Do Women Have an Advantage When Leading Across Groups? An Examination of Gender, Self-Construals, and Intergroup Leadership

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Do Women Have an Advantage When Leading Across Groups? An Examination of Gender, Self-Construals, and Intergroup Leadership

By

Jackie Shaib

Claremont Graduate University

2024
Approval of the Dissertation Committee

This dissertation has been duly read, reviewed, and critiqued by the Committee listed below, which hereby approves the manuscript of Jackie Shaib as fulfilling the scope and quality requirements for meriting the degree of Doctor of Philosophy in Psychology.

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Abstract

Do Women Have an Advantage When Leading Across Groups? An Examination of Gender, Self-Construals, and Intergroup Leadership

By

Jackie Shaib

Claremont Graduate University: 2024

Intergroup leadership, self-construals, and gender are relatively well researched. However, there has been limited research that has looked at the interplay between these areas of research. For example, past research has shown women’s tendency towards an interdependent self-construal (Cross & Madson, 1997), the various challenges women face in pursuit of leadership roles (Eagly, 1987; Schein, 1973), as well as which style of intergroup leadership is most effective in various scenarios of subgroup relations (Hogg & Rast, 2022; Hogg et al., 2012; Rast et al., 2018). Although real world leadership situations often combine all these phenomena, research has yet to catch up and explore how they interact with each other. Therefore, two studies were conducted to examine how leader gender, intergroup leadership style, and subgroup relations impact evaluations of candidates running for a leadership position (Study 1; N = 256); and how participant gender and subgroup relations impact participants’ endorsement of an intergroup leadership style when placed in a leadership role (Study 2; N = 262). Results of Study 1 showed that participants more strongly endorsed a candidate who used an intergroup relational identity (IRI) style of leadership and were also more likely to promote that candidate. Results of Study 2 showed that, in a leadership position themselves, women more strongly endorsed using IRI rhetoric than men, and that participants in the cooperation subgroup condition more strongly endorsed using IRI rhetoric than participants in the competitive subgroup condition.
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CHAPTER ONE

Introduction

Society is almost always structured into discrete groups, based for example on nationality, ethnicity, work, political or religious ideology, and so forth, that have clearly defined boundaries, identities, and practices (Hogg, 2015). Furthermore, it is common for almost all groups to have nested within them multiple smaller subgroups, for example, countries within the European Union, divisions within an organization, and factions within a political party. Due to the fact these subgroups tend to exist in proximity, typically working to some degree towards a shared superordinate goal, they can often feel a need to maintain their distinctiveness, and thus have a competitive orientation to one another (Hogg et al., 2012).

A common thread in situations where subgroups are nested within a superordinate group is the need for intergroup leadership – a style of leadership that hinges on leading multiple subgroups that have their own distinct and valued identities (Hogg & Rast, 2022). Leading across multiple subgroups with their own unique and cherished identities can create a challenge for leadership. When there is tension between the subgroups, intergroup leadership needs to effectively “transform subgroup self-interest and detrimental competition between groups into collaboration and cooperation that optimize intergroup performance” but do so without creating identity distinctiveness threat (Hogg et al., 2012, p. 234).

Research has identified multiple styles of leadership that are beneficial when intergroup leadership is needed. Both collective identity (CI) and intergroup relational identity (IRI) have proven successful in certain circumstances when leading across subgroups (Hogg, 2015; Hogg et al., 2012; Rast et al., 2018). However, there is currently a gap in the literature regarding which
type of leader is best suited for intergroup leadership. Specifically, there is little research on the interplay of gender and self-construals, as they relate to effective intergroup leadership.

Informed by previous research on self-construal (Cross & Madson, 1997; Markus & Kitayama, 1991), gender differences (Eagly, 1987; Schein, 1973), and intergroup leadership (Hogg et al., 2012; Rast et al., 2018), the present research examines the effects of leader gender, subgroup relations, and leadership style on people’s evaluation of leader candidates (Study 1); and the effects of participant gender and subgroup relations on people’s endorsement of using IRI rhetoric when placed in a leader role (Study 2). This research provides new information about the interplay of these variables which can help inform potential pathways to mitigate the current gender gap in top level leadership positions (Catalyst, 2022).

**Literature Review**

**Social Identity Theory**

Being a member of and identifying with a group offers numerous benefits for people. For example, people define who they are via the groups they are in, which can reduce their uncertainty (Hogg, 2021) and enhance their self-esteem (Abrams & Hogg, 1988). Social identity theory is a well-established and robustly supported social psychological analysis of the relationship between self-conception, group processes, and intergroup behavior (Tajfel & Turner, 1986; Turner et al., 1987; also see Abrams & Hogg, 1990; Hogg, 2018). Of relevance to the present research is the theory’s recognition that groups are not only a collection of individuals, but more often than not, contain nested subgroups.

**Social Identity Theory of Leadership**

Leadership plays a central role in group and intergroup dynamics. Practically all groups have some form of formal and/or informal leadership structure, and in almost all cases, “leaders”
play a key role in defining the group’s identity. The social identity theory of leadership “views leadership as a group process generated by social categorization and prototype-based depersonalization process associated with social identity” (Hogg, 2001, p. 184). Social categorization segments people into ingroups and outgroups, which are represented via group prototypes (Hogg, 2001). Prototypes are context specific and can be thought of as “sets of attributes that define and prescribe attitudes, feelings, and behaviors that characterize one group and distinguish it from other groups” (Hogg, 2001, p. 187).

In addition to thinking, feeling, and behaving in line with prototypes of their group, ingroup members feel and express more favorable attitudes towards other ingroup members compared to outgroup members. This behavior helps solidify who the ingroup is, and equally importantly, who the ingroup is not (the outgroup). Hogg (2015) notes how groups provide people with a social identity and their leaders are thus “the most significant and reliable source of information about that identity” (p. 187). The more ingroup members conform to the prototype of the group, the more they accentuate their differences to the outgroup and protect the identity they derived from their ingroup. Social identity theory of leadership shows how crucial group membership is to people, and the benefits that come with closely identifying with your ingroup.

**Intergroup Leadership**

While the social identity theory of leadership has robust support for the key premise that prototypical leaders are strongly supported (see meta-analyses by Barreto & Hogg, 2017; Steffens et al., 2021), the theory is primarily focused on leadership as a process of leading a group of individuals, not a collection of distinct subgroups (Hogg et al., 2012). However, leadership is often intergroup leadership, in which a leader must lead across multiple subgroups,
and promote positive relations among the groups (Hogg, 2015; Hogg & Rast, 2022; Hogg et al., 2012; Pittinsky & Simon, 2007).

**Intergroup Leadership Challenges and Successes**

Intergroup leadership can be particularly challenging when a leader must lead subgroups that are in conflict and have negative stereotypic attitudes towards each other (Pittinsky & Simon, 2007). Minimal group studies powerfully demonstrate how the mere existence of social categories can produce and sustain competitive and discriminatory intergroup behavior (e.g., Tajfel, 1970). It can be difficult to eliminate inter-subgroup conflict. While healthy competition can be beneficial, this conflict can become damaging when “one group has a monopoly of resources and power, and/or the consequences of winning or losing are perceived as profoundly affecting the existence of one’s group and thus oneself as a member” (Hogg, 2015, p.178).

Another challenge of intergroup leadership resides in distinctiveness threat, or how unique and distinct one group is from another (e.g., Jetten et al., 1997). Distinctiveness threat plays a key role in intergroup leadership dynamics, especially during times of conflict between subgroups. For example, in accordance with social identity theory, “threats to group distinctiveness and identity can lead to increased antagonism between groups” (Jetten et al., 1997, p. 636). This is because individuals are motivated to distinguish their ingroup from other outgroups in efforts to reduce subjective uncertainty (Crisp et al., 2006; Hogg, 2021).

Group membership and identification play a key role in how group members react to distinctiveness threat. For example, prototypical members, rather than peripheral members, display more ingroup bias under distinctiveness threat. Thus, the more central group membership is to a person’s identity, and the more one embodies what the group stands for, the more ingroup
bias the person will display. Thus, the centrality of people’s group membership is an important factor in how they will react to any sort of distinctiveness threat their group may face.

**Intergroup Leadership Styles**

It is important to consider what successful intergroup leadership entails. Effective intergroup leadership is characterized by leadership that sustains a collaborative effort between subgroups towards a joint superordinate group goal, in which the leader successfully reduces negative feelings and antagonistic behaviors between subgroups (Hogg et al., 2012; Pittinsky & Simon, 2007). Two common types of intergroup leadership, and the focus of this paper, are collective identity and intergroup relational identity. While both are styles of intergroup leadership, there are significant differences between the two styles, how they are enacted, what they mean for the group, and when it is best to utilize each (Hogg et al., 2012; Rast et al., 2018).

**Collective Identity.** Both IRI and CI refer to an extended sense of self that is inclusive of others, with CI focusing on self-other similarity and IRI focusing on relationships between the in-subgroup and out-subgroups within a superordinate category (Hogg et al., 2012). In line with Turner et al. (1987), a CI style of intergroup leadership “implies similarity between, even interchangeability among, members of the group” (Hogg et al., 2012, p. 238). A CI approach to intergroup leadership tries to create a singular overarching superordinate identity that effectively erases subgroup differences to increase collaboration between the groups (see Gaertner & Dovidio, 2000). In contrast, the goal of successful intergroup leadership “is to fashion and promote a cohesive (superordinate) group with a shared sense of identity … without erasing subgroup boundaries and diluting the distinctiveness of subgroup identities that are important to subgroup members” (Hogg & Rast, 2022, p. 565 – italics added). With this definition of success in mind, it is evident that a CI style of intergroup leadership has the potential to backfire.
One of the biggest challenges posed by CI is that it is difficult for a leader to represent the shared collective identity and not seem like they are representing only one of the subgroups (Hogg et al., 2012). Another issue relates to the identity distinctiveness threat discussed earlier. For example, CI promotes a shared superordinate group identity that threatens to erase real and important intergroup differences. This erasure of intergroup differences can be exceptionally damaging when distinctiveness threat is high and group membership is highly salient to its members. Because groups strive to be distinct from one another when it comes to their identity (Abrams & Hogg, 2010), blurring the boundaries of their intergroup divisions can be extremely problematic (Rast et al., 2018). Some problems of CI, and the subsequent blurring of boundary lines, include a threat to self-conception, potential intergroup hostility, and eroded trust in the leader, which can yield a low rate of success overall (Hogg, 2015; Hornsey & Hogg, 2000; Leonardelli et al., 2010).

**Intergroup Relational Identity.** While CI can be problematic, especially if group distinctiveness is threatened, there is another style of intergroup leadership that can address and overcome some of these problems. Intergroup relational identity is a style of intergroup leadership that can be thought of as a “self-definition in terms of one’s group membership that incorporates the group’s relationship with another group as part of the group’s identity” (Hogg et al., 2012, p. 233). Thus, IRI is particularly useful when attempting to lead across subgroups that have conflict with one another. At the superordinate level, IRI is able to both recognize and celebrate the distinctness of the subgroup’s identities, as well as the value of their shared relationship with each other as a central aspect of the superordinate group’s identity (Hogg & Rast, 2022). At the subgroup level, IRI defines the ingroup’s identity as one that promotes and enables a constructive and cooperative relationship with the outgroup (Hogg & Rast, 2022).
Intergroup relational identity is a highly effective form of intergroup leadership when group membership is central to its member’s identity. IRI “focuses on the valued identity-relationship between one’s ingroup and one or more outgroups, rather than either papering-over real group differences or accentuating intergroup differentiation and distinctiveness” (Rast et al., 2018, p. 1091). By incorporating the group’s relationship with an outgroup as part of the ingroup’s identity, a sense of collaboration that is at the heart of IRI can be seen (Hogg et al., 2012). Thus, with the use of IRI, a superordinate identity can be viewed as a positive identity since it does not conflict with a person’s subgroup identity (Hornsey & Hogg, 2000).

There are numerous benefits to using an IRI, rather than CI, style of intergroup leadership. These benefits are even more pronounced when there is a deep intergroup divide. IRI buys trust in the leader because “it avoids identity threat … and is instead transparent and honest in acknowledging real intergroup differences” (Hogg et al., 2012, p. 240). Leaders who use IRI rather than CI during these challenging times have been shown to be more favorably evaluated (Rast et al., 2018), and perceived as more effective (Kershaw et al., 2021b). Lastly, research has also shown that outgroup members are more effective leaders when they adopt an IRI style of intergroup leadership which lowers ingroup bias (Kershaw et al., 2021a).

**Self-Construals and Gender**

Social psychological research on gender (Eagly, 1987; Eagly & Karau, 2002) and self-construals is enormous (Cross & Madson, 1997; Markus & Kitayama, 1991; Yang & Girgus, 2019), yet there is little research that examines how gender and self-construal interact with intergroup leadership. However, self-construals may help explain unresearched nuances of gender and leadership, which can perhaps bolster the argument that women are better suited to effectively promote IRI when leading across subgroups with high distinctiveness threat.
The two most common self-construals a person can have are an independent self-construal or an interdependent self-construal. For those with an independent self-construal, “others are less centrally implicated in one's current self-definition or identity” (Markus & Kitayama, 1991, p. 246). This is not to say that others are not important to someone with an independent self-construal, as social comparison is still needed for reflected appraisal. However, for those with this type of construal, “at any given moment, the self is assumed to be a complete, whole, autonomous entity, without the others” (Markus & Kitayama, 1991, p. 246).

Readers may question how this type of self-construal works in relation to one’s social identity, and whether people are still able to derive a sense of identity from group membership if they have an independent self-construal. The nuance here is that individuals with an independent self-construal are still able to derive an identity from belonging to a group; however, they simply do not need to define themselves by the interpersonal relationships within that group. Furthermore, Markus and Kitayama (1991) note that “Within a given culture, however, individuals will vary in the extent to which they are good cultural representatives and construe the self in the mandated way” (p. 226). Therefore, an extreme example could be an individual that skews so heavily independent on their self-construal that they derive little of their identity from the groups they are members of. However, even in this rare instance, Markus and Kitayama (1991) stress that even for those with an independent self-construal, others are still important to the person as “sources that can verify and affirm the inner core of the self” (p. 226). This notion is akin to social identity theory in that belonging to a group can both reduce your self-uncertainty and clarify your self-definition in terms of social identity (Abrams & Hogg, 1990).
The other most common type of construal is an interdependent self-construal. The main difference between the construals is the role assigned to the “other” in a person’s self-definition. For people with an interdependent self-construal, “others are included within the boundaries of the self because relations with others in specific contexts are the defining features of the self” (Markus & Kitayama, 1991, p. 246). With this type of self-construal, relationships are central parts of the person’s identity, such that, a person’s motives and emotions may be shaped by their consideration of the reactions of others (Cross & Madson, 1997; Markus & Kitayama, 1991).

**Gendered Self-Construals**

Typically, self-construals are thought of in relation to a person’s culture, or cultural differences, and the research tends to be descriptive in nature (Berry et al., 1997; Triandis, 1994). For example, numerous studies focus on cultural differences between individualistic and collectivist cultures (Berry, 1969; Fiske et al., 1998). However, self-construal research has grown to also include gender. Thus, the present research focuses on self-construal as it relates to gender, which allows for a more complete picture of the combined roles that self-construal and gender play, as they relate to intergroup leadership. For example, research has shown that men are more likely to have an independent self-construal (Cross & Madson, 1997; Markus & Oyserman, 1989; Yang & Girgus, 2019). Specifically, U.S. men are more likely to describe themselves in terms of separateness from others, and more likely to employ styles of resolution that involve using dominance or pressure to get their way (Cross & Madson, 1997; Lyons, 1983). In contrast, research has shown that women have a tendency towards possessing an interdependent self-construal and are more likely to describe themselves in terms of connectedness to others (Cross & Madson, 1997).
Gendered self-construal differences may also reflect differences in the two types of intergroup leadership described above. People with interdependent self-construals are better able to adjust their needs as a way of being receptive towards others and view relationships with others as central to their identity (Cross & Madson, 1997; Markus & Kitayama, 1991). This social orientation that privileges tending to relationships, is consistent with IRI’s central premise of collaboration between subgroups. The main parallel here is that relationships, cooperation with others, and an extended sense of self, are necessary foundations of having an interdependent self-construal, as well as effectively enacting IRI. Thus, the implications of this research on self-construals and gender could imply that women, tending to possess an interdependent self-construal, would be better suited to promote and implement IRI successfully. Specifically, of the two prominent styles of intergroup leadership (CI or IRI), it can be proposed that women are better suited than men to enact an IRI style of leadership. While intergroup dynamics may not be eradicated, it is advantageous to research whether an interdependent self-construal can be a predisposition that is useful for enacting IRI. This is especially true in instances where leadership must work with multiple contentious subgroups towards a shared superordinate goal.

Social Role Theory

Although understanding how gender relates to self-construals provides a window on what makes a good intergroup leader, it is equally important to understand the societal origins of gendered differences, and the consequences these socializations may have, when discussing the larger picture of gender, self-construals, and leadership. Eagly’s (1987) social role theory posits that behavioral differences between men and women result from both social roles that are transmitted in society and culturally gendered stereotypes. Eagly and Karau (2002) later developed role congruity theory (RCT), which explains people’s stereotypes of men and women,
such that, men are perceived as having “agentic” (i.e., assertive, dominant) qualities, whereas women are seen as having “communal” (i.e., helpful, warm) traits. Thus, according to RCT (Eagly & Karau, 2002), female leaders face prejudice resulting from the incongruity people perceive between the requirements for leaders and characteristics of women.

**Consequences and Benefits of Gendered Stereotypes.** There are numerous gender-related obstacles that women encounter on their path to leadership, exemplified by the fact that women are currently the overwhelming minority in top leadership positions (Catalyst, 2022). Relating back to prototype-based leadership, Hogg (2001) notes that a “pitfall of prototype-based leadership is that social minorities may find it difficult to assume leadership roles in some contexts” (p. 195). Due to the fact women are clear minorities in leadership and are not seen as prototypical leaders, their chances of attaining top leadership positions are slim (Catalyst, 2022; Hogg, 2001; Murrell & James, 2001; Schein, 1975). The diminished chance of upper-level leadership positions can make women vulnerable to taking advantage of suboptimal opportunities. For example, the glass cliff describes how women who break through the “glass ceiling” and occupy top level positions, are more likely to be disproportionately represented in positions that are risky and precarious (Morgenroth et al., 2020; Ryan & Haslam, 2005).

However, these gendered differences and how they relate to self-construals could actually benefit women in certain circumstances. Research shows women’s tendency towards communality maps onto an interdependent construal, whereas men’s agency maps onto an independent construal (Yang & Gigrus, 2019). This may help women succeed at enacting intergroup leadership during times of crises. IRI leadership excels when a leader can foster cooperation between distinct subgroups as a central identity within subgroups and at the superordinate group level. If women must lead groups in crises, they are arguably better
equipped to use the traits that come naturally to them to enact IRI successfully. Morgenroth et al. (2020) express this idea by stating, “when times are difficult, stereotypically feminine characteristics are seen as important traits for leaders to have” (p. 799). Thus, if subgroups are in crisis and need an IRI style of leadership, women’s communality and interdependent self-construal could advantage them to effectively enact IRI more successfully than men.

**Current Research**

Although many areas of research previously discussed have been studied, refined, and expanded over many decades (Cross & Madson, 1997; Eagly, 1987; Markus & Kitayama, 1991; Schein, 1973; Tajfel & Turner, 1986), research on intergroup leadership is relatively new, and there are as yet few studies empirically testing IRI (e.g., Hogg & Rast, 2022; Kershaw et al., 2021a; Rast et al., 2018). Informed by research on self-construals, gender differences, and intergroup leadership, two studies were conducted to examine the effects of leader gender, inter-subgroup relations, and leadership style on people’s evaluation of leader candidates and their likelihood of promoting the candidate (Study 1) and participant gender and inter-subgroup relations on people’s endorsement of using IRI rhetoric when placed in a leader role (Study 2). The overarching hypothesis was that people will more favorably endorse and be more likely to promote female leaders when promoting IRI under subgroup competition (Study 1) and that women will more favorably endorse using IRI rhetoric under subgroup competition (Study 2). In Study 1, leader gender, subgroup relations, and leadership style were manipulated to see the effects on participant’s endorsement of a candidate and their likelihood to promote the candidate. In Study 2, subgroup relations were manipulated to examine the effects on participants’ endorsement of using IRI rhetoric in a leadership role.
CHAPTER TWO

Study 1

Research has already shown that women tend to have an interdependent self-construal (Cross & Madson, 1997; Markus & Oyserman, 1989; Yang & Girgus, 2019). Furthermore, a pilot study ($N = 144$) investigated whether there are gendered differences in preference for the two styles of intergroup leadership in the presence of conflict between subgroups (Shaib, 2022). Specifically, participants read a generic description of both “leadership style A” and “leadership style B” (which described IRI and CI respectively). Participants were asked to indicate which style of leadership (A or B) they believed was most effective for a leader to use during times of inter-subgroup conflict. Participants indicated their answer on a 9-point bipolar single item with “leadership style A” and “leadership style B” on opposing ends. Note that the ends on which “leadership style A” and “leadership style B” appeared were randomized in efforts to reduce ordering effects. A significant difference between men ($M = 4.61$, $SD = 2.86$) and women ($M = 6.48$, $SD = 2.60$) was found, $t(134.14) = -4.10$, $p < .001$, $d = 0.68$, indicating that women significantly preferred IRI more than men. However, research has yet to investigate leadership styles, leader gender, and subgroup relations. Therefore, Study 1 examined whether women’s tendency towards an interdependent self-construal resembled an IRI style of leadership, thus making them more favorable leaders in times of high threat subgroup competition.

Study 1 utilized a real-world inspired scenario of intergroup leadership, in which participants, in a 2x2x2 between-participants orthogonal design, read about subgroup relations (cooperation, competition), and evaluated a potential candidate (male, female) running for a leadership position, by reading about their leadership style (IRI, CI). After reading their assigned vignette and candidate information, participants then evaluated the candidate as a leader (in
which a more favorable evaluation equates to a successful enaction of IRI), indicated their
likelihood of promoting the candidate to the leadership position, how difficult they believe the
leadership position would be, completed a self-construal scale, and finished with questions
regarding their American identity centrality. This procedure was based on previous studies that
were able to successfully explore intergroup relational identity (e.g., Kershaw et al., 2021b; Rast
et al., 2018). The hypotheses were as follows:

- **H1**: Leader gender, subgroup relations, and leadership style will interact such that
  women will be more favorably evaluated than men when promoting IRI under subgroup
  competition.

- **H2**: Leader gender, subgroup relations, and leadership style will interact such that women
  will be less favorably evaluated than men when promoting CI under subgroup
  cooperation.

**Method**

**Participants and Design**

An a-priori power analysis was conducted using G*Power 3.1 to determine sample size.
The analysis suggested that a minimum of 250 participants would be required to obtain a small
effect size ($\eta^2 = .05$, $\alpha = .05$, $Power = .95$; Rast et al., 2018). The study had three manipulated
predictor variables: subgroup relation (competition, cooperation), leader gender (male, female),
and leadership style (IRI, CI). The outcome variables were leader evaluation and likelihood to
promote. A total of 272 participants began the study, with 16 removed for missed attention
checks, leaving a final sample of $N = 256$.

Participants, randomly assigned across experimental conditions, were natural born
American citizens, aged 18 ($M_{\text{age}} = 41.01$, $SD_{\text{age}} = 10.83$) or over who identified as English
speakers, recruited through Amazon Mechanical Turk using CloudResearch (Litman et al., 2017). Of these participants, 56.60% identified as men, 75.00% identified as White, and 57.80% as Democrats. Participants completed an online survey that took approximately 10 minutes and were compensated $1.00 for their time.

Study 1 was set up in a way (see Appendix A) that focused on participants’ American identity as their in-subgroup identity, with the out-subgroup being Canadians, and the superordinate group being the U.S. – Mexico – Canada Agreement (USMCA). The USMCA (formerly and perhaps more familiarly called NAFTA – the North American Free Trade Agreement) is a trilateral trade agreement between Canada, the United States, and Mexico. This context of a real-world intergroup relationship provided numerous benefits such as being able to pull from participant’s pre-existing salient identities (since all the participants were natural born American citizens) and avoiding contentious confounding variables such as political affiliation that are often found in other polarizing groups. Due to this potential of political confounding variables, the study focused on the relationship between the US and Canada, rather than the US and Mexico.

Procedure

Participants were told that the study was intended to assess people’s attitudes towards leaders. If participants consented to take part, they were randomly assigned to one of eight conditions. To begin, all participants were told they would be reading about the U.S. – Mexico – Canada Agreement (USMCA) and evaluating a candidate for a leadership position for USMCA. Participants then read a description of USMCA, that discussed the current subgroup relationship between the US and Canada as either cooperative or competitive, depending on the condition they were assigned to. Next, they were told to read a statement from a potential candidate
seeking a leadership position for USMCA, and told they needed to evaluate the candidate after reading the statement. From here, participants received one of four treatments depending on the leadership candidate’s gender (male, female) and leadership style used (IRI, CI). After completing a leader rhetoric prime, participants responded to the outcome questions assessing leader evaluation and their likelihood to promote the candidate. Participants also answered a question regarding how difficult they believed the leadership position would be, a self-construal scale, and a scale to assess their American subgroup identity centrality. To end, participants provided demographic information and were debriefed. See Appendix A for full details of procedures and measures.

**Manipulations**

**Subgroup relations**

The predictor variable of perceived subgroup relations was manipulated so that half of the participants read about subgroups (in the context of this study, the US and Canada) that had a cooperative relationship with each other, and the other half of participants read that the subgroups had a competitive relationship with each other. This was accomplished via a short vignette that participants read at the beginning of the study, explaining USMCA and the current relations between the two countries of focus. These vignettes were created for the purposes of this study to explain what USMCA is and describe the subgroup relationship (cooperative or competitive). The descriptions of the various subgroup relations are based on previous intergroup leadership research (Pittinsky & Simon, 2007).

The cooperation subgroup vignette read as follows:

The U.S. – Mexico – Canada Agreement (USMCA), is a trade agreement between the three countries, which makes it easier to trade with each other and work together.
For the purposes of this study, we will focus solely on the relationship between the US and Canada.

The goal of USMCA is to create mutual benefit and cooperation between the countries. USMCA has:

• Strengthened ties between countries
• Increased shared resources and trading opportunities
• Promoted economic growth
• And reflects a spirit of friendship and cooperation
• An example of this cooperation related to national security would be how USMCA helps protect the flow of goods related to defense.

The competition subgroup vignette read as follows:

The U.S. – Mexico – Canada Agreement (USMCA), is a trade agreement between the three countries, which is characterized by economic competition between the countries.

For the purposes of this study, we will focus solely on the relationship between the US and Canada.

Under USMCA, countries compete with each other to:

• Excel in global markets
• Outperform each other
• Maximize their economic growth
• And compete for dominance in the international market
• An example of this competition can be seen with both nations trying to sell mineral resources to the global market, since both countries are significant producers of the minerals.
Both vignettes were carefully written to be similar in terms of length, tone, and accuracy of information.

*Leader rhetoric manipulation*

Since this study also focused on leader gender (male, female) and leadership style (IRI, CI), there were four manipulations that integrated both the candidate’s gender pronouns and their style of leadership. These vignettes were closely modeled on similar, and successful, vignettes for IRI and CI style of leadership from previous research (Rast et al., 2018).

Below is the female leader example for a CI style of leadership:

Below is a statement from candidate Olivia Johnson. Please carefully read her vision for the future of USMCA:

As a candidate vying for the leadership of USMCA, I believe it is imperative that the US and Canada recognize their similarities and work together under the overarching group of the USMCA. Although the US and Canada are different countries, they are both part of the large collective USMCA, and ignoring their differences is an essential component of success within the USMCA. In fact, the USMCA excels partially because both countries recognize they have a common identity. My leadership style fosters collaboration and promotion of similarities between countries. Together, we can uphold the spirit of cooperation and propel USMCA towards a future that benefits both nations.

Below is the female leader example for an IRI style of leadership:

Below is a statement from candidate Olivia Johnson. Please carefully read her vision for the future of USMCA:

As a candidate vying for the leadership of USMCA, I believe it is imperative that the US and Canada recognize the unique and valued contributions each country provides to
USMCA. The US and Canada must work together while preserving their distinctive and separate country identity. We need not ignore important differences between the US and Canada, and pretend they are similar to one another; instead, it is essential that both countries realize they are defined in part by their interdependent relationship: The USMCA excels because of the distinct and unique roles both countries possess. My leadership style fosters collaboration between both countries while maintaining their unique identities. Together, by acknowledging and leveraging our unique roles, we can uphold the spirit of cooperation and propel USMCA towards a future that benefits both nations.

The other two conditions were the male examples for both CI and IRI style of leadership. The only changes being “Oliver” rather than “Olivia” and male, rather than female, pronouns used throughout the statement.

**Measures**

*Leader Rhetoric Prime*

After reading the relevant leader vignette, a leader rhetoric prime was used to help the participant further internalize both the leadership style and the leader gender (two of the three predictor variables). A single item asked participants to rate the extent to which the candidate emphasized a certain style of leading, based on the participant’s assigned condition. For example, the participants in the female leader/CI condition read, “To what extent did Olivia emphasize her leadership style of fostering collaboration and promotion of similarities between countries?”; 1 Not Very Much, 9 Very Much.

*Leader Evaluation*
This dependent variable was a 6-item leader evaluation scale that was used to assess the participant’s rating of the candidate. This scale was adapted from Rast et al. (2018) to better fit the context of the study (e.g., “[Candidate name] will be a very effective leader of USMCA”); 1 Strongly Disagree, 9 Strongly Agree, $\alpha = .95$.

**Promotion Likelihood**

This second dependent variable was a single item question which assessed the participant’s likelihood to promote the candidate they read about to the position of leadership discussed. This item asked participants, “How unlikely or likely would you be to promote the candidate to this leadership position?”; 1 Very Unlikely, 9 Very Likely.

**Glass Cliff Indication**

To assess whether the glass cliff phenomenon was occurring, an additional question was asked. This item asked participants, “Based on the information you read, how easy or difficult do you think this leadership position is?”; 1 Very Easy, 9 Very Difficult. To get a full picture of whether this phenomenon was occurring, this question was looked at in conjunction with the dependent variable of promotion likelihood. This is because past research on the glass cliff (Ryan & Haslam, 2005) has shown that women are more likely than men to be appointed to leadership positions that are risky. The research explains that if companies are facing a crisis, they can give women difficult leadership opportunities, so if they fail it can be blamed on their gender. Therefore, it is necessary to ask participants both how likely they would be to promote the candidate as well as how difficult they believe the leadership position will be.

**Self-Construal**

A 10-item scale, comprising two 5-item subscales, was used to assess the participant’s self-construal. This scale is a short version of the original self-construal scale (Singelis, 1994).
The subscales assessed a participant’s independent and interdependent self-construal, respectively. Confounding variables with participant self-construal were checked for. Some example items from the independent self-construal scale include “I do my own thing, regardless of what others think” and “I’d rather say “No” directly, than risk being misunderstood”; some items from the interdependent self-construal scale include, “I will sacrifice my self-interest for the benefit of the group I am in” and “My happiness depends on the happiness of those around me.” The scales were treated as two separate subscales, a 5-item independent self-construal scale ($\alpha = .80$), and a 5-item interdependent self-construal scale ($\alpha = .84$) during analyses. This a validated scale commonly used to assess self-construals (D’Amico & Scrima, 2016); 1 Strongly Disagree, 9 Strongly Agree.

**American Identity Centrality**

A 4-item scale was used to measure participant’s American identity centrality. Confounding variables with participant American identity centrality were checked for. This scale has been adapted from previous studies (Hains et al., 1997; Hogg & Hains, 1996; Hogg et al., 2007), and included items such as “How important is being an American to you?” and “How central do you feel being an American is to your sense of who you are?”; 1 Not Very Much, 9 Very Much, $\alpha = .93$.

**Attitudes towards Canada**

A single item question was placed in the demographics section to assess participant’s attitudes towards Canada. Confounding variables with participant attitudes towards Canada were checked for. The item asked participants, “Generally speaking, what is your attitude towards Canada?”; 1 Not Favorable, 9 Very Favorable.

**Demographics**
Participants indicated their gender, age, ethnicity, political ideology, attitudes towards Canada, and whether their data should be kept or removed.

**Exploratory Analyses**

In addition to the above hypotheses, a research question was proposed to investigate whether there was any evidence of the glass cliff occurring in Study 1. Previous research (Ryan & Haslam, 2005) on the glass cliff has stated that women are more likely than men to attain high level leadership positions that are disproportionally risky or precarious. Overall, this appointment to risky leadership positions may reflect a dynamic in which, for example, groups or organizations that are facing crises provide women with a (rare) opportunity to lead because, if women fail, it can be blamed on their gender. Thus, two items measured whether this phenomenon occurred in Study 1. Indication of the glass cliff occurring would show if the participant rates the female candidate poorly and believes the position will be very difficult, but still shows strong likelihood of promoting the female candidate over the male candidate.

**Results**

Three-way ANOVAs were performed to investigate the main and interaction effects of the three manipulated predictor variables (leader gender, leadership style, and subgroup relation) on the outcome variables of leader evaluation and promotion likelihood. For the key measured variables’ reliabilities, means, standard deviations, and intercorrelations, see Table 1.

**Scale Construction**

**Leader Evaluation Scale**

Leader evaluation was measured by six 9-point scale items. A principal components analysis with oblique rotation was performed on these items. It revealed a single factor with eigenvalue > 1.00 that was clear of the scree (eigenvalue = 4.83) and accounted for 80.47% of
Table 1

Means, Standard Deviations, Alphas, and Correlations for Variables of Interest in Study 1

<table>
<thead>
<tr>
<th>Variable</th>
<th>$M$</th>
<th>$SD$</th>
<th>$\alpha$</th>
<th>$r_{12}$</th>
<th>$r_{13}$</th>
<th>$r_{14}$</th>
<th>$r_{23}$</th>
<th>$r_{24}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Leader evaluation (6 items)</td>
<td>6.92</td>
<td>1.63</td>
<td>0.95</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Likelihood to promote (1 item)</td>
<td>6.49</td>
<td>1.97</td>
<td></td>
<td>0.79**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>[0.73, 0.83]</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Independent self-construal (5 items)</td>
<td>6.41</td>
<td>1.64</td>
<td>0.80</td>
<td>0.14*</td>
<td>0.06</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>[0.01, 0.26]</td>
<td>[0.07, 0.18]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Interdependent self-construal (5 items)</td>
<td>5.32</td>
<td>1.85</td>
<td>0.84</td>
<td>0.26**</td>
<td>0.25**</td>
<td>-0.03</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>[0.14, 0.37]</td>
<td>[0.13, 0.36]</td>
<td>[0.15, 0.10]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. American identity centrality (4 items)</td>
<td>6.40</td>
<td>2.10</td>
<td>0.93</td>
<td>0.21**</td>
<td>0.14*</td>
<td>0.16**</td>
<td>0.31**</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>[0.09, 0.32]</td>
<td>[0.02, 0.26]</td>
<td>[0.04, 0.28]</td>
<td>[0.19, 0.41]</td>
<td></td>
</tr>
</tbody>
</table>

Note. $M$ 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 $p < .01$. $N = 256$

the variance in leader evaluation. Therefore, the six items were averaged into a single scale with high reliability ($M = 6.92$, $SD = 1.63$; $\alpha = .95$).

**Self-Construal Scale**

Self-construal was measured by 10 9-point scale items that represent two subscales, with the first five items measuring participants’ independent self-construal, and the last five items measuring participants’ interdependent self-construal. Therefore, each subscale was treated as its own scale in the analyses.
A principal components analysis with oblique rotation was conducted on the first five items (measuring independent self-construal). It revealed a single factor with eigenvalue > 1.00 that was clear of the scree (eigenvalue = 2.81) accounting for 56.11% of the variance in independent self-construal. Therefore, the five items were averaged into a single scale with high reliability ($M = 6.41, SD = 1.64; \alpha = .80$).

A principal components analysis with oblique rotation was conducted on the last five items (measuring interdependent self-construal). It revealed a single factor with eigenvalue > 1.00 that was clear of the scree (eigenvalue = 3.07) accounting for 61.39% of the variance in interdependent self-construal. Therefore, the five items were averaged into a single scale with high reliability ($M = 5.32, SD = 1.85; \alpha = .84$).

**American Identity Centrality**

American identity centrality was measured by four 9-point scale items. A principal components analysis with oblique rotation of the four items was conducted. It revealed a single factor with eigenvalue > 1.00 that was clear of the scree (eigenvalue = 3.30) accounting for 82.41% of the variance in leader evaluation. Therefore, the items were averaged into a single scale with high reliability ($M = 6.40, SD = 2.10; \alpha = .93$).

**Covariate Testing**

Three-way ANOVAs were performed to check for potential confounds between the manipulated predictor variables and measured background and demographic variables (i.e., participant gender, participant age, participant political orientation, participant self-construal, participant American identity centrality, and participant attitudes towards Canada).

These analyses revealed a small number of significant effects. There was a main effect of subgroup relations on participant gender ($F(1, 248) = 4.60, p = .033, \eta^2_p = .018$), an interactive
effective of leader gender and subgroup relations on participant political orientation \((F(1, 248) = 5.44, p = .020, \eta^2_p = .021)\), and an interactive effect of leadership style and subgroup relations on attitudes towards Canada \((F(1, 248) = 4.09, p = .044, \eta^2_p = .016)\).

Although these effects suggest confounds between manipulated independent variables and background/demographic variables (despite random assignment), the effect sizes are considered small (Sullivan & Feinn, 2012), and hypotheses-testing ANOVAs on the focal dependent variables run with and without the covariates did not differ significantly. Thus, it was decided not to include these background variables as covariates in the focal analyses, and instead treat them as error variance.

**Main Analyses**

The two dependent variables of leader evaluation and promotion likelihood were found to be highly correlated (see Table 1). Thus, a 3-way MANOVA was conducted on these variables. The MANOVA found a main effect for leadership style \((F(2, 247) = 7.73, p < .001)\). The MANOVA found no other main effects or interactions. However, given that the two dependent variables are conceptually different, the MANOVA was followed up with separate ANOVAs which are reported in the findings below.

**Leader Evaluation**

To test for a three-way interaction between the three independent variables (Hypothesis 1 and 2), a three-way analysis of variance was conducted with leader evaluation as the dependent variable. There was no support found for either hypothesis \((F(1, 248) = 0.83, p = .363, \eta^2_p = .003)\). However, there was a main effect for leadership style \((F(1, 248) = 13.98, p < .001, \eta^2_p = .053)\), such that participants preferred an IRI style of leadership \((M = 7.32, SD = 1.39)\) over a CI style of leadership \((M = 6.57, SD = 1.76)\).
Promotion Likelihood

To test for a three-way interaction between the three independent variables (Hypothesis 1 and 2), a three-way analysis of variance was conducted with likelihood to promote as the dependent variable. There was no support found for either hypothesis – the three way interaction was non-significant \( F(1, 248) = 3.51, p = .062, \eta^2_p = .014 \). While this three-way interaction was only narrowly non-significant, it is interesting to note that the female candidate who led with an IRI style of leadership in the competition condition was rated one of the candidates most likely to be promoted \( (M = 7.14, SD = 1.46) \), just behind the male candidate who led with an IRI style of leadership in the cooperation condition \( (M = 7.15, SD = 1.37) \). Furthermore, there was a main effect for leadership style \( (F(1, 248) = 13.49, p < .001, \eta^2_p = .052) \), such that participants were more likely to promote a candidate who led with an IRI style of leadership \( (M = 6.95, SD = 1.58) \) over a leader with a CI style of leadership \( (M = 6.06, SD = 2.20) \).

Exploratory Analyses

Leader Evaluation Item Breakdown

Although the 6-item leader evaluation scale is robust, for the sake of exploration, an item breakdown of the scale was conducted to investigate effects more thoroughly for single items. For example, within the leader evaluation scale, Item 1 most directly measures how effective the leader will be, “This candidate will be a very effective leader of USMCA.” Three-way ANOVA on Item 1 revealed a significant main effect for leadership style \( (F(1, 248) = 10.33, p < .001, \eta^2_p = .040) \), such that participants were more likely to believe a leader would be very effective using an IRI style of leadership \( (M = 7.34, SD = 1.37) \) over a leader using a CI style of leadership \( (M = 6.72, SD = 1.66) \). This main effect was significantly moderated by subgroup relation \( (F(1, 248) = 4.80, p = .029, \eta^2_p = .019) \), such that participants rated a leader most effective in the IRI
competition condition \((M = 7.51, SD = 1.36)\) and least effective in the CI competition condition \((M = 6.48, SD = 1.78)\). To follow up on the significant 2-way interaction, simple effects analyses were conducted with the data sub-set by subgroup relations. Analyses revealed that in the cooperation condition there is no effect of leadership style \((F(1, 248) = 0.53, p = .467)\), however, in the competition condition there was a significant effect of leadership style \((F(1, 248) = 14.41, p < .001)\).

The second item of interest, Item 5, measures participants’ direct support for the leader, “I would be a strong supporter of this candidate.” Similarly to Item 1, a three-way ANOVA on Item 5 revealed a significant main effect for leadership style \((F(1, 248) = 12.62, p < .001, \eta^2 = .048)\), such that participants were more likely to support a candidate leading with an IRI style of leadership \((M = 7.02, SD = 1.94)\) over a leader with a CI style of leadership \((M = 6.07, SD = 2.28)\). This main effect was significantly moderated by subgroup relation \((F(1, 248) = 4.35, p = .038, \eta^2 = .017)\), such that participants more strongly supported a leader in the IRI competition condition \((M = 7.35, SD = 1.69)\) and least supported the leader in the CI competition condition \((M = 5.85, SD = 2.34)\). To follow up on the significant 2-way interaction, simple effects analyses were conducted with the data sub-set by subgroup relations. Analyses revealed that in the cooperation condition there is no effect of leadership style \((F(1, 248) = 1.09, p = .297)\), however, in the competition condition there was a significant effect of leadership style \((F(1, 248) = 15.69, p < .001)\).

**Glass Cliff**

An exploratory analysis was conducted to see whether the phenomenon known as the glass cliff occurred. Evidence of the glass cliff would show as participants rating the female candidate more poorly than the male candidate, believing the position would be more difficult
for her, but still showing strong likelihood of promoting her over the male candidate. An analysis of variance test was conducted and found no difference ($F(1, 254) = 0.10, p = .753, \eta_p^2 < .001$) in participant’s promotion likelihood between the male candidates ($M = 6.45, SD = 2.23$) and female candidates ($M = 6.53, SD = 1.69$). This indicates that there was no evidence of the glass cliff occurring.

**Difficulty of Position**

As part of measuring for the glass cliff, a single item asked participants, “Based on the information you read, how easy or difficult do you think this leadership position is?” As an exploratory analysis, a 3-way ANOVA on position difficulty was conducted. There was a significant main effect of leader gender ($F(1, 248) = 4.12, p = .043, \eta_p^2 = .016$), such that participants believed the position would be more difficult for the female candidates ($M = 6.60, SD = 1.69$) than the male candidates ($M = 6.10, SD = 2.26$). There was also a significant main effect of subgroup relation ($F(1, 248) = 5.97, p = .015, \eta_p^2 = .023$), such that participants believed the position would be more difficult in the competition condition ($M = 6.66, SD = 2.03$) than the cooperation condition ($M = 6.05, SD = 1.96$).

**Discussion**

Following from research indicating women’s tendencies towards having an interdependent self-construal (Cross & Madson, 1997) and people’s preference for an IRI style of intergroup leadership during situations of conflict between subgroups (Hogg & Rast, 2022; Hogg et al., 2012; Rast et al., 2018), Study 1 investigated whether female leader candidates were rated more favorably in situations where they must lead across subgroups in conflict using an IRI style of intergroup leadership. It is plausible to assume that women’s tendency towards having an interdependent self-construal could mirror what is needed to effectively enact an IRI style of
intergroup leadership. Thus, by setting up the study with three predictor variables, it was possible to see exactly which situation garnered participants’ highest rating of the job candidate.

We found that there was no significant difference in participant rating for leader evaluation or likelihood to promote based on the interaction between the variables of leader gender, subgroup relation, and leadership style, leaving Hypotheses 1 and 2 unsupported. However, analyses for leader evaluation revealed that participants preferred an IRI style of leadership to a CI style of leadership. Furthermore, participants were also more likely to promote a candidate who led with an IRI style of leadership over a leader with a CI style of leadership.

In an exploratory leader evaluation scale item breakdown, analyses were run on the two items that best capture leader endorsement. The first item asked participants how effective a leader the candidate would be. Participants were more likely overall to believe the candidate would be an effective leader if they used an IRI style of leadership over a CI style of leadership. Moreover, the candidate in the IRI competition condition was rated most likely to be an effective leader. Similarly, analyses for the fifth scale item, indicating participant’s support for the candidate, revealed participants were more likely to support a candidate who led with an IRI style of leadership over a CI style of leadership. Moreover, the candidate in the IRI competition condition was rated with the highest amount of support from participants. Lastly, in an exploratory analysis of difficulty of position, it was found that participants believed the leadership position would be more difficult for the female than the male candidates, and more difficult for the candidates leading over subgroups in contention rather than cooperation.

Overall, while Study 1 did not find direct support for the hypotheses, there was support found for differences in preference for leadership style. However, Study 1 examined these variables through a follower-centric lens. Thus, because most research on intergroup leadership
has primarily been follower-centric (Kershaw et al., 2021a, 2021b; Rast et al., 2018), combined with the overall research goal of investigating whether women are more inclined to successfully lead in an IRI style of leadership, it is important to investigate these variables from a leader-centric point of view. Therefore Study 2 was designed to examine the effect of participant gender and subgroup relations on endorsement of using IRI rhetoric, to better provide a more complete picture of the role gender plays in intergroup leadership success.
CHAPTER THREE

Study 2

While Study 1 investigated which type of leader, under which situation, is evaluated most favorably, it is focused on perceptions of how others lead. Study 2 was designed to focus on how the participants themselves would respond to the need for intergroup leadership. As in Study 1, Study 2 utilized similar methodology in its set up (e.g., similar themed vignette) and similar theme of intergroup leadership under various subgroup relations. However, Study 2 used a different dependent variable and focused the participant’s assessments inward, rather than outward towards others leading. Specifically, Study 2 investigated whether women, compared to men, more strongly endorse using IRI rhetoric in a leadership position when inter-subgroup relations are conflictual. Differing from Study 1, Study 2 can be viewed as leader-centric rather than follower-centric, to get a more complete understanding of how these variables interact.

To test this hypothesis, Study 2 began by explaining to participants what subgroups were and their relation to the superordinate group. Comprehension check questions then assessed the participants’ understanding of how subgroups relate to a superordinate group. Following this was a group membership prime, in which participants thought of a subgroup they were a member of and provided a description of (1) their in-subgroup, (2) the out-subgroup, and (3) what the superordinate group is.

Next was the manipulation, in which participants were randomly assigned one of two subgroup relation conditions that described either a cooperative or a competitive relationship between subgroups. A qualitative manipulation check question followed which was used to assess participant subgroup understanding. Participants were asked to write an example of subgroups either working together or in contention (based on which condition they were in) from
their own life. Next came a quantitative manipulation check question to assess internalizing of the correct manipulation. This question asked participants to indicate whether the groups they read in the manipulation were cooperative or competitive with each other. To end, participants answered an IRI rhetoric endorsement scale, a self-construal scale, and demographic questions (see Appendix B). The hypotheses were as follows:

**H1:** Participant gender and subgroup relations will interact such that, women will more strongly endorse using IRI rhetoric than will men in the competition condition.

**H2:** Participant gender and subgroup relations will interact such that, men will show no difference in endorsement of using IRI rhetoric in either the cooperation or competition condition.

**Method**

**Participants and Design**

An a-priori power analysis was conducted using G*Power 3.1 to determine sample size. The analysis suggested that a minimum of 250 participants was required to obtain a small to medium effect size ($\eta^2 = .05$, $\alpha = .05$, $Power = .95$; Rast et al., 2018). The study had two predictor variables: participant gender (male, female) and subgroup relation (cooperation, competition). The outcome variable was endorsement of using IRI rhetoric.

A total of 275 participants began the study, with 11 removed for being duplicate cases, 13 removed for failing inclusion criteria, 24 removed for failing the subgroup understanding manipulation check, and 41 removed for failing the subgroup relation condition manipulation check, leaving a final sample of $N = 186$. As such, a resample ($N = 113$) was performed to meet the threshold of participants needed for adequate sample size. Of the participants in the resample, four were removed for failing inclusion criteria, 14 removed for failing the subgroup
understanding manipulation check, and 19 removed for failing the subgroup relation condition manipulation check, leaving a final resample of \( N = 76 \). Thus, the final total for participants in the study after the resample was \( N = 262 \).

Participants were American residents, aged 18 \((M_{\text{age}} = 42.05, SD_{\text{age}} = 12.06)\) or over who identified as English speakers, and were recruited through Amazon Mechanical Turk using CloudResearch (Litman et al., 2017). Of these participants, 57.60% identified as men, 76.30% identified as White, and 51.90% as Democrats. Participants completed an online survey that took approximately 10 minutes and were compensated $1.00 for their time.

**Procedure**

Participants were told the study examined people’s attitudes towards leading. If participants consented to take part, they were randomly assigned to one of the two experimental conditions (subgroup relation: cooperative vs competitive). Study 2 began with all participants reading about what subgroups are, how they relate to each other and a superordinate group, and were given examples of subgroups in today’s society. Participants answered comprehension check questions to ensure their understanding of the material and attention to the study. As a subgroup prime, participants were asked to indicate and describe (1) a subgroup that they are member to, (2) what the relevant out-subgroup is, and (3) what the superordinate group to their subgroup is. After this, they read the manipulation which was a passage that asked the participant to imagine they were the leader of subgroups that were either facing cooperation or competition, depending on which condition they were assigned.

This random assignment to either a cooperative or competitive subgroup relationship, is similar to Study 1’s randomization of whether participants read about a cooperative or competitive relationship between the US and Canada, in the context of the USMCA. The
difference here being that Study 2 used a general description of the subgroup relations. After reading the manipulation, participants answered a manipulation check question to ensure their understanding of subgroup relations. Here, participants had to write an example from their own life detailing an instance of either subgroup cooperation or competition, depending on which condition they were assigned to. After this, a manipulation check question asked participants to indicate how cooperative or competitive the groups from the manipulation they read were with each other, to ensure participants internalized the correct subgroup relation for their condition. Participants then indicated how likely they were to use various IRI rhetoric statements if they were the leader in charge of leading multiple subgroups like the situation they previously read about in the manipulation. To conclude the study, participants answered a self-construal scale, followed by demographic questions, and were debriefed on the study.

**Manipulations**

**Subgroup Relations**

As in Study 1, Study 2 contained a description of either a cooperative or competitive subgroup relationship. However, Study 2 differed from Study 1 in that the descriptions for subgroup relations were general, rather than context specific. This predictor variable was manipulated so that half of the participants read about subgroups that were in cooperation, and the other half of participants read about the subgroups that were in competition with each other. This was accomplished via a short passage the participants read, specifically created for this study. The descriptions of the various subgroup relations were based on previous intergroup leadership research (Pittinsky & Simon, 2007).

The cooperation subgroup manipulation reads as follows:
Now that you have an understanding of subgroups, larger groups, and your own examples, please read the following directions carefully:

• Imagine you are the leader of a group
• This group is made up of multiple smaller groups
• Recently, the groups have hit their stride and have been cooperating very well with each other
• The groups are working together by tackling shared challenges, and combining their knowledge and expertise
• They are able to achieve common goals, form strong bonds, and benefit from their cooperation

The competition subgroup manipulation reads as follows:

Now that you have an understanding of subgroups, larger groups, and your own examples, please read the following directions carefully:

• Imagine you are the leader of a group
• This group is made up of multiple smaller groups
• Recently, the groups have begun to compete with each other
• The groups are no longer working together towards shared challenges, and stopped combining their knowledge and expertise
• The opposition between the groups has hurt their ability to achieve common goals, form strong bonds, and has led to self-interest above group interest

Both passages were carefully written to have similar lengths, tones, and accuracy of information.

Subgroup Understanding Manipulation Check
Directly after reading the manipulation, participants were asked to report on an example from their own life in which subgroups were either cooperating or competing (depending on which condition they were in) for at least two minutes before advancing to the next page. Participant responses were analyzed to ensure an understanding of subgroup relations and compatibility with the scenario (i.e., subgroups in a cooperation or competition scenario). If the answers did not meet the criterion of (1) naming two groups and (2) alluding to the groups in a situation of either cooperation or contention, they were deleted before analysis [see Appendix B for complete study materials].

**Subgroup Relation Condition Manipulation Check**

To ensure participants internalized the subgroup relationship from the manipulation, they answered a single item manipulation check question which asked, “To what extent do you believe the groups you read about have a cooperative or competitive relationship with each another?” 1 *Cooperative*, 9 *Competitive*. Analyses include participants who responded either above or below the midpoint for their respective condition. Any differences between this set of participants and analyses run with no participants excluded on the criteria of this manipulation check are noted as a footnote in the results.

**Measures**

**Subgroup Attention Check**

Participants answered two attention checks. These included two true or false statements (e.g., “Subgroups are smaller groups within a larger group”) to indicate the extent to which they (1) understood how subgroups relate to a superordinate group and (2) paid attention to the study. If participants didn’t answer these questions correctly, they were immediately sent to the end of
the survey and their data was not used (since they were not allowed to take the rest of the survey). This was made explicit in the informed consent.

**Group Membership Prime**

In a departure from Study 1, participants were asked to think of a subgroup they are a member of in their own life. This is because Study 2 was focused on how the participant would lead in a scenario of intergroup leadership, so it is necessary for them to think about subgroups they recognize in their own lives that are salient to them. Participants were provided some examples of various subgroups in society and how they relate to a superordinate group. Participants were asked to describe (1) a subgroup that they are member to, (2) the out-subgroup, and (3) the related superordinate group.

**Endorsement of IRI rhetoric**

Study 2’s dependent variable had participants answer a 5-item scale from Rast et al. (2020) to assess their endorsement of using IRI rhetoric. Specifically, their endorsement for using IRI rhetoric in an intergroup leadership scenario in which they were the leader. This is a validated scale commonly used to measure participant’s likelihood to use various IRI statements (e.g., “The collaborative relationship between our group and the other group is part of what makes us who we are”). Items were adapted to better fit the context of this study; 1 Very Unlikely, 9 Very Likely, α = .91.

**Self-Construal**

As in Study 1, Study 2 also utilized a 10-item scale to assess the participant’s self-construal. This scale, comprising two 5-item subscales, is a short version of the original self-construal scale (Singelis, 1994). The subscales assessed a participant’s independent and interdependent self-construal, respectively. Confounding variables with participant self-construal
were checked for. Some example items from the independent self-construal scale included “I do my own thing, regardless of what others think” and “I’d rather say “No” directly, than risk being misunderstood”; while some items from the interdependent self-construal scale included, “I will sacrifice my self-interest for the benefit of the group I am in” and “My happiness depends on the happiness of those around me.” The scales were treated as two separate subscales including a 5-item independent self-construal scale (α = .77) and a 5-item interdependent self-construal scale (α = .84) during analyses. This a validated scale is commonly used to assess self-construals (D’Amico & Scrima, 2016); 1 Strongly Disagree, 9 Strongly Agree.

Demographics

Participants indicated their gender, age, ethnicity, political ideology, and whether their data should be kept or removed.

Results

Two-way ANOVAs were performed to investigate the main and interaction effects of the two predictor variables (participant gender and subgroup relation) on the outcome variable of endorsement of IRI rhetoric. For the key variable’s reliabilities, means, standard deviations, and intercorrelations, see Table 2.

Manipulation Check

To determine the success of the subgroup relation manipulation, a t-test was conducted examining difference in ratings of the manipulation check item between conditions¹. There was a significant difference in participants responses (t(237.63) = 36.91, p < .001, d = 1.23) to the manipulation check question. Participants in the cooperation condition averaged below the

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¹ An analysis was also run with no participants excluded from the manipulation check. Results did not differ (F(1, 321) = 1.28, p = .259, ηp² = .004) from the subset of participants used in the main analyses that passed the manipulation check.
### Table 2

*Means, Standard Deviations, Alphas, and Correlations for Variables of Interest in Study 2*

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>α</th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. IRI endorsement (5 items)</td>
<td>6.72</td>
<td>1.78</td>
<td>0.91</td>
<td>_</td>
<td>_</td>
</tr>
<tr>
<td>2. Independent self-construal (5 items)</td>
<td>6.07</td>
<td>1.64</td>
<td>0.77</td>
<td>.14*</td>
<td>_</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>[.01, .25]</td>
<td></td>
</tr>
<tr>
<td>3. Interdependent self-construal (5 items)</td>
<td>5.02</td>
<td>1.81</td>
<td>0.84</td>
<td>.11</td>
<td>-.19**</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>[-.01, -.30, -.23] [-.07]</td>
<td></td>
</tr>
</tbody>
</table>

*Note. 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. N = 262.*

The median of the scale ($M = 1.82, SD = 1.08$) while participants in the competition condition averaged above the median of the scale ($M = 7.48, SD = 1.37$). Thus, the manipulation was successful, as participants correctly internalized their randomized condition.

**Scale construction**

*Intergroup Relational Identity Endorsement Scale*

Endorsement of using IRI rhetoric was measured by five 9-point scale items. A principal components analysis with oblique rotation of the five items was conducted. It revealed a single factor with eigenvalue > 1.00 that was clear of the scree (eigenvalue = 3.72) accounting for 74.47% of the variance in IRI endorsement. Therefore, the items were averaged into a single scale with high reliability ($M = 6.72, SD = 1.78; \alpha = .91$).

*Self-Construal Scale*

Self-construal was measured by 10 9-point scale items that represent two subscales, with the first five items measuring participants’ independent self-construal, and the last five items
measuring participants’ interdependent self-construal. Therefore, each subscale was treated as its own scale in the analyses.

A principal components analysis with oblique rotation was conducted on the first five items (measuring independent self-construal). It revealed a single factor with eigenvalue > 1.00 that was clear of the scree (eigenvalue = 2.67) accounting for 53.30% of the variance in independent self-construal. Therefore, the five items were averaged into a single scale with high reliability ($M = 6.07$, $SD = 1.64$; $\alpha = .77$).

A principal components analysis with oblique rotation was conducted on the last five items (measuring interdependent self-construal). It revealed a single factor with eigenvalue > 1.00 that was clear of the scree (eigenvalue = 3.04) accounting for 60.75% of the variance in independent self-construal. Therefore, the five items were averaged into a single scale with high reliability ($M = 5.02$, $SD = 1.81$; $\alpha = .84$).

**Covariate Testing**

Two-way ANOVAs were performed to check for potential confounds between the predictor variables and measured background and demographic variables (i.e., participant age, participant political orientation, participant ethnicity, and participant self-construal). These analyses revealed one significant effect. There was a main effect of participant gender on participant age ($F(1, 260) = 5.12$, $p = .025$, $\eta^2_p = .019$).

Although this effect suggests a confound between the independent variable and background/demographic variable (despite random assignment), the effect size is considered small (Sullivan & Feinn, 2012), and hypotheses-testing ANOVAs on the focal dependent variables run with and without the covariate did not differ significantly. Thus, it was decided not
to include this background variable as a covariate in the focal analyses, and instead treat it as error variance.

Main Analyses

**Intergroup Relational Identity Endorsement**

To test for an interaction between the two independent variables (Hypotheses 1 and 2), an analysis of variance was conducted with endorsement of using IRI rhetoric as the dependent variable. There was no support for either hypothesis \((F(1, 258) = 0.94, p = .333, \eta^2_p = .004)\). However, there was a main effect of participant gender \((F(1, 258) = 5.32, p = .022, \eta^2_p = .020)\), such that, in a leadership position themselves, women more strongly endorsed using an IRI style of leadership \((M = 6.99, SD = 1.71)\) than men \((M = 6.50, SD = 1.80)\). Furthermore, there was also a main effect of condition \((F(1, 258) = 25.92, p < .001, \eta^2_p = .091)\), such that participants in the cooperation condition more strongly endorsed using an IRI style of leadership \((M = 7.28, SD = 1.48)\) than participants in the competition condition \((M = 6.20, SD = 1.89)\).

**Discussion**

While Study 1 examined whether participants believed women would be more favorably evaluated for using an IRI style of leadership under contention between subgroups, Study 2 took a different approach by looking at these variables from a leader-centric point of view, rather than follower-centric, to capture a more complete picture of how these variables interact with each other on both sides of the leader follower spectrum. Specifically, Study 2 examined the effects of participant gender and subgroup relation on IRI rhetoric endorsement by placing the participant in the role of an intergroup leader.

There was no support for the interaction of participant gender and subgroup relation on endorsement of using IRI rhetoric, leaving Hypotheses 1 and 2 unsupported. However, support
was found for women more strongly endorsing IRI rhetoric than men, in the scenario that they would use the rhetoric as a leader themselves. Furthermore, unexpected support was found for participants in the cooperation condition more strongly endorsing IRI rhetoric than participants in the competition condition.
CHAPTER FOUR

Overall Discussion

Gender differences have long been examined scientifically. The same can be said for leadership and self-construals. For example, previous research has critically examined the consequences of gender roles that are transmitted in society (Eagly, 1987), as well as the obstacles women face in securing top leadership positions (Eagly & Karau, 2002). Furthermore, research has shown that leadership is more often than not actually intergroup leadership (Hogg & Rast, 2022; Pittinsky & Simon, 2007). Emergent research on intergroup leadership has been taken a step further with Rast et al. (2018) and their studies of which type of intergroup leadership styles (intergroup relational identity vs. collective identity) work best under different conditions of subgroup relations (competitive vs. cooperative). Lastly, research has also explored self-construals and which type of self-construal (independent vs. interdependent) is most prominent in which societies (Markus & Kitayama, 1991) and which gender (Cross & Madson, 1997).

However, these three foci of research have not, to-date, been connected and researched together under one umbrella to see how key variables interact. Thus, in efforts to fill this lacuna of research, two experiments were conducted using vignette-style priming/manipulation methods consistent with previous research that has examined similar variables (Hogg & Rast, 2022; Rast et al., 2018). Specifically, the two studies examined how (both leader and participant) gender, intergroup leadership style, subgroup relations, and self-construals interact. Study 1 built upon previous research (Rast et al., 2018) and used follower-centric framing to examine the impact of these variables on evaluations of candidates running for a leadership position. Study 2 took a novel direction by using leader-centric framing to examine the impact of these variables on
participant’s endorsement of an intergroup leadership style when placed in a leader role themselves.

Study 1 found no significant difference between leader evaluation and promotion likelihood based on the interaction between leader gender, leadership style, and subgroup relations, leaving Hypotheses 1 and 2 unsupported. However, the results did reveal a main effect for leadership style, with participants evaluating leaders who used an IRI style of intergroup leadership, more favorably than those who used a CI style of intergroup leadership. This finding is consistent within the item breakdown of the 6-item leader evaluation scale as well. For example, analyses were run on the two scale items that most closely embody follower support for a leader. Items include “This candidate will be a very effective leader” and “I would be a strong supporter of this candidate.” Consistent with past research (Rast et al., 2018), results showed participants most positively evaluated leaders in the IRI competition condition. These findings support the idea that using IRI as a form of intergroup leadership is an attractive and effective option for a leader who must lead across subgroups (Kershaw et al., 2021b; Rast et al., 2018). Further consistent with past research, Study 1 also found that overall, participants believed the difficulty of the leadership position would be greater for a woman than a man. This finding confirms previous research on the negative consequences of gender stereotypes (Eagly, 1987), and prejudice for women’s advancement in the workplace and their struggles to succeed as a leader (Eagly & Karau, 2002; Schein, 1975).

While Study 1 took a novel approach to intergroup leadership research with the addition of a gendered component, it still prescribed to previous research (Kershaw et al., 2021b; Rast et al., 2018), due to the follower-centric nature of the experiment. However, Study 2 pushes the nascent intergroup leadership research even further by framing the study as leader-centric.
it is important to research which leadership style people would prefer to be led by, it is equally important to research who is capable and willing to enact intergroup leadership when needed. Study 2 found no significant difference in endorsement of using IRI rhetoric based on the interaction between participant gender and subgroup relations, leaving Hypotheses 1 and 2 unsupported. However, results did reveal a main effect of participant gender, such that women more strongly endorsed using an IRI style of intergroup leadership than men. Thus, regardless of subgroup relations, women tended to strongly favor using IRI in situations where they were tasked with leading subgroups.

This finding is significant for both the potential of aiding women in their pursuit of leadership positions, and their ability to succeed in these positions. For example, this finding helps illuminate the fact that women’s greater preference for using IRI could better serve them to “buy into” enacting IRI when leading across subgroups in conflict. Furthermore, previous research has shown that men and women differ on self-construals (Markus & Oyserman, 1989; Yang & Giris, 2019), with women tending to possess an interdependent self-construal (Cross & Madson, 1997). Thus, women’s tendency towards this self-construal could mirror the main effect found. Specifically, women could perhaps more easily transfer the various skills formed from their internalized self-construal to enacting IRI, due to the similarities found between this type of relational intergroup leadership and having an interdependent construal of the self. Furthermore, IRI is a more subtle form of intergroup leadership that is more difficult to enact than CI (Rast et al., 2018). Thus, because women favor IRI more than men, coupled with their interdependent self-construal, women may have a slight advantage over men in successfully enacting IRI.

Lastly, Study 2 also found a main effect of subgroup relations, such that participants in the cooperation condition more strongly endorsed using an IRI style of intergroup leadership
over the competition condition. While perhaps surprising on the surface, this finding is similar to that found from Rast et al. (2018). In one of the studies, researchers found that when identity distinctiveness threat was low (like the cooperation condition from this current study) there was no difference in preference for CI or IRI style of leadership. Although that study was follower-centric, the findings could be seen as a parallel. For example, the current study’s findings of the cooperation condition highly endorsing IRI rhetoric mirrors the Rast et al. (2018) finding that when threat is low, participants also highly favored the IRI leader.

This beneficial research was able to contribute to the budding intergroup leadership research by adding both a new gendered component, as well as a new leader-centric framed research procedure. Across 2 studies, this novel research was able to show that there are gender differences present for preferences towards an IRI style of intergroup leadership. Results supported both the notion that women prefer to be led by an IRI style of leadership, as well as prefer using IRI rhetoric as leaders themselves. Thus, if women prefer IRI on both sides of the leader-follower dynamic, and it is in line with their self-construal, this research could be the first steppingstone towards helping women succeed in leadership positions.

**Limitations and Future Directions**

A limitation to Study 1 is the salience of the in/outgroups used. For example, in the limited previous research that Study 1 is modeled after (Rast et al., 2018), researchers were able to use ingroups, outgroups, and superordinate groups that were highly salient to the participants. This included identities such as native Dutch citizens compared to Dutch immigrants, various college campuses under the same overarching school system, and Faculty of Arts compared to Faculty of Science within the same University. However, because Study 1 needed to be an online survey, using an American identity subgroup was the best option for numerous reasons. First,
participants’ American identity was one of the only reasonable identities that was salient enough for 200 diverse participants across the nation. Furthermore, using imagined in/outgroups was proven ineffective during pilot testing (Shaib, 2022). Lastly, using other, potentially more salient, in/outgroups that could be relevant to that many participants could be too contentious. These would include identities related to politics or religion. Thus, using participants’ American identity and USMCA superordinate identity proved to be the most practical and least problematic identity to make salient.

A potential limitation of Study 2 revolves around the leader-centric framing of the study’s design. For example, Study 2 asked participants to imagine they were leaders of subgroups that were salient to themselves in their own lives. While this is also a strength of the study, as it corrects the salience limitation faced in Study 1, it could have also been difficult for participants to imagine themselves in a leadership position, if they have never previously led others. Finally, another inherent limitation for both studies is the lack of previous research on this topic. Intergroup leadership, especially empirical research testing intergroup relational identity, is still an emergent area of research (Hogg et al., 2012; Kershaw et al., 2021a, 2021b; Rast et al., 2018). The ambitious studies reported in this dissertation aimed to fill gaps in the research through adding novel variables like gender, along with the addition of shifting the focus from follower-centric to leader-centric. However, in the absence of previous research, it was difficult to know what to expect in an under explored area of research that combined numerous variables for the first time.

Due to the bourgeoning nature of this area of research, there are many possible paths for future research. For example, Study 1 saw a narrowly non-significant 3-way interaction trending towards the hypothesized direction that women would be more favorably evaluated than men
when promoting IRI under subgroup competition. These results, while narrowly non-significant, showed that female leaders who led with an IRI style of leadership in the competition condition were rated as one of the candidates most likely be promoted. Future research could examine these variables with identities that are more salient to the participant, such as existing organizations that are already composed of discrete subgroups. Furthermore, Study 1 also saw a main effect such that participants viewed the leadership position as more difficult in the competition condition. Thus, future research could further investigate the most effective circumstances for IRI leadership, given that participants are clearly able to perceive how difficult intergroup leadership is, especially when leading across contentious subgroups.

Although the minimal previous research was a limitation, it is also a clear call for future research. One additional idea for future research builds on the discussion of a person’s self-construal. For example, future research could step away from gender entirely, and investigate treating self-construal as a predictor variable. In real-world situations where organizations are falling apart, it would be beneficial to have a collaborative leader to implement IRI. Thus, future research would benefit from further learning the role self-construal plays in a leader. Lastly, due to the fact the current studies were so novel, it was difficult to predict how the variables would interact with each other. However, these studies were able to provide a launching point for future studies in terms of where to take the research. Future research is needed to acquire a deeper and more nuanced understanding of the interaction of the variables in question.

**Conclusion**

To explore potential pathways to help women succeed in top level leadership positions, the present studies investigated the interplay between (both leader and participant) gender, intergroup leadership style, and subgroup relations on leader evaluation and endorsement of an
intergroup leadership style when placed in a leadership role. Study 1 found that women more strongly endorsed candidates that led using an IRI style of intergroup leadership and were also more likely to promote those candidates. Study 2 found that women, over men, more strongly endorsed using IRI rhetoric in situations where they must use intergroup leadership across subgroups. Thus, through two studies it was found that women both prefer to be led with an IRI style of intergroup leadership, as well highly endorse using IRI rhetoric in situations where they must enact intergroup leadership. With this research we expanded on the limited previous intergroup leadership research, especially that which focused on the use of intergroup relational identity, by exploring a gendered component as well as using leader-centric framing. Overall, there is evidence to support gendered differences within the under explored realm of intergroup leadership research. We hope future research can expand and test new aspects of intergroup leadership research such as gender and self-construals, as a potential to aid underrepresented women in succeeding in top level leadership positions.
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Appendix A: Study 1 Materials

MTurk Recruitment

Title: A survey on your attitudes towards and endorsement of leaders

Description:

You are invited to be a subject in a research project. Participating will not benefit you directly, but you will be helping us explore attitudes towards leaders of a group. If you volunteer, you will be asked about your attitudes towards and endorsement of leaders.

This will take about 10 minutes of your time and you will be compensated $1.00. Participating in this study involves no more risk than what a typical person experiences on a regular day. Your involvement is entirely up to you. You may withdraw at any time for any reason. Please continue reading for more information about the study.

Please complete the external survey by copying and pasting the web address below into your browser. Be sure to hit submit on the final survey page, as well as on this page (after pasting the approval code) when you are finished.

To participate in this study, you must have a US IP address, be a natural born citizen of the US, be 18 years or older, and be fluent in English.

After completing the external survey on Qualtrics, you will see a CONFIRMATION CODE at the bottom of the last page. IT WILL BE ON THE THANK YOU PAGE AFTER THE SURVEY:

Enter your CONFIRMATION CODE to receive payment! Thank you!

Go to Link and follow the study instructions. Note the secret key found at the end of the study which you will need to complete the HIT.
Informed Consent

Agreement to Participate in a Study of Leadership Style Preferences (IRB # 4619)

You are invited to volunteer for a research project. Volunteering will not benefit you directly, but you will be helping us explore leadership style preferences. If you volunteer, you will be asked about your attitudes towards and evaluation of leaders. This will take about 10 minutes of your time. Volunteering for this study involves no more risk than what a typical person experiences on a regular day. Your involvement is entirely up to you. You may withdraw at any time for any reason. Please continue reading for more information about the study.

Study Leadership: This research project is led by Jackie Shaib, a doctoral student of psychology at Claremont Graduate University (CGU), and supervised by Dr. Michael Hogg, a professor of psychology at CGU.

Purpose: The purpose of this study is to learn about how people endorse leaders under different circumstances.

Eligibility: To be in this study, you must be a natural born citizen of the United States, 18 years of age or older, and registered on Amazon’s Mechanical Turk.

Participation: During the study, you will be asked to complete a questionnaire that will take about 10 minutes, asking you to evaluate a potential candidate vying for a leadership position.

Risks Of Participation: The risks that you run by taking part in this study are minimal. You might feel some discomfort when answering some questions.

Benefits Of Participation: I do not expect the study to benefit you personally. This study will benefit the researcher by helping her complete her graduate education.

Compensation: You will be directly compensated 1 dollar ($1.00) through Amazon Mechanical Turk for participating in this study. Upon finishing the survey, you will be given a completion code. Please make note of the completion code.

Voluntary Participation: Your participation in this study is completely voluntary. You may stop or withdraw from the study at any time or refuse to answer any particular question for any reason without it being held against you. Your decision whether or not to participate will have no effect on your current or future connection with anyone at CGU.

Confidentiality: Your data is confidential. Your individual privacy will be protected in all papers, books, talks, posts, or stories resulting from this study. We may share the data we collect with other researchers, but we will not reveal your identity with it. In order to protect the confidentiality of your responses, I will keep the data in secure, password-protected files.

Further Information: If you have any questions or would like additional information about this study, please contact Jackie Shaib at Jacqueline.shaib@cgu.edu. You may also contact the
faculty supervisor Dr. Michael Hogg at (909) 607-0897, or at michael.hogg@cgu.edu. The CGU Institutional Review Board (IRB) has approved this project. If you have any ethical concerns about this project or about your rights as a human subject in research, you may contact the CGU IRB at (909) 607-9406 or at irb@cgu.edu. You may print and keep a copy of this consent form.

**Consent:** Clicking “Yes” to continue means that you understand the information on this form, that someone has answered any and all questions you may have about this study, and you voluntarily agree to participate in it.

- [ ] Yes, I agree to participate.
- [ ] No, I do NOT agree to participate.
Study Materials
Exclusion Criteria

“Are you 18 years or older?”
  __ Yes
  __ No

“Were you born in the United States?”
  __ Yes
  __ No

“Do you currently live in the United States?”
  __ Yes
  __ No

“Are you fluent in English?”
  __ Yes
  __ No

“Please affirm that you will pay attention and answer honestly throughout this study.”
  __ I affirm
  __ I don’t affirm

[if exclusion criteria are met]

Thank you, your responses to these questions make you eligible to continue on with this survey. Please continue to pay close attention to the questions given.

Your code for payment will be provided at the end of this study. Please click on the right arrow button to continue.

[if exclusion criteria are not met]

In your previous answers, you indicated that you did not meet at least one of the inclusion criteria for this study.

Because of that, you do not qualify for this study. We thank you for your time.
Introduction

The study you are taking part in will assess people’s attitudes towards leaders. You will be reading about the U.S. – Mexico – Canada Agreement (USMCA) (previously known as NAFTA) and evaluating a candidate running for a leadership position for USMCA. The study will end with some questions about yourself. Please read the text and questions carefully.

Setup

Subgroup Cooperation

The U.S. – Mexico – Canada Agreement (USMCA), is a trade agreement between the three countries, which makes it easier to trade with each other and work together.

For the purposes of this study, we will focus solely on the relationship between the US and Canada.

The goal of USMCA is to create mutual benefit and cooperation between the countries. USMCA has:

• Strengthened ties between countries
• Increased shared resources and trading opportunities
• Promoted economic growth
• And reflects a spirit of friendship and cooperation
• An example of this cooperation related to national security would be how USMCA helps protect the flow of goods related to defense.

Subgroup Competition

The U.S. – Mexico – Canada Agreement (USMCA), is a trade agreement between the three countries, which is characterized by economic competition between the countries.

For the purposes of this study, we will focus solely on the relationship between the US and Canada.

Under USMCA, countries compete with each other to:

• Excel in global markets
• Outperform each other
• Maximize their economic growth
• And compete for dominance in the international market
• An example of this competition can be seen with both nations trying to sell mineral resources to the global market, since both countries are significant producers of the minerals.
Leader Rhetoric Manipulation

USMCA is currently in the process of appointing a new candidate to lead the US branch of USMCA.

On the following page, you will read about a candidate running for this position. A brief statement from the candidate regarding their vision for USMCA will be provided so you can later evaluate the candidate. Please read the following description.

[participants will receive 1 of the 4 following treatments]

CI Leadership

(1) Female leader: Olivia Johnson

Below is a statement from candidate Olivia Johnson. Please carefully read her vision for the future of USMCA:

As a candidate vying for the leadership of USMCA, I believe it is imperative that the US and Canada recognize their similarities and work together under the overarching group of the USMCA. Although the US and Canada are different countries, they are both part of the large collective USMCA, and ignoring their differences is an essential component of success within the USMCA. In fact, the USMCA excels partially because both countries recognize they have a common identity. My leadership style fosters collaboration and promotion of similarities between countries. Together, we can uphold the spirit of cooperation and propel USMCA towards a future that benefits both nations.

[You must stay on this page for at least 1 minute before proceeding]

(2) Male leader: Oliver Johnson

Below is a statement from candidate Oliver Johnson. Please carefully read his vision for the future of USMCA:

As a candidate vying for the leadership of USMCA, I believe it is imperative that the US and Canada recognize their similarities and work together under the overarching group of the USMCA. Although the US and Canada are different countries, they are both part of the large collective USMCA, and ignoring their differences is an essential component of success within the USMCA. In fact, the USMCA excels partially because both countries recognize they have a common identity. My leadership style fosters collaboration and promotion of similarities between countries. Together, we can uphold the spirit of cooperation and propel USMCA towards a future that benefits both nations.

[You must stay on this page for at least 1 minute before proceeding]
IRI Leadership

(3) Female leader: Olivia Johnson

Below is a statement from candidate **Olivia Johnson**. Please carefully read her vision for the future of USMCA:

As a candidate vying for the leadership of USMCA, I believe it is imperative that the US and Canada recognize the **unique and valued contributions each country provides** to USMCA. The US and Canada must work together while **preserving their distinctive and separate country identity**. We need not ignore important differences between the US and Canada, and pretend they are similar to one another; instead, it is essential that both countries realize they are defined in part by their **interdependent relationship**: The USMCA excels because of the **distinct and unique roles both countries possess**. My leadership style fosters collaboration between both countries while **maintaining their unique identities**. Together, by acknowledging and leveraging our unique roles, we can uphold the spirit of cooperation and propel USMCA towards a future that benefits both nations.

[You must stay on this page for at least 1 minute before proceeding]

(4) Male leader: Oliver Johnson

Below is a statement from candidate **Oliver Johnson**. Please carefully read his vision for the future of USMCA:

As a candidate vying for the leadership of USMCA, I believe it is imperative that the US and Canada recognize the **unique and valued contributions each country provides** to USMCA. The US and Canada must work together while **preserving their distinctive and separate country identity**. We need not ignore important differences between the US and Canada, and pretend they are similar to one another; instead, it is essential that both countries realize they are defined in part by their **interdependent relationship**: The USMCA excels because of the **distinct and unique roles both countries possess**. My leadership style fosters collaboration between both countries while **maintaining their unique identities**. Together, by acknowledging and leveraging our unique roles, we can uphold the spirit of cooperation and propel USMCA towards a future that benefits both nations.

[You must stay on this page for at least 1 minute before proceeding]
Leader Rhetoric Prime

Please read the following question about what the Candidate for leader of USMCA said and indicate how you feel by selecting a number from 1 (Not Very Much) to 9 (Very Much).

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Female/CI
To what extent did Olivia emphasize her leadership style of fostering collaboration and promotion of similarities between countries?

Male/CI
To what extent did Oliver emphasize his leadership style of fostering collaboration and promotion of similarities between countries?

Female/IRI
To what extent did Olivia emphasize her leadership style fostering cooperation between the US and Canada, while respecting each country’s unique identity?

Male IRI
To what extent did Oliver emphasize his leadership style fostering cooperation between the US and Canada, while respecting each country’s unique identity?
Leader Evaluation

Read the following questions about the candidate and indicate how you feel by selecting a number from 1 (Strongly Disagree) to 9 (Strongly Agree).

1. 2. 3. 4. 5. 6. 7. 8. 9.
   Strongly Disagree  Strongly Agree

1. This candidate will be a very effective leader of USMCA
2. This candidate will represent the interests of the countries in USMCA very well
3. This candidate will fit in well at USMCA
4. I am very likely to trust this candidate as a leader
5. I would be a strong supporter of this candidate
6. This candidate would be a very favorable leader
## Promotion Likelihood

How unlikely or likely would you be to promote the candidate to this leadership position?

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<td>Likely</td>
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Glass Cliff Question – Job Difficulty

Based on the information you read, how easy or difficult do you think this leadership position is?

1  2  3  4  5  6  7  8  9
Very Easy
Very Difficult
Self-Construal Scale

Now that you have answered questions regarding the candidate, we would like to ask a few questions about yourself. Please read the following prompts carefully and answer in regards to yourself.

Please read the following statements and indicate how you feel by selecting a number from 1 (Strongly Disagree) to 9 (Strongly Agree).

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<td>Strongly Disagree</td>
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<td>Strongly Agree</td>
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1. I do my own thing, regardless of what others think.
2. I’d rather say “No” directly, than risk being misunderstood.
3. I prefer to be direct and forthright when dealing with people I’ve just met.
4. I act the same way no matter who I am with.
5. I act the same way at home that I do at school (or work).
6. I will sacrifice my self-interest for the benefit of the group I am in.
7. If my brother or sister fails, I feel responsible.
8. I often have the feeling that my relationships with others are more important than my own accomplishments.
9. My happiness depends on the happiness of those around me.
10. I will stay in a group if they need me, even when I am not happy with the group.
American Identity Centrality

The following questions are about your identity as an American. Please read each question and indicate how you feel by selecting a number between 1 (Not Very Much) to 9 (Very Much).

1. How important is being an American to you?
2. How central do you feel being an American is to your sense of who you are?
3. How often are you aware of being an American?
4. How much do you feel you identify as an American?
Demographics

You’re almost done! Lastly, please answer a few questions about yourself for demographic purposes.

What gender do you identify as?
- Man
- Woman
- Other/Non-binary

What is your age (please write in a number)? ____

Please indicate which race/ethnicity you identify yourself (select one):
- American Indian or Alaskan Native
- Asian/Asian-American
- Black/African-American
- Hispanic/Latinx
- White/Caucasian
- Middle Eastern
- Native Hawaiian or Pacific Islander
- Multi-racial
- Prefer not to say
- Other

Generally speaking, what is your attitude towards Canada? Please select a number from 1 (Not Favorable) to 9 (Very Favorable).

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Please indicate where on the scale best represents your **political beliefs** ranging from 1 (Very Liberal) to 9 (Very Conservative).

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<tr>
<td>Very Liberal</td>
<td>Very Conservative</td>
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How do you identify yourself?
- Democrat
- Republican
- Other
We understand that sometimes people are rushed and do not pay careful attention to the survey. If you did not pay close attention, your responses may falsely impact our results, therefore we do not want to keep your data. If you would recommend that we do not use your responses, please select the "remove my data" option below. Note: You will be paid for your participation regardless of your response.

- Keep my data
- Remove my data
Debrief

Thank you for your participation in this study.

The purpose of this study was to see whether there are gendered differences in people’s preference towards leaders during different scenarios. Specifically, we were interested to see endorsement rates of male versus female leaders when leading in one of two types of intergroup leadership styles used, in the presence of competition or cooperation between subgroups.

It is important to note that a form of deception occurred in the study. The deception was that there is no one currently running for a leadership position of USMCA. The truth is that the candidates that the participants saw in the study were completely fabricated solely for the purposes of this study, and that the entire scenario was hypothetical. This deception was necessary to maintain the saliency of the scenario, mitigate response bias, and try to get as close to participants real thoughts/evaluations as possible.

Participants were randomly assigned to one of eight conditions, meaning not everybody saw the same set up. Some participants evaluated a female leader while others a male leader. Furthermore, there were also two types of intergroup leadership styles that were used. Lastly, some participants read about the countries in conflict with each other, while others read about the countries being in cooperation. It is important to note that while some of the set up was different for some participants depending on which condition you were randomly assigned to, each participant answered the same scales and questions.

If you would like a copy of the consent form that you signed, please contact jacqueline.shaib@cgu.edu. We would like to assure you that your data will be kept entirely confidential, and there will be no way to identify your individual data. However, you do have the right to withdraw your data from this study. Please let us know if you would like to have your data removed from the study.

Thank you for your participation, please click next to receive your payment code.

We thank you for your time spent taking this survey. If you have any further questions regarding the study or your participation, please contact jacqueline.shaib@cgu.edu.

Enter this code for payment: Word${e://Field/randomnum}$. Please write down this code for your own records.

Please click the next button to complete the survey.
Appendix B: Study 2 Materials

MTurk Recruitment

Title: A study on your attitudes towards group leadership

Description:

You are invited to be a subject in a research project. Participating will not benefit you directly, but you will be helping us explore attitudes towards leadership. If you volunteer, you will be asked about your attitudes and preferences of leadership style in the context of leading subgroups.

This will take about 10 minutes of your time and you will be compensated $1.00. Participating in this study involves no more risk than what a typical person experiences on a regular day. Your involvement is entirely up to you. You may withdraw at any time for any reason. Please continue reading for more information about the study.

Please complete the external survey by copying and pasting the web address below into your browser. Be sure to hit submit on the final survey page, as well as on this page (after pasting the approval code) when you are finished.

To participate in this study, you must have a US IP address, be a citizen of the US, be 18 years or older, and be fluent in English.

After completing the external survey on Qualtrics, you will see a CONFIRMATION CODE at the bottom of the last page. IT WILL BE ON THE THANK YOU PAGE AFTER THE SURVEY:

Enter your CONFIRMATION CODE to receive payment! Thank you!

Go to Link and follow the study instructions. Note the secret key found at the end of the study which you will need to complete the HIT.
Informed Consent

Agreement to Participate in a Study of Leadership Style Preferences (IRB # 4619)

You are invited to volunteer for a research project. Volunteering will not benefit you directly, but you will be helping us explore leadership style preferences. If you volunteer, you will be asked about your attitudes and preferences of leadership style in the context of leading subgroups. This will take about 10 minutes of your time. Volunteering for this study involves no more risk than what a typical person experiences on a regular day. Your involvement is entirely up to you. You may withdraw at any time for any reason. Please continue reading for more information about the study.

Study Leadership: This research project is led by Jackie Shaib, a doctoral student of psychology at Claremont Graduate University (CGU), and supervised by Dr. Michael Hogg, a professor of psychology at CGU.

Purpose: The purpose of this study is to learn about people’s leadership style preferences in a leadership role.

Eligibility: To be in this study, you must be a citizen of the United States, 18 years of age or older, fluent in English, and registered on Amazon’s Mechanical Turk.

Participation: During the study, you will be asked to complete a questionnaire that will take about 10 minutes, asking you to imagine yourself in a leadership position of multiple groups and give your preferences.

Risks Of Participation: The risks that you run by taking part in this study are minimal. You might feel some discomfort when answering some questions.

Benefits Of Participation: I do not expect the study to benefit you personally. This study will benefit the researcher by helping her complete her graduate education.

Compensation: You will be directly compensated 1 dollar ($1.00) through Amazon Mechanical Turk for participating in this study. Upon finishing the survey, you will be given a completion code. Please make note of the completion code. Lastly, please note there are two attention check questions that will assess whether you are paying attention to the information given. If you do not get these questions correct, you will be sent to the end of the survey without payment.

Voluntary Participation: Your participation in this study is completely voluntary. You may stop or withdraw from the study at any time or refuse to answer any particular question for any reason without it being held against you. Your decision whether or not to participate will have no effect on your current or future connection with anyone at CGU.

Confidentiality: Your data is confidential. Your individual privacy will be protected in all papers, books, talks, posts, or stories resulting from this study. We may share the data we collect
with other researchers, but we will not reveal your identity with it. In order to protect the confidentiality of your responses, I will keep the data in secure, password-protected files.

**Further Information:** If you have any questions or would like additional information about this study, please contact Jackie Shaib at jacqueline.shaib@cgu.edu. You may also contact the faculty supervisor Dr. Michael Hogg at (909) 607-0897, or at michael.hogg@cgu.edu. The CGU Institutional Review Board (IRB) has approved this project. If you have any ethical concerns about this project or about your rights as a human subject in research, you may contact the CGU IRB at (909) 607-9406 or at irb@cgu.edu. You may print and keep a copy of this consent form.

**Consent:** Clicking “Yes” to continue means that you understand the information on this form, that someone has answered any and all questions you may have about this study, and you voluntarily agree to participate in it.

☐ Yes, I agree to participate.
☐ No, I do NOT agree to participate.
Study Materials
Exclusion Criteria

“Are you 18 years or older?”
   ___ Yes
   ___ No

“Do you currently live in the United States?”
   ___ Yes
   ___ No

“Are you fluent in English?”
   ___ Yes
   ___ No

“Please affirm that you will pay attention and answer honestly throughout this study.”
   ___ I affirm
   ___ I don’t affirm

[if exclusion criteria are met]

Thank you, your responses to these questions make you eligible to continue on with this survey. Please continue to pay close attention to the questions given.

Your code for payment will be provided at the end of this study. Please click on the right arrow button to continue.

[if exclusion criteria are not met]

In your previous answers, you indicated that you did not meet at least one of the inclusion criteria for this study.

Because of that, you do not qualify for this study. We thank you for your time.
Introduction

The study you are taking part in will assess people’s leadership styles. You will be reading about subgroups and how they relate to a larger superordinate group, then think of examples from your own life and answer various questions about how you would lead in certain situations. The study will end with some questions about yourself.

Please read the text and questions carefully.

Setup

Before you answer questions, it is important to discuss subgroup relations. Please read the following paragraph closely, as there will be comprehension check questions directly after.

When people belong to a big group (called a superordinate group), that big group can be split into smaller groups called "subgroups." Think of them as individual puzzle pieces that fit together to create a larger picture. Even though these subgroups have their own unique roles and identities, they're all connected and work together for a common purpose or goal.

Some examples of subgroups within a larger superordinate group include:
• **In a company:** Different departments such as marketing, finance, and human resources are subgroups within the larger organization.
• **In a school:** Students and teachers represent subgroups within the entire school.
• **In a sports team:** Players in a team may be divided into subgroups based on positions, like forwards, midfielders, and defenders.

You must stay on this page for at least 1 minute before proceeding. After 1 minute is up, the ‘next’ arrow will appear and take you to the next slide.
Subgroup Attention Check Questions

On the following two pages, please read two statements regarding the material you just read about, and answer whether they are true or false.

1. Subgroups are smaller groups within a larger group.
   a. True
   b. False

2. Most groups are made up of smaller groups that do different things but are still contributing to a larger shared goal.
   a. True
   b. False
Group Membership Prime

We would now like you to think of a subgroup you belong in, that is contained within a larger group. To help, you can think of things related to your job, who you are, things you do, etc.

Some examples discussed earlier include:

- **In a company:** Different departments such as marketing, finance, and human resources are subgroups within the larger organization.
- **In a school:** Students and teachers represent subgroups within the entire school.
- **In a sports team:** Players in a team may be divided into subgroups based on positions, like forwards, midfielders, and defenders.
- **In a community:** Neighborhoods or districts within a city can be considered subgroups within the larger community.

In the boxes below, please describe (1) A subgroup that you are member to, (2) What the other subgroup is, and (3) What the overall larger group is.

1. A subgroup I am member to:
2. The other subgroup:
3. The overall larger group:

You must stay on this page for at least 1 minute before proceeding. After 1 minute is up, the ‘next’ arrow will appear and take you to the next slide.
Subgroup Relation Manipulation

Cooperation Condition

Now that you have an understanding of subgroups, larger groups, and your own examples, please read the following directions carefully:

• Imagine you are the leader of a group
• This group is made up of multiple smaller groups
• Recently, the groups have hit their stride and have been cooperating very well with each other
• The groups are working together by tackling shared challenges, and combining their knowledge and expertise
• They are able to achieve common goals, form strong bonds, and benefit from their cooperation

Competition Condition

Now that you have an understanding of subgroups, larger groups, and your own examples, please read the following directions carefully:

• Imagine you are the leader of a group
• This group is made up of multiple smaller groups
• Recently, the groups have begun to compete with each other
• The groups are no longer working together towards shared challenges, and stopped combining their knowledge and expertise
• The opposition between the groups has hurt their ability to achieve common goals, form strong bonds, and has led to self-interest above group interest
Subgroup Understanding Manipulation Question

**Cooperation Condition**

The information you just read described a leader who led subgroups in cooperation with each other to reach a shared goal. In the box below, please describe an example from your own life of a situation of two subgroups working together.

You will be asked to stay on this page for 2 minutes.

---

**Competition Condition**

The information you just read described a leader who led subgroups in competition with each other. In the box below, please describe an example from your own life of a situation where two subgroups were fighting with each other.

You will be asked to stay on this page for 2 minutes.
Subgroup Relation Manipulation Check

To what extent do you believe the groups you read about have a cooperative or competitive relationship with each another?

1 2 3 4 5 6 7 8 9
Cooperative  Competitive
**Endorsement of IRI Rhetoric**

Now imagine that you are the leader in charge of leading multiple groups facing the situation you just read about. How likely would you be to use the following statements to address the people in the groups as their leader from 1 (Very Unlikely) to 9 (Very Likely)?

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1. The relationship our group has with the other group is part of who we are.
2. The collaborative relationship between our group and the other group is part of what makes us who we are.
3. Our group is in part defined by our relationship with the other group.
4. The relationship between our group and the other group is part of who the two groups are.
5. The relationship between our group and the other group is important to what kind of larger group we are.
Self-Construal Scale

We would now like to ask a few questions about yourself. Please read the following prompts carefully and answer in regards to yourself by indicating how you feel from 1 (Strongly Disagree) to 9 (Strongly Agree).

1. I do my own thing, regardless of what others think.
2. I’d rather say “No” directly, than risk being misunderstood.
3. I prefer to be direct and forthright when dealing with people I’ve just met.
4. I act the same way no matter who I am with.
5. I act the same way at home that I do at school (or work).
6. I will sacrifice my self-interest for the benefit of the group I am in.
7. If my brother or sister fails, I feel responsible.
8. I often have the feeling that my relationships with others are more important than my own accomplishments.
9. My happiness depends on the happiness of those around me.
10. I will stay in a group if they need me, even when I am not happy with the group.
Demographics

You’re almost done! Lastly, please answer a few questions about yourself for demographic purposes.

What gender do you identify as?
- Man
- Woman
- Other/Non-binary

What is your age (please write in a number)? ____

Please indicate which race/ethnicity you identify yourself (select one):
- American Indian or Alaskan Native
- Asian/Asian-American
- Black/African-American
- Hispanic/Latinx
- White/Caucasian
- Middle Eastern
- Native Hawaiian or Pacific Islander
- Multi-racial
- Prefer not to say
- Other

Please indicate where on the scale best represents your political beliefs ranging from 1 (Very Liberal) to 9 (Very Conservative).

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How do you identify yourself?
- Democrat
- Republican
- Other

We understand that sometimes people are rushed and do not pay careful attention to the survey. If you did not pay close attention, your responses may falsely impact our results, therefore we do not want to keep your data. If you would recommend that we do not use your responses, please select the "remove my data" option below. Note: You will be paid for your participation regardless of your response.

- Keep my data
- Remove my data
Debrief

Thank you for your participation in this study.

The purpose of this study was to see whether there are gendered differences in people’s preference towards intergroup leadership styles. Specifically, we were interested to see whether there is a difference in how men and women endorse a style of intergroup leadership called intergroup relational identity, when asked to imagine themselves as a leader during times of subgroup conflict.

Participants were randomly assigned to one of two conditions, meaning not everybody saw the same set up. For example, some participants were asked to imagine they were in charge of subgroups that were in cooperation with each other, while other participants were asked to imagine they were leading groups that were in competition with each other. It is important to note that while some of the set up was different for some participants depending on which condition you were randomly assigned to, each participant answered the same scales and questions.

If you would like a copy of the consent form that you signed, please contact jacqueline.shaib@cgu.edu. We would like to assure you that your data will be kept entirely confidential, and there will be no way to identify your individual data. However, you do have the right to withdraw your data from this study. Please let us know if you would like to have your data removed from the study.

Thank you for your participation, please click next to receive your payment code.

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Please click the next button to complete the survey.