on how to address this issue.

Holding employees accountable for poor performance.

i. Need to let production supervisors know that poor performance ratings are unacceptable.

Being willing to say "no" if a request does not provide a tangible benefit.

i. Need to contact or plan to contact each of the individuals who wrote this letter know that letter was inappropriate (e.g., broke chain of command, merit raises are company policy, etc…) and that the merit raise policy will not be changing anytime soon.

Item #10

Resolution of Critical Issues.

Specify what action(s) will be taken

i. This is a crucial issue. Need to specify what will be done to address it.

Designate who is responsible for success of the action.

i. Need to indicate that John Gasta and Ryan Bruner will be held responsible for ensuring that this doesn't happen in the future.

Specify date(s) that you will personally revisit this issue with those involved

i. Should specify a date to follow-up with design team supervisor in the future to make sure that this issue has been resolved.

If issue involves a customer, specify what will be done to ensure customer satisfaction.

i. Should either write or plan to write an apology to Johns Simmons for what happened, or direct John Gasta and/or Ryan Bruner to write a direct apology for what happened.

Effective Use of Meetings

Meeting with supervisors to discuss issues that exist at the divisional level.

i. Could call a meeting with John Gasta or Steve Thompson or both to discuss this issue and find out if they are aware of what‘s going on.

Using one-on-one meetings to address an individual employee issue.

i. Should call a meeting with Ryan Bruner to address this issue.

Disseminating a meeting agenda to all attendees. i. Should come up with agenda to address problematic behavior such as (but not limited to):

1. Go over problem

2. Seek Ryan Bruner‘s perspective

3. Let Ryan Bruner know that this kind of incident is unacceptable

Specifying all employees who sill attend each meeting.

i. If they scheduled a meeting to deal with this issue, should include a list of who to invite.

Included area supervisor in meeting with problem employee. (22)

If meeting with a problem employee, be sure to employee’s supervisor attends.

i. Should schedule a meeting between Ryan Bruner, John Gasta, and yourself to discuss this issue.

Item #11 (Related to items: 4, 9, 13, 26, 28)

Resolution of critical issues

Specify what action(s) will be taken

i. This is a serious problem that needs to followed up on. Should plan to meet with production personnel in the near future to see how things are going and if issues have been resolved.

Designate who is responsible for the success of the action

i. Should note that production supervisor needs to take care of issues in his division

Specified date(s) that you will personally revisit this issue with those involved.

i. Should set a specific date in the near future to meet with production personnel see how things are going and if issues have been resolved.

Efficient use of meetings

Meeting with supervisors to discuss issues that exist at the divisional level

i. There are some serious performance issues in the production area that need to be addressed. Should meet with production supervisors to find out what is going on and get things sorted out.

Disseminating a meeting agenda to all attendees.

i. If meetings are scheduled, should plan an agenda, such as:

4. Why is chain of command being broken?

5. Why is performance low and absences high in production?

6. What are we going to do about this?

Specifying all employees who will attend each meeting

i. If meeting is scheduled, should make a list of who all they would like to attend the meeting.

Effective Leadership

Soliciting strategic advice from your boss

i. Should try to meet with Brookes Felton to discuss production issues and get advice from him.

Soliciting operational advice from other plant managers

i. Should try to meet with other plant managers to discuss your issues and get suggestions from them on how to address this issue.

Item #12

Resolution of Critical Issues

Ignore issues that are non-time sensitive.

i. The flu-shots are more than 2 months away and nothing to be done at this point about it.

Item #13 (Related to items 4, 9, 11, 26, 28)

Resolution of critical issues

Specify what action(s) will be taken

i. This is a serious problem that needs to followed up on. Should plan to meet with production personnel in the near future to see how things are going and if issues have been resolved.

Designate who is responsible for the success of the action

i. Should note that production supervisor needs to take care of issues in his division

Specified date(s) that you will personally revisit this issue with those involved.

i. Should set a specific date in the near future to meet with production personnel see how things are going and if issues have been resolved.

Efficient use of meetings

Meeting with supervisors to discuss issues that exist at the divisional level

i. There are some serious performance issues in the production area that need to be addressed. Should meet with production supervisors to find out what is going on and get things sorted out.

Disseminating a meeting agenda to all attendees.

i. If meetings are scheduled, should plan an agenda, such as:

1. Why is chain of command being broken?

2. Why is performance low and absences high in production?

3. What are we going to do about this?

Specifying all employees who will attend each meeting

i. If meeting is scheduled, should make a list of who all they would like to attend the meeting.

Effective Leadership

Soliciting strategic advice from your boss

i. Should try to meet with Brookes Felton to discuss production issues and get advice from him.

Soliciting operational advice from other plant managers

i. Should try to meet with other plant managers to discuss your issues and get suggestions from them on how to address this issue.

Item #14 (Related to item 20)

Resolve Conflicting Requests

Communicate to affected parties that there is a conflict

i. This request directly conflicts with invitation from the mayor (item 20) and should be identified as such. Should let whomever they decide to turn down the reason for being unable to meet.

Provided rationale for regarding how conflict will be resolved. (4)

ii. Should say why they chose to either have dinner with President of company or attend city business meeting.

Prioritize Issues

Prioritize requests from superiors

i. Should choose to have dinner with Walter Black.

Item #15 (Related to items: 16, 18, 23)

Prioritize Issues

Prioritize legitimate customer requests

i. Should choose not to loan design team members out to other supervisors so that this issue receives all of the manpower you have.

Resolution of critical issues

Specify what action(s) will be taken

i. This is a critical issue. Need to specify how it will be addressed.

Designate who is responsible for success of the action.

i. Design area supervisor should be designated as responsible for success of this action.

Specify date(s) that you will personally revisit this issue with those involved

i. Should write a reminder to follow-up with design area supervisor on the 14th to make sure this issue has been resolved.

If issue involves a customer, specify what will be done to ensure customer satisfaction.

i. Need to apologize to Ed Lastings and let him know that situation will be resolved.

Efficient Use of Meetings

Meeting with supervisor to discuss issues that exist at the divisional level.

i. Should schedule a meeting with design team supervisor to discuss this issue and find out what happened.

ii. Could also set up a meeting with design area supervisor to address communication problems in area.

Specifying all employees who will attend each meeting.

i. If they decide to call a meeting about this issue, should include a list of invitees, such as design supervisors.

Disseminating a meeting agenda to all attendees.

i. If they set up a meeting with design area, should have an agenda such as:

1. Why did this happen?

2. What can we do in the future to prevent this from happening?

Item #16 (Related to items: 15, 18, 23)

Resolve Conflicting Requests

Communicate to afflicted parties that there is a conflict

i. Apologize to Paul Quick for confusion and let him know why request cannot be accommodated

Provide rationale regarding how conflict will be resolved.

i. Should recognize that conflict will not allow them to loan people to Quick and resolve issue with Ed Lastings; should provide rationale for how Ed Lasting issue will be addressed.

Prioritize Issues

Prioritize legitimate customer requests

i. This request directly conflicts with item need to resolve Wilkerson Company issue (item 15).

Item #17

Effective Leadership

Personally praising an employee who does something positive.

i. Could do any of the following:

1. Write Ed Smith a personal note commending his excellent work.

2. Plan to meet w/ Ed Smith personally to commend him.

Public recognition of an employee or a team who does something outstanding.

i. Send a note out to entire marketing department recognizing their outstanding performance and commending them as a group.

ii. Send a note out to everyone in the plant area recognizing the marketing department‘s outstanding performance.

Item #18 (Related to items: 15, 16, 23)

Resolve Conflicting Requests

Communicate to afflicted parties that there is a conflict

i. Apologize to Paul Quick for confusion and let him know why request cannot be accommodated

Provide rationale regarding how conflict will be resolved.

i. Should recognize that conflict will not allow them to loan people to J.J. Sharp and resolve issue with Ed Lastings; should provide rationale for how Ed Lasting issue will be addressed.

Prioritize Issues

Prioritize legitimate customer requests

i. This request directly conflicts with item need to resolve Wilkerson Company issue (item 15).

Item #19

Prioritize Issues

Ignore issues that are not important.

i. Too late to do anything about this item, so should just toss it in recycling bin.

Item #20 (Related to item 14)

Resolve Conflicting Requests

Communicate to affected parties that there is a conflict

i. This request directly conflicts with invitation from the mayor (item 20) and should be identified as such. Should let whomever they decide to turn down the reason for being unable to meet.

Provided rationale for regarding how conflict will be resolved. (4)

i. Should say why the those to either have dinner with President of company or attend city business meeting.

Prioritize Issues

Prioritize requests from superiors

i. Should choose to have dinner with Walter Black.

Item #21

Prioritize Issues

Delay taking action if you need more information

i. Don‘t know what this drawing is for, why it‘s important, or why you‘re being asked to approve it.

Actively Manage Information.

Making requests for further information.

i. Could do any number of things, such as contacting design supervisor to find out what this drawing is for and to ask his opinion of it.

Effective Leadership

Informing subordinates that they should follow the chain of command.

i. Should contact design supervisor to find out why this request was sent to you and not him.

Item #22

Prioritize Issues.

Ignore unimportant issues.

i. This information should be kept for future reference, but is not related to any pressing issues and should be ignored.

Item #23 (Related to items: 15, 16, 18)

Resolve Conflicting Requests

Communicate to afflicted parties that there is a conflict

i. Apologize to Steve Thompson for confusion and let him know why request cannot be accommodated

Provide rationale regarding how conflict will be resolved.

i. Should recognize that conflict will not allow them to loan people Steve Thompson and resolve issue with Ed Lastings; should provide rationale for how Ed Lasting issue will be addressed. (i.e., not loaning members of design team because they are needed to address Wilkerson Company issue).

Prioritize Issues

Prioritize legitimate customer requests

i. This request directly conflicts with item need to resolve Wilkerson Company issue (item 15).

Item #24

Prioritize Issues

Delay taking action if you need more information

i. Don‘t know how vital supplies in letter are.

Actively Manage Information.

Making requests for further information.

i. Should talk to either production or design team or both to find out how vital these supplies are before contacting AAMCO.

Item #25

Prioritize Issues.

Ignore unimportant issues.

i. This item is trivial and should be ignored.

Item #26 (Related to items: 4, 9, 11, 13, 28)

Resolution of critical issues

Specify what action(s) will be taken

i. This is a serious problem that needs to followed up on. Should plan to meet with production personnel in the near future to see how things are going and if issues have been resolved.

Designate who is responsible for the success of the action

i. Should note that production supervisor needs to take care of issues in his division

Specified date(s) that you will personally revisit this issue with those involved.

i. Should set a specific date in the near future to meet with production personnel see how things are going and if issues have been resolved.

Efficient use of meetings

Meeting with supervisors to discuss issues that exist at the divisional level

i. There are some serious performance issues in the production area that need to be addressed. Should meet with production supervisors to find out what is going on and get things sorted out.

Disseminating a meeting agenda to all attendees.

i. If meetings are scheduled, should plan an agenda, such as:

1. Why is chain of command being broken?

2. Why is performance low and absences high in production?

3. What are we going to do about this?

Specifying all employees who will attend each meeting

i. If meeting is scheduled, should make a list of who all they would like to attend the meeting.

Effective Leadership

Soliciting strategic advice from your boss

i. Should try to meet with Brookes Felton to discuss production issues and get advice from him.

Soliciting operational advice from other plant managers

i. Should try to meet with other plant managers to discuss your issues and get suggestions from them on how to address this issue.

Effective Leadership

Informing subordinates that they should follow the chain of command.

i. These employees should not have come to you directly; they should have taken these issues up with production area supervisor James Miller. Need to communicate to these employees that breaking chain of command is unacceptable.

Holding employees accountable for poor performance.

i. Need to let production supervisors know that poor performance ratings are un-acceptable.

Being willing to say "no" if a request does not provide a tangible benefit.

i. Need to contact or plan to contact each of the individuals who wrote this letter know that you don't' appreciate threat that the promotions are based on performance and managerial potential, not how long someone has been on the job.

Item #27

Prioritize Issues.

Ignore unimportant issues.

i. This item is trivial and should be ignored.

Item #28 (Related to items: 4, 9, 11, 13, 26)

i. Efficient Use of Meetings

Using one-on-one meetings to address and individual employee issue

i. Don Jackson needs to be straightened out with regards to a number of issues, including why he chose to committee company money to highway beautification committee without prior permission.

Disseminating a meeting agenda to all attendees

i. Could be:

1. Highway beautification commitment

2. Following chain of command

3. Performance issues

If meeting with a problem employee, be sure the employee's supervisor attends the meeting.

i. If they plan meeting with Don Jackson, should include his direct supervisor.

ii. Actively Managing Information

Making requests for further information.

i. Hold off on committing money to highway beautification committee until you can find out more about it. Could contact committee to find out more about

and/or find out if Brookes Felton approves

ii. Effective Leadership

Informing subordinates that they should follow the chain of command.

i. Don Jackson needs to be reprimanded, either by you or his direct supervisor, for going outside his authority to commit company money to non-work related project without permission.