



University of Richmond
UR Scholarship Repository

Jepson School of Leadership Studies articles,
book chapters and other publications

Jepson School of Leadership Studies

5-2013

Inspirational or Self-Deflating: The Role of Self-Efficacy in Elite Role Model Effectiveness

Crystal L. Hoyt

University of Richmond, choyt@richmond.edu

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

 Part of the [Gender and Sexuality Commons](#), and the [Leadership Studies Commons](#)

Recommended Citation

Hoyt, C. L. "Inspirational or Self-Deflating: The Role of Self-Efficacy in Elite Role Model Effectiveness." *Social Psychological and Personality Science* 4, no. 3 (May 15, 2013): 290-98. doi:10.1177/1948550612455066.

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.

Hoyt, C. L. (in press). Inspirational or self-deflating: The role of self-efficacy in elite role model effectiveness. *Social Psychological and Personality Science*.

Inspirational or self-deflating: The role of self-efficacy in elite role model effectiveness

Abstract:

This research examines the role of self-efficacy in women's responses to elite leadership role models. Previous research on role models has been equivocal, demonstrating that the impact of social comparisons on the self is multifaceted. Using an experimental methodology, 102 female participants were presented with role models (elite, non-elite, control) before serving as the leader of an ostensible 3-person group. Findings revealed that women with low, as opposed to high, levels of leadership self-efficacy were less inspired by the highly successful role models and showed deflating contrast effects as demonstrated in their diminished identification with leadership, leadership aspirations, and leadership performance. Moreover, the performance effects were mediated by participants' identification with leadership. This research has identified an important self-regulatory variable that influences whether people engage in assimilative or contrastive processes when making strategic comparisons and it identifies the important role of self-perception outcomes on behavioral responses to role models.

Keywords: Role models, self-efficacy, leadership, social comparison

Article text:

There is great intuitive appeal to attribute the success of highly influential individuals to solitary achievement and thus to study individuals in order to better understand success. People,

however, are largely socially constructed through interactions with others (Cooley, 1902) and researchers are beginning to turn their attention to the powerful interpersonal processes involved in individual achievement (Carver & Scheier, 1998; Rusbult, Finkel, & Kumashiro, 2009). Indeed, research highlights the important role of others in individuals' pursuit and attainment of goals (Finkel & Fitzsimons, 2011). Successful individuals oftentimes look to others, such as role models, for motivation and inspiration. Although role models can have powerful effects on individuals by showing not only that success is possible but by also demonstrating how to achieve various goals, role models are not always inspiring (Suls, Martin, & Wheeler, 2002). This current research merges both intrapersonal and interpersonal perspectives to individual success by examining the role of self-efficacy in moderating responses to role models.

Role models have been shown to impact people's aspirations and self-perceptions primarily through social comparison processes (Festinger, 1954; Suls et al., 2002). Upward social comparisons with successful role models can fulfill a self-improvement motive, enhance people's subjective well-being, and offer both inspiration and hope particularly when people focus on similarities with the role model (Collins, 1996, 2000; Wood, 1989). The value of role models is even greater when considering the potential impact on individuals who are underrepresented in domains such as leadership (Buck, Clark, Leslie-Pelecky, Lu, & Cerda-Lizarraga, 2007). Individuals who belong to lower status social groups, such as women or minorities, are underrepresented in top leadership positions in part due to negative stereotypic expectations (Hoyt, 2010; Hoyt & Blascovich, 2007; Steele & Aronson, 1995). Thus, exposure to positive role models who disconfirm negative stereotypes may help buffer individuals from the threatening effects of these expectations (Marx, Ko, & Friedman, 2009; Marx & Roman, 2002).

The research on role models, however, has been equivocal. Exposure to superior others can have inspiring assimilation effects by suggesting that one could improve and reach that level of success or it can result in self-deflating contrast effects by demonstrating how relatively deficient one is compared to the superior other (Lockwood & Kunda, 1999; Suls et al., 2002). Lockwood and Kunda (1997) empirically demonstrated that whether relevant ‘superstar’ role models have an inspiring or self-deflating impact on people depends on whether their success is seen as attainable. Similarly, people who are more likely to endorse the idea that leadership abilities are malleable as opposed to fixed, and thus are more likely to see leadership success as attainable, demonstrate more positive responses to leader role models (Hoyt, Burnette, & Innella, 2012). If individuals do not identify with the role model or perceive that level of success as attainable, they may lose confidence in their own abilities (Major, Testa, & Bylsma, 1991). In this case, the role model can serve to activate positive constructs related to the role model’s success but negative self-related concepts in comparison (e.g., “I am no Ruth Bader Ginsberg, I am not a capable leader;” Dijksterhuis & van Knippenberg, 1998; Hoyt & Simon, 2011).

Investigating factors that influence whether superior leader role models will be injurious or inspiring to women, Hoyt and Simon (2011) demonstrated the self-deflating effects of elite female leaders on participants’ leadership aspirations and self-perceptions following a leadership task. However, less elite role models, whom the women could identify with more, did not have this negative impact. These studies suggest that elite role models might be inspiring to the extent that individuals are able to identify with them and deem their success as attainable. As Wheeler and Suls (2005) suggest, it is likely that “every social comparison creates both the pull of assimilation and the push of contrast” (p. 576). Whether assimilation or contrast dominates is a function of the individuals’ ability to make strategic comparisons. Thus, it might be the case that

women with high levels of leadership self-efficacy will view the success of these elite leaders as attainable and thus not demonstrate the self-deflating effects resulting from contrast processes.

Self-efficacy is a critical component of Bandura's social-cognitive theory (1986) and is defined as "beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments" (Bandura, 1997, p.3). Self-efficacy expectancies are focal determinants of self-regulation, influencing goals, effort, persistence, and performance, and are the most widely researched expectancies in recent years (Locke & Sadler, 2007). Self-efficacy has been shown to be particularly important in the leadership domain (Hoyt & Blascovich, 2007; Hoyt, Murphy, Halverson, & Watson, 2003). People with high, as opposed to low, self-efficacy are more likely to anticipate success in the relevant domain and are thus more likely to view the success of top-notch role models in that domain as attainable.

By merging the self-efficacy, social comparison, and role model literatures, this research advances our understanding of role model influence processes in important ways. This research contributes to a more nuanced understanding of the importance of perceived attainability of success in the effectiveness of role models by taking an intrapersonal self-regulatory perspective. Specifically, this study examines the role of leadership self-efficacy in moderating the impact of elite leader role models on women's identification with the leadership domain, leadership aspirations, and leadership performance. Women with high self-efficacy are predicted to view the elite role models' success as attainable, be inspired by her, and show assimilative effects demonstrated through enhanced identification with the domain of leadership and leadership aspirations. Those with lower levels of efficacy are predicted to demonstrate deflating contrast effects and a resultant distancing from the domain of leadership. This study also tests the

prediction that this effect is unique to superstar role models by examining responses to non-elite role models.

Another important goal of this research is to contribute to the rather small literature on behavioral assimilation (Hoyt et al., 2012; Wheeler & Suls, 2007) by examining the process through which role models can facilitate behavioral responses. As delineated in social-cognitive theory, self-views are critical to successful performance (Bandura, 1997). Thus, the heightened or diminished self-identification with leadership resulting from social comparison processes with elite role models is predicted to mediate relatively greater or lesser leadership performance. Additionally, this research augments the nascent literature examining the importance of leader role models for women. The focus of this research stems, in part, from the practical importance of leadership role models for women (Eagly & Carli, 2007) and the importance of same-gender role models for women in domains in which they face negative stereotypes (Lockwood, 2006).

Method

Participants and design. One hundred and two undergraduate women at a liberal arts university in the US Southeast were recruited to participate in exchange for \$10 cash. Participants were 74% White, 10% African American, 8% Latina, 3% Asian, with a median age of 19 (SD=1.54). The experiment employed a 3-group (elite, non-elite role model, control) between-subjects design with leadership self-efficacy as a continuous variable¹.

Procedural overview. Participants were run individually and were told that the research, aimed at examining college students' transition to the workplace, is examining two things: perceptions of role models and how well participants perform organizational tasks. The experimenter led the participant to believe that she would be one of three individuals in a group and that she was randomly selected to be the leader. The experimenter informed the participant

that her followers were in another building across campus and that the meeting would convene via live video-camera feed. Participants completed the self-efficacy questionnaire before beginning the role model task followed by the leadership task and then completion of the final questionnaires.

Role model manipulation. Participants were presented with one of the two sets of 16 leaders (or flowers in the control) via a powerpoint presentation. In the elite condition, participants were presented with Dasgupta and Asgari's (2004) pictures and paragraph-long descriptions of high profile female leaders from diverse fields including journalism (Connie Chung) and the law (Justice Ruth Bader Ginsberg). The descriptions include information on the leaders' educational background, career trajectory, and most notable accomplishments, positions, and honors. In the non-elite condition the stimuli from Hoyt and Simon (2011) were used. These non-elite role model stimuli were created to be counterparts to the elite models, representing similar racial and ethnic diversity, occupational domains, and with similar descriptions of accomplishments, but at an earlier stage in their career. Following the presentation, participants completed the role model inspiration measure whereas control participants responded to questions about flowers.

Leadership task. Similar to tasks used in previous research (Hoyt et al., 2010; Towler, 2003), participants were told that they would play the role of the hypothetical Recruitment Manager of the Amidex Corporation and they were to brief their ostensible "followers" on how to complete a resume selection/screening of potential employees. Participants were given a packet of information including task instructions, a description of Amidex's background, values and goals, and a background of their leadership role. Participants had 5-minutes to deliver their instructions to the followers in real-time via a webcam. After the preparation period, participants

faced a camera mounted on the wall as the experimenter ostensibly called the other participants to confirm that the audio-video feed was working and that they were ready to begin. Participants then delivered their speeches, which were audio-recorded, and completed the final questionnaires while their followers supposedly completed the task.

Measures.

Unless noted otherwise, participants responded to the following measures using a 7-point Likert-type scale ranging from 1 (strongly disagree) to 7 (strongly agree).

Self-efficacy for leadership. Murphy (1992) developed this measure to assess individuals' self-efficacy regarding general leadership abilities. Participants rated their leadership abilities on eight items such as "I am confident of my ability to influence a work group that I lead" ($\alpha=.81$).

Role model inspiration. Using a measure modified from Dasgupta and Asgari (2004), participants indicated how inspired they were by the role models on a 9-item measure. Sample items include: "I identify with the accomplishments of the role models I read about," and "Someday in the future, I will reach a similar level of success in my own field" ($\alpha=.71$).

Leader self-identification. Participants assessed their identification with the domain of leadership by rating themselves on twelve items. Sample items include: "I have the ability to perform as a leader," and "Leadership is important to me" ($\alpha=.91$).

Leadership aspirations. After completing leadership task, participants were erroneously told there would be another upcoming small group task. Participants responded to five questions assessing their leadership aspirations such as "I would like to be selected as leader of the upcoming group task" ($\alpha=.88$).

Self-rated leadership performance. Using a measure similar to those used in previous

research (Hoyt & Blascovich, 2007, 2010), participants were asked to rate their own performance on three items including “I performed well on the leadership task I just completed” ($\alpha=.90$).

Other-rated leadership performance. Similar to the rating process used to assess leadership performance by Hoyt and Blascovich (2010), audiotapes were independently coded by two trained raters blind to efficacy and experimental condition. This performance scale consisted of nine items including guidance/delegation, clarity of explanation of task, and overall leadership ability. Performance assessments were made on a 9-point Likert-type scale ranging from poor to excellent and the scale demonstrated adequate reliability for both raters ($\alpha=.77$; $\alpha=.78$) and interrater reliability for the combined data was $r=.80$, $p<.001$.

Results

Summary of Analytic Procedure

All dependent variables were predicted using simultaneous regression analyses. Unless specified otherwise, two orthogonal contrast coded terms were used to test the hypotheses: the *elite* contrast coefficient compares the elite condition (coded as 1) to the control condition (coded as -1) and the *non-elite* contrast coefficient compares the non-elite condition to the control condition. Participants’ self-efficacy (mean centered) was entered into the equation along with the two orthogonal contrast coded terms and both two-way interaction terms. Significant interactions were further explored using simple slopes analyses and the analyses performed within levels of efficacy are done so at both ± 1 SD from the mean (Aiken & West, 1991).

Role Model Inspiration

Because role model inspiration was not assessed in the control condition, the following analysis used a *role model* contrast coefficient comparing the elite condition (coded as 1) to the non-elite condition (coded as -1), and the regression equation included the contrast coefficient,

centered efficacy, and the interaction term. Although not significant, participants in the elite condition showed a trend toward reporting lower levels of inspiration ($\beta = -.14, p = .141$). Next, the higher the participants' self-efficacy, the more inspired they were ($\beta = .32, p < .001$). As hypothesized, there was a significant interaction between efficacy and condition ($\beta = .24, p = .012$). Simple slopes testing (see Table 1 for simple slopes) revealed that the relationship between efficacy and inspiration was significant in the elite condition but not in the non-elite condition (see Figure 1). Further simple slopes testing revealed that those low in efficacy (-1 SD) reported significantly lower levels of inspiration in the elite, compared to non-elite, condition whereas the increase for high efficacy individuals (+1 SD) was not significant.

Identification with the Leadership Domain

Participants in the elite condition reported similar levels of identification as those in the control condition ($\beta = .06, ns$) and although participants in the non-elite condition reported greater levels of self-identification than those in the control, this was only marginally significant ($\beta = .15, p = .099$). The higher the participants' level of self-efficacy, the more they self-identified as a leader ($\beta = .62, p < .001$). The relationship between self-efficacy and self-identification as a leader was significantly different in the elite compared to control condition ($\beta = .27, p = .005$) but the relationship did not differ across the non-elite and control conditions ($\beta = -.034, ns$). The simple slopes revealed that the relationship between efficacy and self-identification was positive in all three conditions but was significantly stronger in the elite condition (see Figure 2). Furthermore, the lower levels of leadership identification demonstrated by low efficacy participants in the elite versus control condition was only a non-significant trend but the higher levels reported by those higher in efficacy was significant.

Leadership Aspirations

Participants in the elite condition reported similar levels of leadership aspirations as those in the control condition ($\beta=-.05$, *ns*) while those in the non-elite condition reported marginally higher levels ($\beta=.18$, $p=.062$). As expected, leadership self-efficacy significantly predicted leadership aspirations ($\beta=.52$, $p<.001$). Next, the relationship between self-efficacy and leadership aspirations was significantly different across the elite versus control conditions ($\beta=.30$, $p=.005$) but it did not differ across the non-elite versus control conditions ($\beta=-.15$, *ns*). Simple slopes analyses revealed that the relationship between efficacy and leadership aspirations is positive in all three conditions but the relationship is significantly stronger in the elite condition (see Figure 2). Simple slopes analyses within levels of efficacy revealed significantly lower levels of aspiration in the elite compared to control condition for those low in efficacy, and marginally higher aspirations for those high in efficacy

Performance: Self-rated and other-rated

Self-rated performance. Compared to those in the control condition, participants in the elite condition reported performing worse ($\beta=-.21$, $p=.054$) and those in the non-elite condition reported performing better ($\beta=.20$, $p=.060$); both of these are marginally significant. Greater levels of leadership self-efficacy predicted greater levels of self-rated performance ($\beta=.37$, $p<.001$). Consonant with predictions, the relationship between self-efficacy and self-rated performance was stronger in the elite compared to the control condition ($\beta=.23$, $p=.046$) but did not differ in the non-elite relative to the control condition ($\beta=-.11$, *ns*). Simple slopes analyses revealed that the relationship between efficacy and self-rated performance was positive in all three conditions but only reached statistical significance in the elite condition and marginal significance in the control condition (see Figure 3). Additionally, those low in efficacy perceived

their performance as significantly worse in the elite compared to control condition however, there was no significant difference across conditions for those high in self-efficacy.

Other-rated performance. Performance data from 6 participants were missing due to technical problems with the audiotapes leaving a final sample size of 96. Neither the participants in the elite condition ($\beta=-.14$, *ns*) nor those in the non-elite condition ($\beta=.12$, *ns*) performed significantly different than those in the control condition. There was a marginally significant positive relationship between participants' levels of self-efficacy and rated performance, ($\beta=.21$, $p=.053$). As expected, the relationship between self-efficacy and performance was marginally stronger in the elite condition compared to the control condition ($\beta=.25$, $p=.056$) however, the relationship across the non-elite relative to the control condition was not significant ($\beta=.04$, *ns*). Simple slopes analyses revealed that the relationship was significant in the elite condition but not in the non-elite or control conditions (see Figure 3). The simple slopes revealed that low efficacy participants performed significantly worse in the elite compared to control condition however, there was no significant difference across conditions for those high in efficacy.

In sum, responses to elite, but not non-elite, role models are moderated by participants' levels of leadership efficacy. Simple slopes analyses (see Table 1) revealed that the relationship between leadership efficacy and all dependent variables is significantly stronger in the elite role model condition compared to the other conditions. Although the elite role models have a positive impact on high efficacy participants' identification with leadership and a marginally significant effect on their leadership aspirations, the elite models have a greater effect on low efficacy participants. Specifically, they are less inspired by the elite compared to non-elite role models and the elite models have deflating effects on their leadership aspirations and self-rated and

other-rated performance. Although not significant, the effect of elite models on their leadership identification shows a trend in the predicted direction.²

Mediational Analyses

To test the moderated mediation hypothesis the guidelines and analytic approach advocated by Preacher, Rucker, and Hayes (2007) were employed. Using their macro for testing moderated mediation, two analyses were conducted, one for each dependent variable. Table 2 displays the two multiple regression models for each dependent variable; the mediator variable model displays the path coefficients with leadership identification as the dependent variable and the dependent variable model displays the coefficients with performance as the dependent variable. The statistically significant interaction in the mediator models indicates that the interaction term was significantly associated with the mediator ($p < .01$). Next, in the dependent variable models the mediator was significantly associated with both dependent variables: self-rated performance ($B = 1.15, p < .001$) and other-rated performance ($B = .41, p = .010$). The conditional indirect effects for both dependent variables in the elite role model condition are significant. These results support the argument that the indirect effect of self-efficacy on self-rated performance or other-rated performance through one's leadership identification is moderated by role model.

These mediational findings were further verified with bootstrapping as recommended (Preacher et al., 2007). Bootstrap-based confidence intervals (95%) for the indirect effects were generated by taking 5,000 samples from the original data set, yielding 5,000 estimates of each path coefficient. These estimates were used to calculate estimates of conditional indirect effects of leadership efficacy on performance through leader self-identification conditional on role model condition. The bias-corrected and accelerated confidence interval for self-rated

performance was {.82, 1.87} and for other-rated performance was {.17, .74}. In sum, bootstrapping corroborated the results from the normal-theory tests; the conditional indirect effects were statistically significant for both outcomes.

Discussion

Previous research on role models has been equivocal, demonstrating that the impact of social comparisons on the self is multifaceted (Suls et al., 2002). Whether superior role models have inspiring or deflating effects depends on whether people assimilate themselves with the successful individual or whether they contrast themselves with her. Which process people engage in depends on a variety of factors including the types of self-knowledge made accessible, the mutability of self-views, the distinctiveness of the role model, and the perceived attainability of success (Suls et al., 2002). The current research takes a self-regulatory perspective to understanding factors that can make an elite role model's level of success seem attainable by examining self-efficacy expectancies. Research has shown that exposure to outstanding female leader role models can have deflating effects on women's leadership-related self-perceptions and behaviors (Hoyt & Simon, 2011), but the current findings suggest that this only holds for those with lower levels of self-efficacy and these outstanding role models can be beneficial to those with higher levels of efficacy. Specifically, compared to those with higher leadership efficacy, women with low efficacy were less inspired by the elite role models and subsequently showed lowered identification with leadership, leadership aspirations, and performance. Finally, efficacy did not play a role in moderating responses to non-elite leaders who were equally inspiring to high and low efficacy participants.

This research makes a number of unique and important contributions to the literature. First, it demonstrates that the relative beneficial versus detrimental effects of social comparisons

to highly successful role models depends in part on people's self-views regarding their beliefs in their ability to succeed at a specific task. Thus, this research has identified an important self-regulatory variable that serves to influence which process- assimilation or contrast- predominates when making strategic comparisons. In addition, the majority of the extant research focuses on self-perception outcomes whereas the current research has also demonstrated the important behavioral consequences that exposure to top level role models can have. Moreover, this study further develops this line of research by identifying and testing a process variable that begins to elucidate how role models have an impact on domain-relevant behavior: these leadership performance effects were mediated by participants' identification with the domain of leadership.

Although this research was not designed to test the cognitive processes that the individuals engage in when comparing to the role models, the results are consistent with the informational perspective in the selective accessibility model (Mussweiler, 2003). According to this model, whether assimilation or contrast comparisons are activated depends on the self-related knowledge obtained during the social comparisons; when individuals selectively focus on similarities with the role model they demonstrate assimilation effects whereas contrast effects are more likely to emerge when people focus on differences (Mussweiler, Ruter, & Epstude, 2004). Thus, the direction of the social comparison depends on the position of the self relative to the role model. This study suggests that self-efficacy can serve as a proxy for the position of the self in relation to the role model. As Mussweiler et al (2004) state, whether people "see themselves as farther away or closer to the standard critically determines whether they assimilate toward or contrast away from it" (p. 841).

An important impetus for this research was to provide a more nuanced understanding of the role of ingroup role models for those performing in stereotype-relevant domains (Hoyt &

Simon, 2011; Major, Sciacchitano, & Crocker, 1993). This research focused on female role models for women in the domain of leadership given the social-relevance of leadership and the importance of female role models for women in male-dominated professions (Lockwood, 2006). The current research substantiates the claim that the extent to which outstanding role models can inspire success is dependent, in part, on people's existing self-conceptions in regards to the domain. Future research should examine the generalizability of these effects by examining members of other underrepresented groups, such as racial or sexual minorities, as well as individuals who are performing in domains that are not stereotype-relevant. Recent research showing that the perceived attainability of a leader role model's success is important for both women and men (Hoyt et al., 2012) suggests that the effects observed in the current research might generalize across social groups and contexts. These effects, however, may be more difficult to detect in contexts that are not stereotype relevant given that the importance and impact of role models is arguably greater and levels of self-efficacy are likely lower for those seeking success in stereotype-relevant domains.

In a more applied vein, these findings hold valuable implications for role model interventions. The present study was not designed to test the causal role of leadership efficacy; indeed, changing self-efficacy percepts is not a simple feat (Gist & Mitchell, 1992). While efficacy may or may not play a causal role in the observed effects, knowing the important moderating role of efficacy helps to identify those who are more or less likely to benefit from exposure to elite role models. Furthermore, efficacy *may* play a causal role in the observed findings. One promising approach to investigating the causal role of efficacy would be to develop and test a comprehensive efficacy-training program by focusing on the determinants of self-efficacy including the four sources of efficacy information identified by Bandura (1997).

Furthermore, just as efficacy is a determinant of responses to role models, role models clearly impact self-perceptions indicating a potentially important iterative nature of these processes.

In sum, individual achievement does not happen in a social vacuum but often results from powerful interpersonal processes that influence people's pursuit and attainment of goals. The current research demonstrates the great utility in merging both intrapersonal and interpersonal perspectives when attempting to understand individual success. This research has demonstrated that extremely successful role models have the potential to be inspiring or self-deflating and a key predictor in determining which response ensues is the individual's self-efficacy. Specifically, women with high levels of efficacy were inspired by the role models and they showed positive assimilation responses, identifying more with leadership, whereas women with lower levels of efficacy were less inspired by the role models and they demonstrated responses consistent with self-deflating contrast social comparison effects. Furthermore, the impact of these top level role models on participants' self-views mediated their behavioral performance responses. Research such as this, focused on understanding variables that influence whether individuals engage in contrast or assimilation processes, holds great potential for encouraging effective interventions aimed at inspiring greater levels of achievement and influence particularly amongst individuals in underrepresented groups.

References:

- Aiken, L. S., & West, S. G. (1991). *Multiple Regression: Testing and interpreting interactions*. Newbury Park, CA: Sage.
- Bandura, A. (1986). *Social foundations of thought and action*. Englewood Cliffs, NJ: Prentice-Hall.

- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: W.H. Freeman.
- Buck, G., Clark, V., Leslie-Pelecky, D., Lu, Y., & Cerda-Lizarraga, P. (2008). Examining the cognitive processes used by adolescent girls and women scientists in identifying science role models: A feminist approach. *Science Education, 92*, 688-707.
- Buunk, B. P., Collins, R. L., Taylor, S. E., VanYperen, N. W., & Dakof, G. A. (1990). The affective consequences of social comparison: Either direction has its ups and downs. *Journal of Personality and Social Psychology, 59*, 1238–1249. doi: 10.1037/0022-3514.59.6.1238
- Carver, C. S., & Scheier, M. F. (2002). Control processes and self-organization as complementary principles underlying behavior. *Personality and Social Psychology Review, 6*, 304-315.
- Collins, R. L. (1996). For better or worse: The impact of upward social comparison on self-evaluations. *Psychological Bulletin, 119*, 51-69. doi: 10.1037/0033-2909.119.1.51
- Collins, R. L. (2000). Among the better ones: Upward assimilation in social comparison. In J. Suls & L. Wheeler (Eds.), *Handbook of social comparison: Theory and research* (pp. 159–172). New York, NY: Kluwer Academic/Plenum.
- Cooley, C. H. (1902). *Human nature and the social order* (Rev. ed.). New York: Scribner's.
- Dasgupta, N., & Asgari, S. (2004). Seeing is believing: Exposure to counterstereotypic women leaders and its effect on automatic gender stereotyping. *Journal of Experimental Social Psychology, 40*, 642-658. doi: 10.1016/j.jesp.2004.02.003
- Dijksterhuis, A., & van Knippenberg, A. (1998). The relation between perception and behavior, or how to win a game of Trivial Pursuit. *Journal of Personality and Social Psychology, 74*, 865-877. doi: 10.1037/0022-3514.74.4.865

- Eagly, A. H., & Carli, L. L. (2007). Women and the labyrinth of leadership. *Harvard Business Review*, 85, 62-71.
- Festinger, L. (1954) A theory of social comparison processes. *Human Relations*, 7, 117-40. doi: 10.1177/001872675400700202
- Finkel, E. J., & Fitzsimons, G. M. (2011). The effects of social relationships on self-regulation. In K. D. Vohs, & R. F. Baumeister (Eds.), *Handbook of self-regulation: Research, theory, and applications* (2nd ed., pp. 390-406). New York: Guilford Press.
- Fitzsimons, G. M., & Finkel, E. J. (2010). Interpersonal influences on self-regulation. *Current Directions in Psychological Science*, 19, 101-105.
- Gist, M. E., & Mitchell, T. R. (1992). Self-efficacy: A theoretical analysis of its determinants and malleability. *Academy of Management Review*, 17, 183-211.
- Hoyt, C. L. (2010). Women, men, and leadership: Exploring the gender gap at the top. *Social and Personality Psychology Compass*, 4, 484-498.
- Hoyt, C., & Blascovich, J. (2010). The role of self-efficacy and stereotype activation on cardiovascular, behavioral and self-report responses in the leadership domain. *Leadership Quarterly*, 21, 89-103. doi: 10.1016/j.leaqua.2009.10.007
- 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. L., Burnette, J., & Innella, A. (2012). I can do that: The impact of implicit theories on leadership role model effectiveness. *Personality and Social Psychology Bulletin*, 38, 257-268.

- Hoyt, C. L., Murphy, S., Halverson, S., & Watson C. (2003). Group leadership: Efficacy and effectiveness. *Group Dynamics: Theory, Research, and Practice*, 7, 259-274.
- Hoyt, C.L., & Simon, S. L. (2011). Female leader role models: Injurious or inspiring? *Psychology of Women Quarterly*, 35, 143-157.
- Locke, K.D. & Sadler, P. (2007). Self-efficacy, values, and complementarity in dyadic interactions: Integrating interpersonal and social-cognitive theory. *Personality and Social Psychology Bulletin*, 33, 94-109.
- Lockwood, P. (2006). Someone like me can be successful: Do college students need same-gender role models? *Psychology of Women Quarterly*, 30, 36-46.
- Lockwood, P. & Kunda, Z. (1997). Superstars and me: Predicting the impact of role models on the self. *Journal of Personality and Social Psychology*, 73, 93-103.
- Lockwood, P. & Kunda, Z. (1999). Increasing the salience of one's best selves can undermine inspiration by outstanding role models. *Journal of Personality and Social Psychology*, 76, 214-228. doi: 10.1037/0022-3514.76.2.214
- Major, B., Sciacchitano, A. M., & Crocker, J. (1993). In-group versus out-group comparisons and self-esteem. *Personality and Social Psychology Bulletin*, 19, 711-721. doi: 10.1177/0146167293196006
- Major, B., Testa, M., & Bylsma, W. H. (1991). Responses to upward and downward social comparisons: The impact of esteem-relevance and perceived control. In J. Suls & T.A. Wills (Eds.), *Social comparison: Contemporary theory and research* (pp. 237-260). Hillsdale, NJ: Lawrence Erlbaum.

- Marx, D. M., Ko, S. J., & Friedman, R. A. (2009). The “Obama Effect”: How a salient role model reduces race-based performance differences. *Journal of Experimental Social Psychology, 45*, 953-956.
- Marx, D. M., & Roman, J. S. (2002). Female role models: Protecting women's math test performance. *Personality and Social Psychology Bulletin, 28*, 1183-1193.
- Murphy, S. E. (1992). The contribution of leadership experience and self-efficacy to group performance under evaluation apprehension. Unpublished doctoral dissertation, University of Washington, Seattle.
- Mussweiler, T. (2003). Comparison processes in social judgment: Mechanisms and consequences. *Psychological Review, 110*, 472-489.
- Mussweiler, T., Rüter, K., & Epstude, K. (2004). The ups and downs of social comparison: Mechanisms of assimilation and contrast. *Journal of Personality and Social Psychology, 87*, 832-844.
- Preacher, K. J., Rucker, D. D., & Hayes, A. F. (2007). Assessing moderated mediation hypotheses: Theory, methods, and prescriptions. *Multivariate Behavioral Research, 42*, 185-227.
- Rusbult, C. E., Finkel, E. J., & Kumashiro, M. (2009). The Michelangelo phenomenon. *Current Directions in Psychological Science, 18*, 305-309.
- Steele, C. M., & Aronson, J. (1995). Stereotype threat and the intellectual test performance of African Americans. *Journal of Personality and Social Psychology, 69*, 797-811. doi: 10.1037/0022-3514.69.5.797
- Suls, J., Martin, R., & Wheeler, L. (2002). Social comparison: Why, with whom and with what effect? *Current Directions in Psychological Science, 11*, 159-163.

- Towler, A. J. (2003). Effects of charismatic influence training on attitudes, behavior, and performance. *Personnel Psychology, 56*, 363-381.
- Wheeler, L., & Suls, J. (2005) Social comparison and self-evaluations of competence. In A.J. Elliot & C.S. Dweck (Eds.) *Handbook of competence and motivation* (pp. 566-578). New York: Guilford Publications.
- Wheeler, L., & Suls, J. (2007). Assimilation in social comparison: Can we agree on what it is? *Revue Internationale De Psychologie Sociale, 20*, 31-51.
- Wood, J. V. (1989). Theory and research concerning social comparisons of personal attributes. *Psychological Bulletin, 106*, 231-248. doi: 10.1037/0033-2909.106.2.231

Footnotes:

¹In an attempt to activate gender-related stereotypes in the leadership domain, participants were either told that the research is examining gender differences or individual differences in leadership. This manipulation had no independent or interactive effects on any of the independent variables.

²Although the current research does not replicate the main, self-deflating effects of elite role models found in previous research, this may be a result of differences in the leadership self-efficacy of participants. Supporting this, the mean efficacy score in this study is rather high (5.37 on 7-point scale).

Tables:

Table 1

Simple slopes within condition and within levels of efficacy.

Simple Slopes Within Conditions			
Dependent Variable	Elite role model	Non-elite role model	Control
Role Model Inspiration	$\beta=.63, p<.001$	$\beta=.08, ns$	NA
Leadership Identification	$\beta=.80, p<.001$	$\beta=.54, p<.001$	$\beta=.47, p=.004$
Leadership aspirations	$\beta=.74, p<.001$	$\beta=.37, p=.025$	$\beta=.41, p=.015$
Self-rated performance	$\beta=.57, p<.001$	$\beta=.20, ns$	$\beta=.33, p=.056$
Other-rated performance	$\beta=.44, p=.014$	$\beta=.20, ns$	$\beta=-.18, ns$

Simple Slopes Within Levels of Efficacy		
Dependent Variable	High efficacy (+1 SD)	Low efficacy (-1 SD)
Role Model Inspiration	$\beta=.119, ns$	$\beta=-.39, p=.007$
Leadership Identification	$\beta=.30, p=.014$	$\beta=-.19, p=.125$
Leadership aspirations	$\beta=.220, p=.098$	$\beta=-.326, p=.018$
Self-rated performance	$\beta=.01, ns$	$\beta=-.42, p=.007$
Other-rated performance	$\beta=.09, ns$	$\beta=-.36, p=.037$

Table 2

Conditional indirect effect of self-efficacy in relation to leadership performance through leadership identification

Predictor	B	SE	t	p
Outcome: Self-rated Performance				
Mediator Variable Model (DV=Leadership Identification)				
Constant	4.85	.07	68.52	.000
Self-efficacy	.79	.11	7.39	.000
Role Model	.12	.07	1.65	.104
Efficacy x Role model	.35	.11	3.28	.002
Dependent Variable Model (DV=Self-rated performance)				
Constant	-1.29	.91	-1.41	.163
Leadership Identification	1.15	.19	6.17	.000
Self-efficacy	-.07	.21	-.32	.749
Role Model	-.29	.11	-2.76	.008
Efficacy x Role model	-.03	.17	-.18	.86
Outcome: Other-rated Performance				
Mediator Variable Model (DV=Leadership Identification)				
Constant	4.90	.07	69.76	.000
Self-efficacy	.74	.11	7.00	.000
Role Model	.11	.07	1.60	.116
Efficacy x Role model	.30	.11	2.87	.006
Dependent Variable Model (DV=Other-rated performance)				
Constant	4.93	.77	6.42	.000
Leadership Identification	.41	.16	2.66	.010
Self-efficacy	-.09	.17	-1.88	.066
Role Model	-.24	.17	-1.38	.174
Efficacy x Role model	.25	.14	1.83	.074
Conditional Effects in Elite Role Model Condition				
Outcome	$b_1(a_1+a_3W)$	SE	z	p
Self-rated performance	1.30	.26	4.95	.000
Other-rated performance	.42	.14	3.00	.003

Note: $N_{\text{self-rated}}=66$; $N_{\text{other-rated}}=63$. The conditional indirect effect is calculated by $b_1(a_1+a_3W)$: a_1 is the path from leadership self-efficacy to leadership identification, a_3 is the path from the interaction between self-efficacy and role model to leadership identification, W is role model, and b_1 is the path from leadership identification to the performance measure.

Figure captions:

***Figure 1.* Predicting role model inspiration from leadership self-efficacy and role model condition.**

***Figure 2.* Predicting leadership identification and leadership aspirations from leadership self-efficacy and role model condition.**

***Figure 3.* Predicting self-rated and other-rated leadership performance from leadership self-efficacy and role model condition.**