

2011

Taking a Turn Toward the Masculine: The Impact of Mortality Salience on Implicit Leadership Theories

Crystal L. Hoyt
University of Richmond, choyt@richmond.edu

Stefanie Simon

Audrey N. Innella

Follow this and additional works at: <https://scholarship.richmond.edu/jepson-faculty-publications>



Part of the [Feminist, Gender, and Sexuality Studies Commons](#), [Leadership Studies Commons](#), [Personality and Social Contexts Commons](#), and the [Social Psychology Commons](#)

Recommended Citation

Hoyt, Crystal L., Stefanie Simon, and Audrey N. Innella. "Taking a Turn Toward the Masculine: The Impact of Mortality Salience on Implicit Leadership Theories." *Basic and Applied Social Psychology* 33, no. 4 (2011): 374-81. doi:10.1080/01973533.2011.614173.

This Article is brought to you for free and open access by the Jepson School of Leadership Studies at UR Scholarship Repository. It has been accepted for inclusion in Jepson School of Leadership Studies articles, book chapters and other publications by an authorized administrator of UR Scholarship Repository. For more information, please contact scholarshiprepository@richmond.edu.

Taking a turn toward the masculine:

The impact of mortality salience on implicit leadership theories

Crystal L. Hoyt
University of Richmond

Stefanie Simon
Tulane University

Audrey N. Innella
University of Central Florida

Author Note

Crystal L. Hoyt, University of Richmond; Stefanie Simon, Department of Psychology, Tulane University; Audrey N. Innella, Psychology Department, University of Central Florida

Correspondence concerning this article should be addressed to Crystal L. Hoyt, Jepson Hall, University of Richmond, Richmond, Virginia, 23173; Email: choyt@richmond.edu.

Abstract

The present research investigates the influence of subtle death-related thoughts (i.e., mortality salience), on people's images of effective leaders (i.e., their implicit leadership theories). We test the prediction that mortality salience will change the content of these implicit theories to be more gender stereotypical such that individuals will conceive of effective leaders in a significantly more masculine, or agentic, manner. To test this prediction, we assessed participants' communal and agentic implicit leadership theories after they were presented with a mortality salience or control manipulation. Results show that priming individuals to think about their mortality with two open-ended questions resulted in a significant shift in their implicit leadership theories such that an effective leader is described in significantly more agentic terms compared to the control condition. This masculine-shift in people's implicit theories of leadership was demonstrated in both women and men, and mortality salience did not influence perceptions of effective leaders' communal traits. This work contributes to research on gender bias in leadership, implicit leadership theories, and terror management theory and has implications for female leaders.

Keywords: Implicit theories of leadership, mortality salience, terror management theory, gender stereotypes, leadership

Taking a turn toward the masculine:

The impact of mortality salience on implicit leadership theories

When women make notable appearances either contending for or attaining top political positions, the media are quick to make the all too familiar declarations of it being another ‘year of the woman.’ This declaration signifies that the presence of women in these elite leadership positions is remarkable—a change from the status quo years of the men. Indeed, women are vastly underrepresented in top leadership positions (Center for the American Woman and Politics, 2010; Catalyst, 2009) and this is due in part to bias against female leaders. This bias, oftentimes much more subtle than overt, stems from women not aligning with our image of an elite leader—an image that is often White and male (Nye & Forsyth, 1991; Rosette, Leonardelli, & Phillips, 2008). The masculine nature of people’s implicit leadership theories has been shown to impact the perceived suitability of women for leadership roles (Eagly & Karau, 2002). Thus, understanding factors that can alter the gender-relevant content of people’s implicit notions of leadership is crucial to understanding and eradicating the bias women face in elite leadership positions. This research examines a non-conscious factor that might influence people’s implicit leadership theories: the salience of death related thoughts. Previous research has shown that subtle reminders of our own mortality are associated with changes in preferred leadership styles (Cohen, Solomon, Maxfield, & Pyszczynski, 2004; Landau et al., 2004) as well as increased stereotypical thoughts (Renkema, Stapel, Maringer & van Yperen, 2008; Schimel et al., 1999). Consequently, this research was undertaken to examine the role of mortality salience in altering the gendered content of people’s implicit leadership theories.

Gender, Leadership, and Implicit Leadership Theories

Although we can readily point to women in top leadership positions throughout leading

Running head: IMPLICIT LEADERSHIP THEORIES AND MORTALITY SALIENCE

organizations and political systems, such as the Chancellor of Germany Angela Merkel and PepsiCo's CEO Indra Nooyi, a closer examination reveals the very real gender gap that still exists in these top leadership positions. For example, women reside in a mere 3% of Fortune 500 CEO seats and only 15.2% of the F500 board seats (Catalyst, 2009) and they occupy only 89 of the 535 seats (16.6%) in the U.S. Congress (CAWP, 2011), and, globally, women's representation in national legislatures or parliaments is 19.0% (Inter-Parliamentary Union, 2011). Originally, this limitation to women's career advancement, in the form of unsanctioned and unseen barriers, was dubbed the glass ceiling (Hymowitz & Schellhardt, 1986). Eagly and Carli (2007) more recently offered the metaphor of a labyrinth to describe the journey women face that is riddled with many challenges along the way, not just a single indiscernible barrier. Importantly, this difficult journey can eventually lead to success, if barriers are navigated correctly.

One such barrier women must effectively navigate is their stigmatized status. Women have characteristics that indicate low status and power, devaluing them in the leadership context (Hoyt & Chemers, 2008). Although there has been an enormous shift toward accepting women as leaders over the last half century (Eagly & Carli, 2007), women still have more difficulty than men reaching positions of respect, influence, and leadership. This is due in part to the stereotyping, prejudice, and discrimination they face (Hoyt, 2010). Gender stereotypes both describe stereotypic beliefs about the attributes of women and men, as well as prescribe how men and women should or ought to be (Burgess & Borgida, 1999; Glick & Fiske, 1999). Although women and men are viewed as differing on a number of traits (Deaux & Lewis, 1983; 1984; Eckes, 1994), the stereotypes that influence women in leadership are the pervasive and resilient gender stereotypes maintaining that women take care and men take charge (Dodge, Gilroy & Fenzel, 1995; Heilman, 2001; Hoyt, 2010). That is, women are associated with communal

Running head: IMPLICIT LEADERSHIP THEORIES AND MORTALITY SALIENCE

characteristics that highlight a concern for others, whereas men are stereotypically thought to possess agentic characteristics emphasizing dominance, confidence, and self-reliance (Deaux & Kite, 1993; Eagly, Wood, & Diekmann, 2000; Williams & Best, 1990). In addition to impacting women's own responses in leadership situations (Hoyt & Blascovich, 2007; Hoyt & Simon, 2010), these gender stereotypes also impact others' perceptions of them (e.g., Boldry, Wood, & Kashy, 2001; Eagly, Makhijani, & Klonsky, 1992).

Prejudice stems from perceiving a group's stereotype as inconsistent with the requisite attributes for success in certain social roles (Eagly, 2004). As demonstrated by the lack-of-fit model and role congruity theory (Eagly & Karau, 2002; Heilman, 2001; Heilman & Eagly, 2008), the bias many women confront in the leadership domain stems from the mismatch between gender stereotypes and the characteristics deemed crucial for success in leadership. People have conceptions of what it means to be a leader, called implicit leadership theories or leadership prototypes. Such implicit theories commonly revolve around task-oriented and people-oriented traits and behaviors, such as being determined and influential as well as being caring and open to others' ideas (Forsyth & Nye, 2008; Lord & Maher, 1991; Kenney, Schwartz-Kenney, & Blascovich, 1996). Perceptual and cognitive processes are fundamental to the leadership process wherein people evaluate their leaders and potential leaders in reference to their intuitive notion of an ideal leader (Hogg, 2001). These implicit leadership theories, however, can result in biased perceptions and evaluations of people who do not fit the image of a leader, such as women (Hoyt & Chemers, 2008). Early research by Schein (1975) showed that descriptions of men were much more similar to the descriptions of managers than were descriptions of women, and this has been demonstrated in numerous studies since (Eagly & Carli, 2007; Heilman, Martell, & Simon, 1988; Johnson, Murphy, Zewdie, & Reichard, 2008). In

Running head: IMPLICIT LEADERSHIP THEORIES AND MORTALITY SALIENCE

sum, significant research supports the notion that the leader role is associated with masculinity and agency (Eagly & Carli, 2007; Kent & Moss 1994; Ledet & Henley 2000).

Thus, factors that influence the gendered nature of people's implicit leadership theories are important to understand as they are directly relevant to the perception and evaluation of female leaders. Although a number of qualities deemed necessary for leadership persist across contexts, research has demonstrated that people's implicit theories can vary across cultures and world regions, and within a particular context they can be altered in response to situational demands (Forsyth & Nye, 2008; House & Javidan, 2004). For example, the competencies deemed necessary for a high-level leader (e.g., CEO) differ somewhat from the perceived requisite qualities of lower level leaders (e.g., departmental managers; Den Hartog & Koopman, 2005). As well, ILTs have been shown to vary across domains of leadership (politics, business, sports; Lord, Foti, & DeVader, 1984). In this research we seek to demonstrate how non-conscious processes such as subtle death-related thoughts can alter the content of people's intuitive beliefs about leaders. Research into terror management theory has shown that thoughts of death, or mortality salience, lead to increased stereotyping, suggesting that these thoughts could alter people's implicit leadership theories to enhance stereotypicality (Greenberg, Simon, Pyszczynski, Solomon & Chatel, 1992; Ochsman & Mathay, 1996; Schimel et al., 1999). Thus, the present research is examining the extent to which death-related thoughts, often fueled by media accounts of war and terrorism, might alter the content of people's ILTs to be more gender stereotypic.

Terror Management Theory

Terror Management Theory (TMT; Greenberg, Pyszczynski, & Solomon, 1986; Solomon, Greenberg, & Pyszczynski, 1991) posits that the simultaneous predisposition toward

Running head: IMPLICIT LEADERSHIP THEORIES AND MORTALITY SALIENCE

self-preservation combined with our awareness of the inevitability of our eventual mortality has the potential to be terrifying. According to terror management theory, based on cultural anthropologist Ernest Becker's (1971, 1973, 1975) interdisciplinary work analyzing culture and self-esteem, humans use their unique cognitive capacities that give rise to an existential dilemma, to manage the potential terror through a dual-component, cultural anxiety buffer consisting of cultural worldviews and self-esteem. First, cultural worldviews provide individuals with a meaningful and stable conception of reality as well as the potential for literal or symbolic immortality for those who live up to the standards. Second, believing in a cultural worldview and living up to its value standards confers self-esteem which acts as a shield against mortality-related anxiety (Pyszczynski, Greenberg, & Solomon, 2005).

Terror management theory has important implications for leaders in the present era of mounting concerns over war and terrorism. The existential angst from these pervasive death-related thoughts can be managed in part by identifying with and supporting leaders who make people feel like they are a valued part of something larger than themselves (Cohen et al., 2004). In support of this, Landau and colleagues (2004) found that mortality salience increased support for President G. W. Bush, and Cohen and colleagues (2004) found that subtle reminders of death led to more positive evaluations of charismatic leaders but less positive evaluations of relationship-oriented leaders. Importantly, these death-related thoughts might also serve to alter the content of people's implicit leadership theories in such a way as to advantage certain leaders (men) and disadvantage others (women) by increasing reliance on gender stereotypes.

Adhering more strongly to stereotypes is another way that people can defend themselves against existential angst (Renkema et al., 2008; Schimel et al., 1999). Because stereotypes provide people with an orderly and stable conception of reality, they exist as part of people's

Running head: IMPLICIT LEADERSHIP THEORIES AND MORTALITY SALIENCE

cultural worldviews that offer protection from existential fear. By viewing groups stereotypically and preferring stereotype-consistent individuals over stereotype-inconsistent individuals, people confirm the validity of their cultural worldviews, making these worldviews more effective buffers against existential angst. Schimel and colleagues (1999) demonstrated, across five studies and four distinct social groups, that mortality salience increases the use of group stereotypes on evaluations of individual members from those groups.

If mortality salience increases reliance on gender stereotypes, then thoughts of death might also serve to change the content of people's implicit leadership theories by enhancing stereotypicality. That is, people's implicit leadership theories will likely be more agentic in nature. In support of this prediction, Hoyt, Simon, and Reid (2009) have shown that mortality salience impacts people's preferences for political leaders based on gender stereotypicality. Examining people's preferences for gubernatorial candidates, they found that mortality salience resulted in a general increased preference for the agentic candidate over the communal candidate. This research supports the contention that mortality salience influences gender-stereotype relevant leadership choices. It is not clear, however, whether people are more likely to apply the stereotype or whether the gendered content of their implicit leadership theories is actually altered. Furthermore, it is not apparent whether the preference for the agentic politician is driven by an increase in preference for the masculine leader, a distancing from the feminine leader, or both. The current research experimentally tests the prediction that mortality salience will lead to a change in the content of people's lay theories regarding effective leaders such that they will encompass agentic traits to a greater degree. Thus, in this research we directly assess the gendered trait content of people's implicit theories rather than the accessibility of the gender leader stereotype. In this research we also disambiguate the impact of mortality salience on the

Running head: IMPLICIT LEADERSHIP THEORIES AND MORTALITY SALIENCE

agentic and communal components of implicit leadership theories by assessing each of them directly. Furthermore, this research extends the implicit leadership theories literature by examining the impact of non-conscious processes on people's intuitive conception of a leader.

Method

Participants and Design

Eighty-seven undergraduate students (57% female) at a small liberal arts university in the US Southeast voluntarily participated in a study ostensibly examining the factors that contribute to attitudes such as those toward domestic and international policies. Because gender-related aspects of people's ILTs can differ across the sexes (Epitropaki, & Martin, 2004), we included sex as a factor in this research. This study employed a 2 (Mortality Salience: MS or Control) x 2 (Participant sex) between-subjects design.

Procedure

Employing procedures similar to those of Hoyt et al. (2009), participants were told that they were taking part in research designed to understand the relationship between personality factors and attitudes. Augmenting this cover story, participants initially completed two filler items: the relationship questionnaire (Bartholomew & Horowitz, 1991) and the ten-item personality inventory (Gosling, Rentfrow, & Swann, 2003). At the end of the study, participants completed two filler attitudinal measures assessing domestic and international policies.

Mortality salience manipulation. Using a customary form of mortality salience treatment used in terror management theory studies (Rosenblatt, Greenberg, Solomon, Pyszczynski, & Lyon, 1989), participants were asked to respond to two open ended questions. Mortality was made salient by asking participants to 'Please briefly describe the emotions that the thought of your own death arouses in you,' and 'Jot down, as specifically as you can, what you think will happen to you as you

Running head: IMPLICIT LEADERSHIP THEORIES AND MORTALITY SALIENCE

physically die and once you are physically dead.’ Participants in the control condition responded to corresponding questions with regards to their next important exam¹.

The terror management theory literature has shown that the mortality salience manipulation is more effective after a delay (Pyszczynski, Greenberg, & Solomon, 1999). Thus, after completing the open-ended questions participants responded to a 60-item mood indicator scale and then completed a crossword search puzzle before completing the measures of interest. The mood scale was the expanded form of the Positive and Negative Affect Schedule (PANAS-X; Watson & Clark, 1991) and it was administered to ensure that the results are driven by mortality salience, as opposed to a mood manipulation. Finally, participants responded to the filler attitudinal questionnaires and the dependent measures of interest: agentic and communal implicit leadership theories. Upon completing the experiment, participants were debriefed and thanked for their time and effort.

Measures

Implicit leadership theories: Agentic and communal. Using a 7-point Likert-type scale ranging from 1 (strongly disagree) to 7 (strongly agree), participants responded to two scales assessing the agentic and communal traits (modified from scales used by Rudman and Glick, 2001) associated with their leadership prototype. Importantly, participants were not asked to describe a *typical* leader but rather they were prompted with “An *effective* leader is...” The communal scale assessed responses to the following traits: kind, supportive, warm, sincere, helpful, likeable, friendly, a good listener, and sensitive to the needs of others ($\alpha = .86$). The agentic scale consisted of the following traits: independent, confident, determined, analytical, ambitious, and competitive ($\alpha = .68$). Both scales were significantly correlated $r(87) = .36, p < .001$.

PANAS-X. Participants indicated the extent to which they felt a particular emotional

Running head: IMPLICIT LEADERSHIP THEORIES AND MORTALITY SALIENCE

state using a scale from 1 (very slightly or not at all) to 5 (extremely). The PANAS-X (Watson & Clark, 1991) includes 60 items and assesses both higher order scales of positive and negative affect, as well as 11 specific affect scales. All of the subscales demonstrated internal consistency at or greater than .68.

Results

To test the prediction that mortality salience will alter the content of people's ILTs to be more congruent with the male sex role, both dependent variables, the communal and agentic implicit leadership theories, were analyzed with a two-way multivariate analysis of variance including the mortality salience manipulation and participant sex. The overall MANOVA revealed a multivariate main effect for mortality salience (Wilks' $\lambda = .91$, $F(2, 82) = 4.18$, $p = .019$, $\eta^2 = .09$). Univariate ANOVA tests were then examined demonstrating that mortality salience had a significant impact on agentic ILTs ($F(1, 83) = 8.28$, $p = .005$, $\eta^2 = .09$) but not communal ILTs ($F(1, 83) = .34$, n.s.). Participants in the MS condition reported greater levels of agency in their ILTs ($M = 5.99$, $SD = .69$) than those in the control condition ($M = 5.52$, $SD = .79$; see Figure 1). Simple effects analyses with participant sex revealed that mortality salience increased agency ratings for both female participants ($p = .028$) as well as male participants ($p = .064$). Although the p -value for men does not quite reach conventional levels of significance, this could be due to the smaller sample size for men (37 males, 50 females). The MANOVA main effect for participant sex was also statistically significant (Wilks' $\lambda = .905$, $F(2, 82) = 4.33$, $p = .016$, $\eta^2 = .10$). The univariate effects revealed that women and men reported significantly different levels of communal ILTs ($F(1, 83) = 8.27$, $p = .005$, $\eta^2 = .09$) but not agentic ILTs ($F(1, 83) = .11$, n.s.). Female participants reported greater levels of communality in their ILTs ($M = 5.58$, $SD = .88$) than male participants ($M = 5.03$, $SD = .85$). Finally, neither the

Running head: IMPLICIT LEADERSHIP THEORIES AND MORTALITY SALIENCE

multivariate interaction effect nor the univariate interaction effects neared significance.

In another approach to testing the prediction that MS should have a stronger impact on agentic compared to communal traits, we ran a MIXED 2 x 2 x 2 MANOVA with the MS manipulation and participant sex as the between factors and trait ratings as the within factor. The expected interaction between mortality salience and trait ratings was marginally significant (Wilks' $\lambda = .96$, $F(1, 83) = 3.09$, $p = .082$, $\eta^2 = .04$). As can be seen in Figure 1, the difference in traits ratings, with agency being rated higher, is greater in the MS compared to control condition.

Finally, to detect whether the MS manipulation resulted in differences in conscious affect, which might provide an alternative explanation for observed effects, the subscales of the PANAS-X were analyzed with a one-way MANOVA revealing no significant effect of MS on any of the subscales (multivariate and univariate ps are all $\geq .10$). Thus, consistent with previous TMT research (Hoyt et al., 2009; Landau et al., 2004), these results suggest that affect was not responsible for the observed effects.

Discussion

This research was conducted to examine the influence of mortality salience on changing the gendered nature of people's implicit leadership theories. Our results show that simply priming individuals to think about their mortality resulted in a significant shift in their implicit theories. Participants in the mortality salience condition described an effective leader in significantly more agentic terms than those in the control condition. Mortality salience, however, did not influence perceptions of effective leaders' communal traits. Finally, this masculine-shift in the content of people's implicit theories of leadership was demonstrated in both women and men.

Theoretical and Practical Implications

Leadership is largely in the eye of the beholder. Indeed, leadership begins minimally with “the process of being perceived by others as a leader” (Lord & Maher, 1991, p. 11). According to the congruence hypothesis, individuals are deemed leaders to the extent that their traits and behaviors are compatible with people’s conceptions of a leader, or their implicit leadership theories (Forsyth & Nye, 2008; Kenney et al., 1996; Lord & Maher, 1991). From this cognitive-perceptual perspective on leadership, factors that alter these implicit theories in a stereotypical manner will serve to make it less likely that members of the stereotyped group will attain leadership roles. Furthermore, because effective leadership is dependent on followers’ willingness to follow and respond positively to their leaders, not fitting the ideal prototypical image of a leader can result in real decrements in leadership effectiveness, as people are less likely to accept the influence of these leaders.

The present study extends our knowledge of implicit leadership theories and terror management in important ways. This research expands upon the literature by directly assessing the content, not the accessibility, of people’s stereotypes regarding leaders. Importantly, by changing people’s implicit leadership theories, the present study suggests that non-conscious processes can actually alter implicit theories, at least temporarily. Previous research into the malleability of ILTs has primarily focused on the culture where people live or the situational demand of the particular leadership role (Forsyth & Nye, 2008). The current research demonstrates that peripheral, non-conscious cues can alter the content of people’s ILTs. Moreover, while past TMT research has shown that exposure to mortality salience increases individuals’ dependence on stereotypes, the present research demonstrates that death-related thoughts can actually alter the content of individuals’ implicit leadership theories.

One potential alternative interpretation of the data is that mortality salience increases

Running head: IMPLICIT LEADERSHIP THEORIES AND MORTALITY SALIENCE

preferences for a leadership style or a level of leadership competency that will reduce threats to survival. While we do not directly test this alternative hypothesis, we do not believe this is a viable interpretation of the data for two reasons. First, previous research has shown that although people generally preferred the masculine, task-oriented leadership style focused on getting the job done, mortality salience did not result in an increased preference for this style (Cohen et al., 2004). However, people did show an increased preference for a charismatic leadership style, a style that tends to boost people's self-esteem. These leadership style findings demonstrate that under mortality salience "people want to identify with special, great things, and charismatic leaders typically offer the promise of just that" (p. 850, Cohen et al., 2004). Taken together, these studies show both the self-esteem and cultural worldview components of the anxiety buffer at work in the domain of leadership. They show that mortality salience both bolsters cultural worldviews by changing the content of implicit leadership theories to become more stereotypic (masculine) and it draws people to a leadership style that strengthens people's self-worth. Our findings do suggest, however, that in the absence of such a charismatic leader, people would likely be drawn to a leader exhibiting more stereotypically masculine, compared to feminine, characteristics. Second, although competence is often associated with agency, it is more frequently being conceptualized as a separate dimension in research examining gender and social role requirements largely because competence is becoming less gendered and it is not the component of agency that women are penalized for demonstrating (Rudman & Glick, 2001; Spence & Buckner, 2000). Because competence was not assessed in the agency measure in this research it is unlikely that mortality salience simply increased preference for competent leaders.

This research has important practical implications for female leaders and notably female politicians. We are constantly bombarded by media images of war and terrorism, which serve as

Running head: IMPLICIT LEADERSHIP THEORIES AND MORTALITY SALIENCE

constant reminders of death and mortality and likely work negatively against female politicians. Our findings reveal that subtle reminders of death alter people's perceptions of an effective leader to be more agentic and masculine, thus deeming men a better fit with this image than women. Our findings become particularly worrisome when they are combined with related research showing that subtle thoughts of death can influence voting behavior (Cohen et al., 2004; Hoyt et al., 2009; Landau et al., 2004). Together, this research shows that choosing a leader is not simply a matter of rational decision making but can be impacted in subtle, non-rational ways. On an optimistic note, we are hopeful that this and related research will help make people aware of how subtle factors, such as death related thoughts, can increase and change stereotypic thinking which in turn can influence preferences and behaviors. Furthermore, the research literature clearly demonstrates that with motivation and practice, people can unlearn stereotyped associations and overcome prejudiced thoughts (Blair, 2002; Devine & Monteith, 1999; Devine, Plant, Amodio, Harmon-Jones, & Vance, 2002). Finally, while the present study examines gender stereotypes related to leadership, it is possible that mortality salience would also increase other stereotypes related to leadership including the racial bias such that "being White" is an attribute of people's implicit leadership theories (Rosette et al., 2008). Future research should examine how exposure to death-related thoughts may also negatively impact ethnic and racial minorities in leadership positions.

Summary

Leadership is, in large part, in the eye of the beholder. People's stereotypical images of leaders, their implicit leadership theories, influence who they choose to follow and how they respond to leaders. Thus, it is important to understand how these theories can be altered, particularly by non-conscious situational cues. In this research we tested the hypothesis that

Running head: IMPLICIT LEADERSHIP THEORIES AND MORTALITY SALIENCE

subtle thoughts of death will serve to alter the content of people's implicit leadership theories such that they will become more stereotypically masculine. To experimentally test this prediction, participants were presented with a mortality salience, or control, prime and were asked to describe an effective leader. Results were in accord with predictions: participants in the mortality salience condition reported implicit leadership theories that were significantly more agentic than those in the control condition. Furthermore, both women and men demonstrated this effect and mortality salience had no impact on implicit theories regarding leaders' communal traits. This research has great theoretical and practical significance for understanding how mortality salience may contribute to the leadership labyrinth women confront on their quest for top leadership roles. We hope this initial investigation assessing the impact of mortality salience on implicit leadership theories fosters further explorations which will help put theory into practice.

References

- Bartholomew, K., & Horowitz, L. M. (1991). Attachment style among young adults: A test of a four-category model. *Journal of Personality and Social Psychology, 61*, 226-244. doi: 10.1037/0022-3514.61.2.226
- Becker, E. (1971). *The birth and death of meaning: An interdisciplinary perspective on the meaning of man*. New York, NY: Free Press.
- Becker, E. (1973). *The denial of death*. New York, NY: Free Press.
- Becker, E. (1975). *Escape from evil*. New York, NY: Free Press.
- Boldry, J., Wood, W., & Kashy, D. A. (2001). Gender stereotypes and the evaluation of men and women in military training. *Journal of Social Issues, 57*, 689-705. doi:10.1111/0022-4537.00236

Running head: IMPLICIT LEADERSHIP THEORIES AND MORTALITY SALIENCE

Blair, I. V. (2002). The malleability of automatic stereotypes and prejudice. *Personality and Social Psychology Review*, 6, 242–261. doi: 10.1207/S15327957PSPR0603_8

Burgess, D., & Borgida, E. (1999). Who women are, who women should be: Descriptive and prescriptive gender stereotyping in sex discrimination. *Psychology, Public Policy, & Law*, 5, 665–692. doi: 10.1037//1076-8971.5.3.665

Catalyst (2009, December 9). *2009 Catalyst census of the Fortune 500 reveals women missing from critical business leadership*. Retrieved from: <http://www.catalyst.org/press-release/161/2009-catalyst-census-of-the-fortune-500-reveals-women-missing-from-critical-business-leadership>.

Center for American Women and Politics (CAWP; 2011). Women in elected office 2011.

Retrieved February 22, 2011, from:

http://www.cawp.rutgers.edu/fast_facts/levels_of_office/documents/elective.pdf

Cohen, F., Solomon, S., Maxfield, M., Pyszczynski, T., & Greenberg, J. (2004). Fatal attraction: The effects of mortality salience on evaluations of charismatic, task-oriented, and relationship-oriented leaders. *Psychological Science*, 15, 846–851. doi: 10.1111/j.0956-7976.2004.00765.x

Hymowitz, C. & Schellhardt, T. D. (1986, March 24). The glass ceiling: Why women can't seem to break the invisible barrier that blocks them from the top jobs. *The Wall Street Journal*, D1, D4-D5.

Wall Street Journal (1986). 'The Corporate Woman: A special report', 32 page supplement, 24 March.

Deaux, K. & Kite, M. E. (1993). Gender stereotypes. In F. Denmark & M. Paludi (Eds.), *Handbook on the psychology of women* (pp. 107-139). Greenwood Press.

Running head: IMPLICIT LEADERSHIP THEORIES AND MORTALITY SALIENCE

- Deaux, K., & Lewis, L. L. (1983). Components of gender stereotypes. *Psychological Documents*, *13*(2), MS. 2583 25.
- Deaux, K., & Lewis, L. L. (1984). Structure of gender stereotypes: Inter-relationships among components and gender label. *Journal of Personality and Social Psychology*, *46*, 991-1004.
- Den Hartog, D.N., & Koopman, P.L. (2005). Implicit theories of leadership at different hierarchical levels. In B.Schyns & J. Meindl (Eds.), *Implicit leadership theories: Essays and explorations*. (pp. 135-158). Greenwich, CT: Information Age Publishing.
- Devine, P., & Monteith, M. J. (1999). Automaticity and control in stereotyping. In S. Chaiken, & Y. Trope (Eds.), *Dual-process theories in social psychology* (pp. 339–360). New York, NY: Guilford Press.
- Devine, P., Plant, E. A., Amodio, D. M., Harmon-Jones, E., & Vance, S. L. (2002). The regulation of explicit and implicit race bias: The role of motivations to respond without prejudice. *Journal of Personality and Social Psychology*, *82*, 835–848. doi: 10.1037/0022-3514.82.5.835
- Dodge, K. A., Gilroy, F. D., & Fenzel, L. M. (1995). Requisite management characteristics revisited: Two decades later. *Journal of Social Behavior and Personality*, *10*, 253–264.
- Eckes, T. (1994). Explorations in gender cognition: Content and structure of female and male subtypes. *Social Cognition*, *12*, 37-60.
- Eagly, A. H., & Carli, L. L. (2007). Women and the labyrinth of leadership. *Harvard Business Review*, *85*, 62-71.
- Eagly, A. H., & Karau, S. J. (2002). Role congruity theory of prejudice toward female leaders. *Psychological Review*, *109*, 573–598. doi: 10.1037/0033-295X.109.3.573

Running head: IMPLICIT LEADERSHIP THEORIES AND MORTALITY SALIENCE

Eagly, A. H., Makhijani, M. G., & Klonsky, B. G. (1992). Gender and the evaluation of leaders:

A meta-analysis. *Psychological Bulletin*, *111*, 3-22. doi: 10.1037/0033-2909.111.1.3

Eagly, A. H., Wood, W., & Diekmann, A. B. (2000). Social role theory of sex differences and

similarities: A current appraisal. In T. Eckes & H. M. Trautner (Eds.) *The developmental social psychology of gender* (pp. 123-174). Mahwah, NJ: Lawrence Erlbaum Associates.

Epitropaki, O., & Martin, R. (2004). Implicit leadership theories in applied settings: Factor structure, generalizability, and stability over time. *Journal of Applied Psychology*, *89*, 293-310.

Fein, S., & Spencer, S. J. (2008). Prejudice as self-image maintenance: Affirming the self

through derogating others. In R. H. Fazio, & R. E. Petty (Eds.), *Attitudes: Their structure, function, and consequences. Key readings in social psychology* (pp. 261-281). New York, NY: Psychology Press.

Forsyth, D. R., & Nye, J. L. (2008). Seeing and being a leader: The perceptual, cognitive, and interpersonal roots of conferred influence. In C. L. Hoyt, G. R. Goethals, & D. R. Forsyth (Eds.), *Leadership at the crossroads: Leadership and Psychology* (Vol. 1, pp. 116-131). Westport, CN: Praeger.

Glick, P., & Fiske, S. T. (1999). Sexism and other "isms": Independence, status, and the ambivalent content of stereotypes. In W. B. Swann Jr. & J. H. Langlois (Eds.), *Sexism and stereotypes in modern society: The gender science of Janet Taylor Spence* (pp. 193-221). Washington, DC: American Psychological Association.

Gosling, S. D., Rentfrow, P. J., Swann, W. B. (2003). A very brief measure of the Big-Five personality domains. *Journal of Research in Personality*, *37*, 504-528. doi:

10.1016/S0092-6566(03)00046-1

Running head: IMPLICIT LEADERSHIP THEORIES AND MORTALITY SALIENCE

Greenberg, J., Pyszczynski, T., & Solomon, S. (1986). The causes and consequences of a need for self-esteem: A terror management theory. In R. F. Baumeister (Ed.), *Public self and private self* (pp. 189–212). New York: Springer-Verlag.

Greenberg, J., Simon, L., Pyszczynski, T., Solomon, S., & Chatel, D. (1992). Terror management and tolerance: Does mortality salience always intensify negative reactions to others who threaten one's worldview? *Journal of Personality and Social Psychology*, *63*, 212-220. doi: 10.1037/0022-3514.63.2.212

Heilman, M. E. (2001). Description and prescription: How gender stereotypes prevent women's ascent up the organizational ladder. *Journal of Social Issues*, *57*, 657-674. doi: 10.1111/0022-4537.00234

Heilman, M. E., Martell, R. F., & Simon, M. C. (1988). The vagaries of sex bias: Conditions regulating the undervaluation, evaluation, and overvaluation of female job applicants. *Organizational Behavior and Human Decision Processes*, *41*, 98-110. doi:10.1016/0749-5978(88)90049-0

Hogg, M. A. (2001). A social identity theory of leadership. *Personality and Social Psychology Review*, *5*, 184-200.

House, R.J., & Javidan, M. (2004). Overview of GLOBE. In R. J. House, P. J. Hanges, M. Javidan, P. W. Dorfman, & V. Gupta (Eds.), *Culture, leadership, and organizations: The GLOBE study of 62 societies* (pp. 9-28). Thousand Oaks, CA: Sage Publications.

Hoyt, C. L. (2010). Women, men, and leadership: Exploring the gender gap at the top. *Social and Personality Psychology Compass*, *4*, 484-498.

Running head: IMPLICIT LEADERSHIP THEORIES AND MORTALITY SALIENCE

- Hoyt, C., & Blascovich, J. (2007). Leadership efficacy and women leaders' responses to stereotype activation. *Group Processes and Intergroup Relations*, *10*, 595-616. doi: 10.1177/1368430207084718
- Hoyt, C., & Chemers, M. M. (2008). Social stigma and leadership: A long climb up a slippery ladder. In C.L. Hoyt, G. R. Goethals, & D.R. Forsyth (Eds.) *Leadership at the crossroads: Leadership and psychology* (Vol.1, pp. 165-180). Westport, CT: Praeger.
- Hoyt, C., & Simon, S. (2010). Female leaders: Injurious or inspiring role models for women? Manuscript in press at the *Psychology of Women Quarterly*.
- Hoyt, C. L., Simon, S., & Reid, L. (2009). Choosing the best (wo)man for the job: The effects of mortality salience, sex, and gender stereotypes on leader evaluations. *The Leadership Quarterly*, *20*, 233-246. doi: 10.1016/j.leaqua.2009.01.016
- Inter-Parliamentary Union. (2011). *Women in national parliaments*. Retrieved February 22, 2011, from <http://www.ipu.org/wmn-e/world.htm>
- Johnson, S. K., Murphy, S. E., Zewdie, S., Reichard, R. J. (2008). The strong, sensitive type: Effects of gender stereotypes and leadership prototypes on the evaluation of male and female leaders. *Organizational Behavior and Human Decision Processes*, *106*, 39-60. doi: 10.1016/j.obhdp.2007.12.002
- Kenney, R. A., Schwartz-Kenney, B. M., & Blascovich, J. (1996). Implicit leadership theories: Defining leaders described as worthy of influence. *Personality and Social Psychology Bulletin*, *22*, 1128-1143. doi: 10.1177/01461672962211004.
- Kent, R. L., & Moss, S. E. (1994). Effects of sex and gender role on leader emergence. *Academy of Management Journal*, *37*, 1335-1346. doi: 10.2307/256675

Running head: IMPLICIT LEADERSHIP THEORIES AND MORTALITY SALIENCE

Landau, M., Solomon, S., Greenberg, J., Cohen, F., Pyszczynski, T., Arndt, J., et al. (2004).

Deliver us from evil: The effects of mortality salience and reminders of 9/11 on support for President George W. Bush. *Personality and Social Psychology Bulletin*, 30, 1136–1150. doi: 10.1177/0146167204267988

Ledet, L. M., & Henley, T. B. (2000). Perceptions of women's power as a function of position within an organization. *Journal of Psychology*, 134, 515–526. doi: 10.1080/00223980009598233

Lord, R. G., Foti, R. J., & De Vader, C. L. (1984). A test of leadership categorization theory: Internal structure, information processing, and leadership perceptions. *Organizational Behavior and Human Performance*, 34, 343-378.

Lord, R. G., & Maher, K. J. (1991). *Leadership and information processing: Linking perceptions and performance*. Cambridge, MA: Unwin Hyman.

Major, B., & O'Brien, L. T. (2005). The social psychology of stigma. *Annual Review of Psychology*, 56, 393-421. doi: 10.1146/annurev.psych.56.091103.070137

Nye, J., & Forsyth, D. (1991). The effects of prototype-based biases on leadership appraisals: A test of leadership categorization theory. *Small Group Research*, 22(3), 360-379. doi:10.1177/1046496491223005.

Ochsmann, R., & Mathay, M. (1996). Depreciating of and distancing from foreigners: Effects of mortality salience. Unpublished manuscript, Universitat Mainz, Mainz, Germany.

Pyszczynski, T., Greenberg, J., & Solomon, S. (2005). The machine in the ghost: A dual process model of defense against conscious and unconscious death-related thought. In J. P. Forgas, K. D. Williams, & S. M. Laham (Eds.), *Social motivation: Conscious and unconscious processes* (pp. 40–54). New York, NY: Cambridge University Press.

Running head: IMPLICIT LEADERSHIP THEORIES AND MORTALITY SALIENCE

Pyszczynski, T., Solomon, S., & Greenberg, J. (2003). *In the wake of 9/11: The psychology of terror*. Washington, DC: American Psychological Association.

Renkema, L. J., Stapel, D. A., Maringer, M., & Van Yperen, N. W. (2008). Terror Management and stereotyping: Why do people stereotype when mortality is salient? *Personality and Social Psychology Bulletin*, 34, 553-564. doi: 10.1002/ejsp.468

Rosenblatt, A., Greenberg, J., Solomon, S., Pyszczynski, T., & Lyon, D. (1989). Evidence for terror management theory: I. The effects of mortality salience on reactions to those who violate or uphold cultural values. *Journal of Personality and Social Psychology*, 57, 681–690. doi: 10.1037/0022-3514.57.4.681

Rosette, A., Leonardelli, G.J., & Phillips, K.W. (2008). The White standard: Racial bias in leader categorization. *Journal of Applied Psychology*, 93(4), 758-777. doi:10.1037/0021-9010.93.4.758.

Rudman, L. A., & Glick, P. (2001). Prescriptive gender stereotypes and backlash toward agentic women. *Journal of Social Issues*, 57, 743-762.

Schein, V. E. (1975). The relationship between sex role stereotypes and requisite management characteristics. *Journal of Applied Psychology*, 57: 95 – 100. doi:10.1037/h0076637.

Schimel, J., Simon, L., Greenberg, J., Pyszczynski, T., Solomon, S., Waxmonsky, J., et al. (1999). Stereotypes and terror management: Evidence that mortality salience enhances stereotypic thinking and preferences. *Journal of Personality and Social Psychology*, 77, 905–926. doi: 10.1037/0022-3514.77.5.905

Simon, L., Greenberg, J., Harmon-Jones, E., Solomon, S., Pyszczynski, T., Arndt, J., & Abend, T. (1997). Terror management and cognitive-experiential self-theory: Evidence that terror

Running head: IMPLICIT LEADERSHIP THEORIES AND MORTALITY SALIENCE

management occurs in the experiential system. *Journal of Personality and Social Psychology*, 72, 1132–1146. [doi:10.1037/0022-3514.72.5.1132](https://doi.org/10.1037/0022-3514.72.5.1132)

Solomon, S., Greenberg, J., & Pyszczynski, T. (1991). A terror management theory of social behavior: The psychological functions of self-esteem and cultural worldviews. In M. P. Zanna (Ed.), *Advances in experimental social psychology*, Vol. 24 (pp. 93–159). Orlando, FL: Academic Press.

Spence, J. T., & Buckner, C. E. (2000). Instrumental and expressive traits, trait stereotypes, and sexist attitudes. *Psychology of Women Quarterly*, 24, 44–62.

Williams, J. E., & Best, D. L. (1990). *Sex and psyche: Gender and self viewed cross-culturally*. Thousand Oaks, CA: Sage Publications, Inc.

Footnotes

¹To test if we could stifle the effects of mortality salience by making people think rationally (Simon, Greenberg, Harmon-Jones, Solomon, Pyszczynski, Arndt, & Abend, 1997), half of the participants were instructed to think rationally when responding to the open-ended questions. However, these instructions had no impact on any of the results.

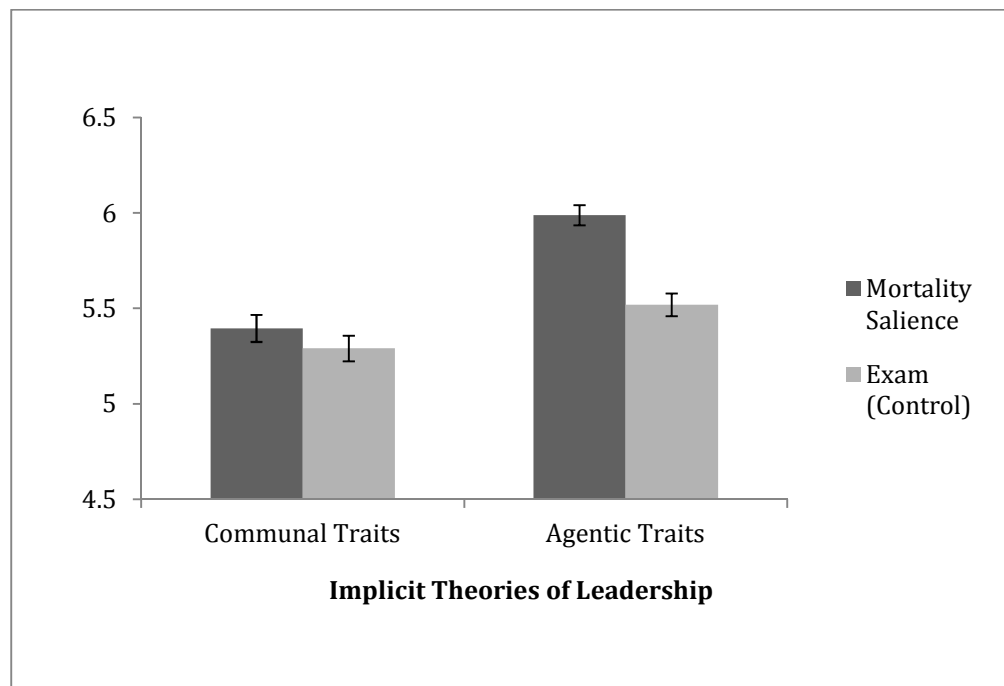


Figure 1. Communal and agentic trait components of implicit leadership theories as a function of mortality salience. Scores ranged from 1 to 7. Error bars represent standard errors of the mean.