EXAMINING EARLY PERCEPTIONS OF LEADERS AND ENTITATIVITY IN A SHARED LEADING SITUATION WITH A FOCUS ON GENDER

by

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A dissertation submitted to the faculty of
The University of North Carolina at Charlotte
in partial fulfillment of the requirements
for the degree of Doctor of Philosophy in
Organizational Science

Charlotte

2022

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ABSTRACT

LEANN ELIZABETH CAUDILL. Examining early perceptions of leaders and entitativity in a shared leading situation with a focus on gender. (Under the direction of DR. ANITA BLANCHARD)

As organizations become increasingly team-based and less hierarchical, the leader (and follower) role could stretch within groups and be shared by all group members. When faced with gender-diverse groups, members or observers of the group may have difficulty perceiving women as leaders (and men as followers), especially when members that are men are engaged in leader-like behaviors. The current study examines the relationships among gender status beliefs, gender implicit biases, and leader and follower perceptions. I integrate entitativity into these relationships to investigate the possibility of a moderating effect. I attempt to provide an explanation for why members in gender-diverse groups may initially perceive women as leaders and men as followers. To test my hypotheses, I used a survey design with a manipulated moderator in which data were collected from 175 participants over two time points. Generally, results do not support the theoretical arguments included, however, entitativity was found to be a significant moderator in the relationship between gender implicit biases and perceptions of follower claiming of men. Managers interested in shared leading processes may want to increase the entitativity of their groups or highlight the high levels of entitativity, especially if group members are susceptible to strong associations between man and leader.

ACKNOWLEDGEMENTS

The fuel behind this dissertation would not have been made possible without the relationships developed inside and outside of the Organizational Science community. I would like to acknowledge several people who made this document possible. First, I would like to acknowledge my dissertation chair, Dr. Anita Blanchard, for the continued encouragement throughout my doctoral education journey. From graduate assistant advisor, to coauthor, to colleague, to friend, she has been a pillar of support and guidance in crafting the scholar I am today. Second, I would like to acknowledge my committee member, Dr. Lisa Walker, for her insights regarding my research interests of gender and status. It has been wonderful to engage in research conversations with her. I would also like to thank Dr. George Banks for serving on my committee and providing his insights on leadership and feedback to improve this paper. I am also appreciative of early feedback from Dr. Samira Shaikh and very thankful to Dr. Bernadette Donovan-Merkert for joining my committee and providing valuable feedback for future research considerations.

Several peers also had a large influence on my doctoral journey. I am honored to follow in the funky footsteps of Drs. Sabrina Speights, Bob Bickmeier, Haley Woznyj, and Andy Loignon. I appreciate the love and support from each of them. May we stay funky! I am also thankful for several other friendships that have helped me along the way. Thank you to Drs. Melissa Medaugh, Lea Williams, Shahar Gur, Elizabeth Clayton, Chelsea Beveridge, Alex Dunn, Ben Uhrich, and Oscar Jerome Stewart and to Jessie Olien, Krista Engemann, Miles Moffitt, and Paul Schmidt. This group of people made Charlotte home and I will treasure the many memories made.

Getting to this point would have not been made possible without the experiences from receiving my master's from Xavier University and my bachelor's from the University of Kentucky, where I first realized my passion for research. I would like to acknowledge my early mentors and advisors, Drs. Dalia Diab, Morrell Mullins, Mark Nagy, Greg Smith, Melissa Cyders, and Ron Taylor.

Finally, I would like to acknowledge the Organizational Science Alumni Dissertation Fund for support to compensate participants for this project and to the IO Psychology Small Grant Fund for support to purchase an online assessment.

DEDICATION

I dedicate this paper to my parents, Ron and Barb, who emphasized the importance of learning and education since grade school. Through all the moves, transitions, and changes from the past 20 years, their love, support, and encouragement were constant. Although 488 miles separated us during most of my doctoral journey, they were at my doorstep when needed. I am not sure who is more excited this dissertation process is over, me or them.

I also dedicate this paper to my husband, Greg, who came into my life at the perfect moment, when I was writing my proposal document. He has experienced the best moments of this dissertation and the worst. And no matter what, has stood by me with nothing but compassion, understanding, and unwavering love, support, and encouragement. I am excited for him to see the non-student version of me.

Lastly, I dedicate my journey to Peaches, who was adopted after my first semester and with me until the last year before my defense. She was the best roommate and provided much emotional support, especially during my time in Charlotte.

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Introduction

The increase in the focus on groups at work provides a context in which the leader role is shared by multiple members of the group. Shared leadership provides the structure for multiple members to take on the leader role. It allows organizations to adapt to complex, dynamic, and unpredictable modern environments. With the complexities that organizations face, it is no longer reasonable to assume that one single leader can effectively influence, motivate, direct, delegate, and solve all the problems that groups face. Therefore, shared leading provides opportunities for group members, with or without formal authority, to emerge as informal leaders to appropriately lead the group.

Shared leading is the distribution of leadership roles and influence among members of a group (D'Innocenzo, Mathieu, & Kukenberger, 2016). It is important to group functioning and positively relates to task satisfaction (Serban & Roberts, 2016), team effectiveness (Perry, Pearce, & Sims, 1999), and performance (Hiller, Day, & Vance, 2006). Although these outcomes are important, the literature lacks an understanding of the beginning processes of shared leading. How do groups get to the point of shared leading? What are the initial characteristics of the group or group members that provide (or not provide) a context for shared leading? To answer these questions, I examine the cognitive processes of group observers at the onset of their group perceptions that may have an effect on how and when members engage in shared leading.

Using a survey design with experimental components, I test the effects of unconscious, sexist attitudes and early group perceptions on leader and follower identification. Past research shows that both status characteristics and implicit biases play a part in determining how we evaluate and view other people, especially in the workplace. Using gender-diverse groups, I examine the implications of these unconscious attitudes toward women in task groups.

Additionally, I explore the importance of an early group perception, namely entitativity (i.e., the "groupness" of a group), and its effect on how status characteristics and unconscious biases influence how group members perceive others as leaders and followers.

This study attempts to shed light on early processes of shared leading. In addition to showing how unconscious perceptions may affect the way we identify leaders and followers, this research shows a potential link between the fields of entitativity and shared leading and adds to the growing literature of group processes and early group formation. The findings provide recommendations for how group observers with a strong association between "man" and "leader" can better perceive men as followers.

Shared Leading

Shared leading[1] is "an emergent and dynamic team phenomenon whereby leadership roles and influence are distributed among team members" (D'Innocenzo et al., 2016, p. 1968). It has its roots when leadership was described as a "group quality" and the emphasis was put on the group to carry out the leading (Gibb, 1954). Though conceptualized several decades ago, shared leading did not emerge as a focal construct until more recently (e.g., Avolio, Jung, & Sivasubramaniam 1996; Carson, Tesluk, & Marrone, 2007; Ensley, Hmieleski, & Pearce, 2006; Gronn, 2002; Pearce & Sims, 2002). This definition fits the modern ideas of leadership because

[1] Shared leading is used throughout the paper instead of shared leadership to emphasize the process, as opposed to the structure involved (Weick, 1974). Borrowing from Weick's model of organizing, Gidden's model of structuration, and Scott and Davis (2007), the subject is shared leadership, the verb is shared leading. Here, leadership implies the structure in which social processes (e.g., leading) occur. I am most interested in the early processes that enact the structure of shared leadership. The repeated social processes of leading are what create or change the structure of leadership. To distinguish between shared leadership and shared leading is to compare what is being discussed – does it relate to the processes (e.g., interacting, negotiating) or the structures (i.e., a relationship between two members of a group). Weick would encourage scholars to focus on that processes that constitute shared leading, as opposed to the structural features of shared leadership, because it is the repeated actions of group members that allow the structures to exist (Weick, 1969). Giddens (1979) would agree and encourage researchers to study the more dynamic processes, as opposed to the static structures, as the roles and relationships that create the structures are going to be different today compared to yesterday, and will be different tomorrow (Scott & Davis, 2007).

it emphasizes that leadership is not what an individual has or does, but what a group experiences. Commonly described in the context of self-managed teams whereby group members emerge as informal leaders, shared leading can exist more intentionally when multiple leaders are expected and the expectation is made explicit (D'Innocenzo et al., 2016). Further, shared leading allows different people to take on the leader and follower roles, regardless of their formal position in the work group or organization to create shared leading. This phenomenon can occur within groups with a designated formal leader or within leaderless groups.

Current thoughts on leadership argue that single leaders cannot appropriately lead every aspect of a group or be responsible for all leader behaviors (Pearce & Manz, 2005). As such, shared leading occurs when a group has multiple (if not all) group members take on the role of leader. Correspondingly, group members alternately take on the role of follower. Some researchers suggest that this process unfolds as members in a group lead when they are needed (Friedrich, Vessey, Schuelke, Ruark, & Mumford, 2009).

Similarly, some people gravitate toward particular leader behaviors more so than other behaviors (Barry, 1991). For example, most group members take one on specific type of leading behavior (e.g., initiating structure), while very few group members take on three or four different leading behaviors (Bergman, Rentsch, Small, Davenport, & Bergman, 2012).

Shared leading can be theorized as overall leading behaviors, such as the extent to which group members are a leader (Carson et al., 2007) or a specific type of leading, such as the extent to which group members are self-aware of their own strengths and limitations (Hmieleski, Cole, and Baron, 2012). Although shared leading is a more modern approach to leadership, it often complements traditional, vertical leadership. Nonetheless, shared leading predicts performance

and team effectiveness above and beyond vertical leadership (Ensley et al., 2006; Pearce & Sims, 2002).

The antecedents of shared leading include shared purpose, social support, voice, and external coaching (Carson et al, 2007). The outcomes of shared leading include less conflict and greater trust and cohesion (Bergman et al., 2012), team effectiveness (Carson et al., 2007; Pearce & Sims, 2002; Pearce, Yoo, & Alavi, 2004; Perry et al., 1999) and performance (Hiller et al., 2006; Mehra, Smith, Dixon, & Robertson, 2006). Ultimately, meta-analyses investigating the relationship between shared leading and performance support a positive relationship between shared leadership and group outcomes of team effectiveness (Wang, Waldman, & Zhang, 2014) and team performance (D'Innocenzo et al., 2016; Nicolaides, et al., 2014).

Leadership identity construction theory is one way to understand how the shared leading process unfolds (cf., DeRue & Ashford, 2010). This theory involves social interactions as the building blocks to allow members in a leadership context to be leaders and followers. DeRue and Ashford posit that leadership is constructed through a process of negotiating leader and follower identities. Identities are continually negotiated when (1) people act as leaders, (2) people allow or do not allow others to act as leaders, (3) people act as followers, and (4) people allow or do not allow others to act as followers. Identities are successfully constructed when they mutually reinforce each other (i.e., leader identities and follower identities align through the claiming and granting of roles).

Claiming a role occurs when a person either steps up as a leader (known as a leader claim) or acts as a follower (i.e., follower claim). Granting a role occurs when a person acknowledges someone else as a leader (i.e., leader grant) or behaves in a way to show someone else is a follower (i.e., follower grant). Role claiming and granting can be accomplished through

direct verbal acts (e.g., speaking as a leader, following directions) and nonverbal acts (e.g., dressing like a leader, not sitting at the head of the table). Additionally, people can make indirect claims, such as name dropping other important figures (leader claim) or not bringing up relevant experiences from the past (follower claim). Because leader and follower identities do not form immediately, an individual's leader (or follower) identity forms over the course of multiple claims and grants.

How does this work in a shared leadership structure? Imagine a group of four managers working on a new project. They are meeting for a brainstorming and strategic session. These managers come from a variety of departments with diverse backgrounds. Suppose one member, Jacob, initiates the meeting and guides the others. Jacob initially claims the role of the leader. When Jacob is asked a question and does not know the answer because it is outside his expertise, another member, William, steps up and guides the decision making. William now claims the role of the leader. This happens repeatedly as all four group members step up to help influence, guide, and make important decisions – while the remaining members accept their leadership claims and act as followers.

Although this example focuses on decision making, there may be several different types of shared leader behaviors that the members enact, such as taking on the role of motivator or building relationships among group members. Additionally, this identity construction is a dynamic process and differs across time and situations (DeRue & Ashford, 2010). One individual may emerge as an informal leader in one group (i.e., claim leader role multiple times and take on the leader identity), but in another group, may only take on the follower identity.

Leadership identity construction theory (DeRue & Ashford, 2010) finds empirical support through a few notable studies. In multiple experiments, participant observers perceive

leader claimers as “actual” leaders (Marchiondo, Myers, & Kopelman, 2015). People who claim the leader role are perceived as more leader-like when another group member accepts their claim (i.e., granted the leader role). In addition to validating the leader claiming and granting process, this research also extends DeRue and Ashford’s (2010) model to incorporate the influence of claiming and granting for observers (i.e., those not part of the group) and shows how watching group members claim and grant can influence observer’s own decision making. Ultimately, this work empirically highlights that identities are strengthened by the amount of acceptance (i.e., role granting) they are given (DeRue & Ashford, 2010).

A second study focuses on leader granting in multidisciplinary research and development teams (Chrobot-Mason, Gerbasi, & Cullen-Lester, 2016). Predictors of granting leadership and being granted leadership include strong organizational and team identification. Specifically, organizational identification increases when people are both granted leadership and grant others leadership (Chrobot-Mason et al., 2016). Team identification, however, only affected whether employees were granting leader roles to others (Chrobot-Mason et al., 2016). That is, if employees identify with the organization (team), they are more likely to act in ways to make sure the organization (team) is successful.

Holm and Fairhurt (2018) continue to find support for claiming and granting. In an ethnographic study using videos of groups meeting and interviews of Danish teams, they find the forms that claims and grants take in shared leading situations that include formal leaders. People claim authority through their hierarchical position (e.g., opening a meeting), through their expertise (e.g., having inside knowledge of the topic being discussed), and by ‘advancing the task’ (e.g., taking on responsibility). People grant authority by not contesting authority claims (e.g., remaining quiet as someone else claims authority), acknowledging authority claims (e.g.,

explicitly agreeing to claim), and 'attributed expertise' (e.g., going to another for knowledge or expertise). Holm and Fairhurt also find common ways in which group members resist authority, such as contesting an authority claim (e.g., expressing disagreement), interrupting the person trying to claim (e.g., expressing disagreement while the person trying to claim is in the process of claiming), and 'subversive humor' (e.g., jokes that undermine the person trying to claim authority).

The extant research on leadership granting and claiming is important. Nonetheless, there is still a black box around how shared leading develops. DeRue and Ashford (2010) point to an identity construction process, but this takes time to form and develop. Past research has not fully examined this process over time or taken a closer look at how group members negotiate their leadership identities initially, the time when the patterns of leadership are starting to establish.

We know that shared leading is related to positive outcomes, but we cannot expect that this phenomenon will always occur when groups initially form. Shared leading research neglects the growing complexity of modern groups and leaders, especially in regard to gender. There are numerous studies and theories that point to the difficulties women face being perceived as leaders. I argue gender and leadership research should not be ignored in understanding shared leading.

Gender and Shared Leading

Let us revisit the shared leading example with four managers working on a new project, meeting for a brainstorming and strategic session. If the context is ripe for a shared leadership structure (e.g., self-managed work group), what happens when Amy claims the leader role early in group formation. Will the other members likely grant the leader role to her initially? Based on a plethora of research examining the gender disparities in leadership positions, I posit that early

leader claiming by women will not be as well received as early leader claiming by male group members. I turn to a few key explanations for why this might be the case.

For group members to successfully experience full shared leading (i.e., all group members leading and following), members will need to first perceive others in their group as potential leaders. Further, they need to perceive others as potential followers (regardless of gender). Women are less likely than men to be perceived as leaders because of gender beliefs and stereotypes (e.g., Boldry, Wood, & Kashy, 2001; Johnson, Murphy, Zewdie, & Reichard, 2008; McClean, Martin, Emich, & Woodruff, 2018; Sczesny, Bosak, Neff, & Schyns, 2004), especially in early group formation.

Early work by Schein (1973, 1975) points to a "think manager-think male" phenomenon where middle managers are perceived as more related to characteristics, attitudes, and temperaments of men. This association is true for both managers that are men (Schein, 1973) and managers that are women (Schein, 1975) – regardless of the gender of the rater, managers associate sex role stereotypes and manager characteristics. More evidence of this phenomenon is provided by other early research using men and women raters to describe good managers; masculine traits are associated with good managers (Powell & Butterfield, 1979).

Schein (2007) revisits "think manager-think male" and finds women are no longer favoring men for manager positions, however, men still associate the characteristics of men with manager characteristics. Additionally, traits of men are more associated with leader prototypes and leader anti-prototypes than traits of women (Powell & Butterfield, 2017). Only when a more disguised, gender trait instrument is used is femininity associated with leader prototype. Although this study shows some evidence favoring traditional, feminine leader traits, it still shows that a majority of the time, people may perceive managers as having masculine traits.

Favoring men for leadership continues with additional research showing that a man's voice is considered more like a leader than a woman's voice (McClean et al., 2018). Hence, it is still more difficult to perceive women as leaders. Role congruity theory describes this association (Eagly & Karau, 2002).

Role congruity theory (Eagly & Karau, 2002) offers a reason for why women are perceived less favorable in leader roles than men, and when they are in leader roles, their leader behaviors are perceived less favorable than men. Eagly and Karau (2002) posit that there is incongruence between the woman gender role and the leader role (p. 573). Incongruence occurs when people hold certain views of a group (i.e., women) which are not aligned with the characteristics associated with a certain social role (i.e., leader). This leads to a prejudice that lowers evaluations of women leaders because the woman gender role is not similar to leader expectations. This prejudice is based on the communal qualities associated with women (e.g., helpful and kind) and the agentic characteristics associated with leaders (e.g., ambitious and dominant).

Further, other research tests perceptions of directive (i.e., agentic) and supportive (i.e., communal) leader behaviors in mixed-gender task groups, but still finds an advantage toward men (Mendez & Busenbark, 2015). Men are granted more directive and supportive influence opportunities than women, even though women are usually perceived as supportive leaders. These researchers examine whether the type of leadership (i.e., shared leadership or focused leadership) moderated the influence perceptions, but even in groups that were engaged in shared leading, men still had the most influence. This is a substantial problem. A shared leading context should instill an environment for women to successfully lead groups, as shared leading is a more egalitarian approach to leadership (Neubert and Taggar, 2004).

How do group members identifying as women become perceived as leaders, especially when their men counterparts are also engaging in leader claiming? I posit that adding an individual's implicit gender perceptions and their group perceptions to the shared leading literature will open new theoretical avenues to understanding how men and women group members function at a high level of shared leading. I turn to status characteristics theory and research on implicit biases to understand the likelihood of women perceived as initial leaders.

Status Characteristics Theory

Status characteristics theory explains how differences in attributes influence how members will come to expect or not expect certain behaviors from their peers (Wagner & Berger, 1993). Status characteristics are attributes on which people can be evaluated and differ (Berger, Cohen, & Zelditch, 1972; Wagner & Berger, 2002). They can be diffuse (e.g., race, gender, attractiveness) which reveal assumptions that are general and applicable to multiple contexts or specific (e.g., math ability, occupation) which reveal assumptions that are applicable to a certain task or context (Berger et al., 1972). Both diffuse and specific status characteristics inform who has influence in a group (Berger et al., 1972).

Higher status members are more likely to problem-solve and be evaluated more positively compared to lower status members. These differences could have implications for how members perceive leaders. For example, leaders are often problem-solvers. Group members may perceive a man to be a problem-solver solely because of his gender (i.e., diffuse status characteristic) and men have higher status than women. Additionally, people with higher status are more likely to have power (Walker et al., 2000; Willer, Lovaglia, & Markovsky, 1997) and success at being influential (Yukl & Falbe, 1990; Yukl & Tracey, 1992).

Gender Status Beliefs

Belief systems regarding gender and performance are influential. When told the belief that men are better at a certain task than women, women self-reported lower ability than men after completing the task, even though all participants were given the same score (Correll, 2004). But when the belief was given that no gender differences existed, the self-reported ability was the same for both men and women. This study shows the powerfulness of a simple belief can affect the way in which people perceive ability.

Ridgeway (2001) relates status characteristics to gender and leadership through status beliefs, which are "shared cultural schemas about the status position in society of groups" (p. 637). Gender status beliefs form because gender is related to social hierarchy given that more competence is attributed to men than women (Ridgeway, 2001). They affect the likelihood that women will emerge as leaders (Ridgeway, 2001). Status characteristics theory would suggest that it is harder to perceive women as leaders as compared to men because women leaders go against the norm that men have higher status and prestige (Ridgeway, 1991; 2001). Status beliefs create challenges for women when attempting to achieve similar levels of leadership as men, especially since status beliefs are shared among the advantaged and disadvantaged (Ridgeway, 2001).

Although gender status beliefs may affect people to varying degrees depending on the context (Wagner & Berger, 1997; Ridgeway, 1997), when the task is leading a group, gender status beliefs will be heightened, because leading is still considered a masculine behavior (e.g., Eagly & Karau, 2002; Schein, 2007). Within the context of shared leading, both diffuse and specific status characteristics could facilitate or impede who is perceived as a leader. This process would be especially powerful early in group formation or when someone is new to a

group or newly observing. When there is evidence of shared leading and new members join the group or observe, they may still rely on their expectations while they accumulate enough information to make more objective evaluations of the leader(s) of the group, especially if they are seeing evidence of leading behaviors from lower status members.

Status characteristics theory explains why some people (e.g., males) receive privilege and better opportunities (e.g., leader promotions). It is people's expectations (e.g., thinking men have high status and will leader better than women) that inhibit perceivers from identifying women as leaders. Status characteristics provide a well-established explanation for why some people are granted higher status (and power) than others. However, individuals within a society do experience differences in how much they adhere to these status beliefs. I propose that implicit biases offer another, complementary way to understand why women are not identified as leaders.

Implicit Biases

Implicit bias is a routinized orientation that is automatically activated during certain experiences, which cannot be controlled or faked (Rudman, 2004). It is derived from implicit attitudes, which are "introspectively unidentified (or inaccurately identified) traces of past experiences that mediate favorable or unfavorable feeling, thought, or action toward social objects" (Greenwald & Banaji, 1995, p. 8). In other words, past experiences can unconsciously affect behavior (Greenwald & Banaji, 1995). This is important because subtle discrimination (e.g., implicit biases) may be just as detrimental as overt discrimination (e.g., illegal discriminatory practices; Jones, Peddie, Gilrane, King, & Gray, 2016).

People hold implicit biases regarding race, ethnicity, gender, nationality, age, and many more social categories. They are shaped by early experiences, affective experiences, and cultural biases (Rudman, 2004, p. 135). For example, Banaji and Greenwald (2013) argue that we are

battling years of experience that comes from hearing or seeing gender preferences from the outside world. In their words, “the outside ends up inside the mind” (p. 68) and people are not even aware of it. Implicit attitudes, especially in the right environment, even help predict employee discrimination. Ziegert and Hanges (2005) examine discriminatory behavior and find that implicit racial bias, under the condition of a business case for racial discrimination, lead to lower ratings of Black applicants.

In addition to race, gender is also a common subject for implicit biases in the workplace. Banaji and Greenwald (2013) cite a riddle in which a surgeon is usually thought of as a male. They explain that when most people hear the word “surgeon,” “male” is coming to mind. They posit this “mental habit…is difficult to override” (p. 72). They further explain this mental habit or mental association with the metaphor of, “mental glue,” where a bonding of two categories (e.g., surgeon and male) form into one. Using six years of implicit attitude tests (IATs), 76% of respondents report a stronger male=career, female=family implicit attitude (Nosek, Smyth, Hansen, Devos, Lindner et al., 2007). Given this, how accurate are individuals at perceiving leaders, when most of us have an implicit bias to think career (and leading) are for men and family duties (and following) are for women? When thinking about leaders, who they are and what they look like, there may not be much “mental glue” between the categories of leader and woman.

Gender Implicit Biases

There is much research to suggest that people have an implicit preference for men as leaders. Men and women alike have similar attitudes regarding gender authority. Specifically, both have negative attitudes of women in authority in comparison to male authorities and low-authority men and women (Rudman & Kilianski, 2000). This relationship is weaker for people

with feminist views and stronger for people with sexist views. This study also shows that those who explicitly have more egalitarian beliefs still have negative implicit attitudes toward women in authority. Perhaps more harshly, those with an implicit attitude that women are nicer than men, also view agentic women applicants as interpersonally unskilled and unlikeable (Rudman & Glick, 2001, p. 758).

Employers favor men during hiring and promotions as women receive fewer promotions because manager's implicit biases do not allow them perceive a fit between women employees and upper-level positions (Heilman, 2012). Faculty members rated men job applicants more favorably for a lab manager job (Moss-Racusin, Dovidio, Brescoll, Graham, & Handelsman, 2012). Both men and women faculty participants rated men as more competent, hirable, and deserving of higher salaries and resources. In Moss-Racusin et al.'s study, there was a bias against women applicants; men applicants were favored for this position over women applicants. Additionally, in an intervention study for faculty in medicine, baseline results show an overall slight implicit bias relating men to leaders more than women (Girod, Fassiotto, Grewal, Ku, Sriram, et al., 2016). This effect was stronger for men faculty and older faculty.

Although both status beliefs and implicit biases affect the extent to which women are recognized as leaders, these similar, yet distinct literatures have not been examined together. There is not enough background evidence to suggest a directional relationship between the two constructs. Therefore, I consider them separately. Nonetheless, I expect a moderate to strong correlation between status beliefs and implicit biases.

In sum, by understanding how cultural beliefs and past experiences can create unconscious beliefs (i.e., gender status beliefs, implicit gender biases) of our views of leaders, we could learn a great deal how the early stages of shared leading works. I theorize that status

beliefs as well as implicit biases affect how people form initial perceptions of shared leading in groups with women. Although past research suggests that people have higher expectations for men than women (e.g., Ridgeway, 1997; Raschotte & Webster, 2005), I focus primarily on the status beliefs of women and acknowledge that some people will have higher or similar expectations for women as men. Specifically, I expect that people who hold high status beliefs toward women are more likely to perceive women claiming the leader role and less likely to perceive women claiming the follower role. I believe these high status beliefs toward women will have the opposite effect on men's leader and follower claiming. I also expect that people with more implicit biases against women are less likely to perceive women claiming the leader role and more likely to perceive women claiming the follower role. I also believe these implicit biases will have the opposite effect on men's leader and follower claiming.

The focus of this research attempts to address the phenomenon that even when evidence exists that all members in the group successfully grant and claim the leader identity (i.e., therefore all are leaders), new members or observers may not perceive everyone as leaders but will rely on status beliefs and implicit attitudes to make leader (and follower) judgments. Without other crucial information, new members or observers will be susceptible to their unconscious perceptions influencing who they recognize as leaders and followers. Therefore, I hypothesize the following:

Hypothesis 1: Status beliefs toward women are positively related to perceptions of leader claiming of women.

Hypothesis 2: Status beliefs toward women are negatively related to perceptions of follower claiming of women.

Hypothesis 3: Status beliefs toward women are negatively related to perceptions of leader claiming of men.

Hypothesis 4: Status beliefs toward women are positively related to perceptions of follower claiming of men.

Hypothesis 5: Gender implicit biases are negatively related to perceptions of leader claiming of women.

Hypothesis 6: Gender implicit biases are positively related to perceptions of follower claiming of women.

Hypothesis 7: Gender implicit biases are positively related to perceptions of leader claiming of men.

Hypothesis 8: Gender implicit biases are negatively related to perceptions of follower claiming of men.

Entitativity

In this research, I suggest a way in which group members may quickly overcome the effects of status beliefs and implicit biases. I theorize that entitativity is a powerful source to overcome their influences. Entitativity is a person's cognitive evaluation of the extent to which a social unit is a "group" (Blanchard, Caudill, & Walker, 2020). Others call it the "groupness" of a group (Carpenter & Radhakrishnan, 2002; Lickel, Hamilton, Wieczorkowska, Lewis, Sherman et al., 2000; Lickel, Hamilton, & Sherman, 2001). Rutchick, Hamilton, & Sack (2008) describe entitativity as the extent to which a collection of people is perceived as a meaningful social entity. In other words, a collection of people can be thought of as more than just the individual components.

Introduced in 1958, Campbell suggests that entitativity is made up of four components. Borrowing from Wertheimer (1938), Campbell describes entitative systems as having common fate (to what extent objects move in the same direction), being similar (to what extent the objects are similar), being proximal (to what extent are objects physically close), and pregnance (to what extent objects have an observable pattern of organization). Campbell notes that some aggregates (such as of people) are entities and some are not. Entitativity is, therefore, a matter of degree.

Although primarily residing in the social psychology field, especially with regard to stereotyping and intragroup biases (Crawford, Sherman, & Hamilton, 2002; Spencer-Rodgers, Hamilton, & Sherman, 2007; Yzerbyt, Corneille, & Estrada, 2001), organizational scholars have begun to research entitativity through examination of task groups (Blanchard et al., 2020; Lickel et al., 2001; Lickel et al., 2000). Considering different types of groups and how they vary on entitativity, Lickel et al. (2000) shows that task groups have high entitativity, behind intimacy groups (e.g., families), but are more entitative than social categories (e.g., women) and loose associations (e.g., people who enjoy reading). In addition to using these four categories to differentiate types of groups, people also have assumptions about these group types, such as the members' qualities, how influence is used, and how relationships are maintained (Lickel, Rutchick, Hamilton, & Sherman, 2006).

Lickel et al. (2000) also examines numerous antecedents that affect the level of entitativity. Among these antecedents, interaction among members is the strong predictor of entitativity, while importance of group to members, common goals of members, common outcomes of members, and similarity among members have moderate relationships to entitativity. For example, a person would perceive a collection of individuals who are not talking, wearing completely different outfits, and not sitting in an organized manner (facing all

different directions) at a Starbucks to not have a high level of entitativity. This person may perceive this collection as a loose association - people who enjoy Starbucks. However, if this same collection of individuals were sitting in a circle at Starbucks, talking with each other, and all wearing business professional clothes, a person would perceive this collection with a high level of entitativity – perhaps as a work group that is on a coffee break. For task groups in particular, people perceive them to be small, short-lived, interacting, important to its members, and have similar members, goals, and outcomes, and permeable boundaries (Lickel et al., 2000). Additionally, interactivity, history of interactions, and similarity are significant predictors of entitativity in work groups (Blanchard et al., 2020).

Increasing the entitativity of task groups through the aforementioned antecedents can facilitate group processes and outcomes. When people view their group as a meaningful whole, they also perceive the group members not just as a collection of individuals, but as a group that has, for instance, similar members with common goals. This is also true for outsiders who are perceiving groups of which they are not members. I posit that the perception that individuals are a meaningful whole can help new members or outside observers overcome the implicit barriers to leader perceptions.

Entitativity as Moderator

I propose that entitativity decreases the likelihood that people's default thought patterns (i.e., biases toward women) are a primary factor driving perceptions of leaders and followers. Specifically, higher entitativity will increase the likelihood of perceiving women as leaders and men as followers. The shared leadership literature does not contain discussion of potential cognitive processes that influence the perception of seeing multiple group members as leaders

(and followers). Including entitativity with the study of leadership addresses this gap and offers new contributions to both fields of study.

To understand the relationship between entitativity and shared leading, I examine self-categorization theory (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987). Building on social identity theory (Tajfel, 1982), self-categorization theory describes how individuals become a group through different cognitive processes that highlight the similarity and sharedness of the group members (Turner et al., 1987). In other words, groups form when people develop similar social categorizations of themselves and other group members. This process is influenced by entitativity (Crawford et al., 2002) – the more an individual perceives entitativity, the more likely the individual will develop an identity similar to the group, and therefore, see other group members similar to self. A method for which social categorization occurs is through internalizing group norms and values (Turner et al., 1987). Group identification helps facilitate this process (e.g., Hogg, Abrams, Otten, & Hinkle, 2004; Terry & Hogg, 1996; Turner, 1985). The more identification to the group an individual feels, the more accepting of the group norms and values the individual will be and will assign the group norms and values to self and others (Livingstone, Haslam, Postmes, & Jetten, 2011, p. 1858; Turner at al., 1987). I believe that when group members or observers of the group perceive that members subscribe to similar norms and values about leadership (e.g., everyone can take on the leader and follower role), that they will be more likely to evaluate multiple group members as leaders and followers. I propose entitativity ignites this process.

I test whether entitativity might interact with the process that creates leader and follower perceptions. Because shared leading does not occur automatically within groups, group members need time to go through negotiations (i.e., claiming of leader and follower roles) to get to the

point of shared leading. I posit that for newly formed groups, new members of groups, or new observers of groups, there is a process of evaluating the members as potential leaders (and followers) and that status beliefs and implicit biases help inform this evaluation.

In a gender-diverse group, gender is a salient characteristic. It enacts status beliefs and implicit biases toward women. A highly entitative group may lower the salience of gender and allow group members or observers to perceive everyone as leaders and followers through trait transference. Perceivers are more likely to transfer traits of one group member to other members if that group has high entitativity (Crawford et al., 2002). In this research, perceivers may be likely to transfer the "trait of leader" from men to women and the "trait of follower" from women to men.

Crawford et al. (2002) shows how observers infer traits based upon an individual's behavior. When that individual is in a highly entitative group, those inferred traits help create a stereotype for the group, and observers then associate the group traits to each individual member. Using this model, I predict that for highly entitative groups, the salience of gender decreases, and the leader traits of men are then transferred to women based on the leading behaviors of the men. In other words, observers are more likely to perceive men as leaders, but in highly entitative groups, observers will perceive women as leaders, too. Additionally, low entitativity will not reduce the salience of the gender of group members and the individual trait information (i.e., gender) will remain prominent. Moreover, I theorize this process is relevant for increasing perceptions of men as followers – the follower traits of women are transferred to the men, based on the following behaviors of the women in the group.

For example, considering the previous consulting group example, when Jacob, William, Amy, and Marie perceive high entitativity in their group, Amy and Marie (i.e., the women

members) will more likely be identified as leaders initially by their co-workers if they claim the leader role because they are, altogether, group members. Alternatively, if their group has low entitativity, Amy and Marie will less likely be identified as leaders at least initially because they are unique and individuals. The "wholeness" of the group will outweigh the negative perceptions of the individual members. Therefore, entitativity will interact with the status beliefs toward women and gender implicit biases that affect initial leader and follower perceptions. Once the leader and follower stereotype is highlighted in the perceiver's mind, any implicit barriers that prohibit him or her from identifying leaders/followers will be reduced. Therefore, I hypothesize:

Hypothesis 9: The effect of status beliefs toward women on perceptions of leader claiming of women is moderated by entitativity, such that the higher degree of entitativity, the stronger the relationship.

Hypothesis 10: The effect of status beliefs toward women on perceptions of follower claiming of men is moderated by entitativity, such that the higher degree of entitativity, the stronger the relationship.

Hypothesis 11: The effect of gender implicit biases on perceptions of leader claiming of women is moderated by entitativity, such that the higher degree of entitativity perceived, the weaker the relationship.

Hypothesis 12: The effect of gender implicit biases on perceptions of follower claiming of men is moderated by entitativity, such that the higher degree of entitativity perceived, the weaker the relationship.

Figure 1 shows the full hypothesized model. Examining work groups at their early stages may shed light on not only early leader perceptions, but also what can be done to get group members to the place in which shared leading is possible and works well, especially in gender-

diverse groups. Dasgupta and Asgari (2004) show that women have a less implicit gender bias if they are around women leaders. Situations that challenge traditional gender roles may reduce bias, but what if this context is not available? For example, many women face obstacles being the only woman in the room. Therefore, I posit that early perceptions of the group, specifically, to what extent the members perceive that the group is actually a meaningful unit, may have implications for how they perceive others as leaders. I intend to provide evidence that unconscious perceptions (i.e., gender status beliefs and gender implicit biases) play an important part in the initial process of perceiving leaders, especially in a shared leading context with both men and women group members. Although unconscious perceptions may hinder shared leading, certain group characteristics and processes (i.e., entitativity) can counteract those effects so that group members can fully perceive multiple leaders and therefore, perceive shared leading.

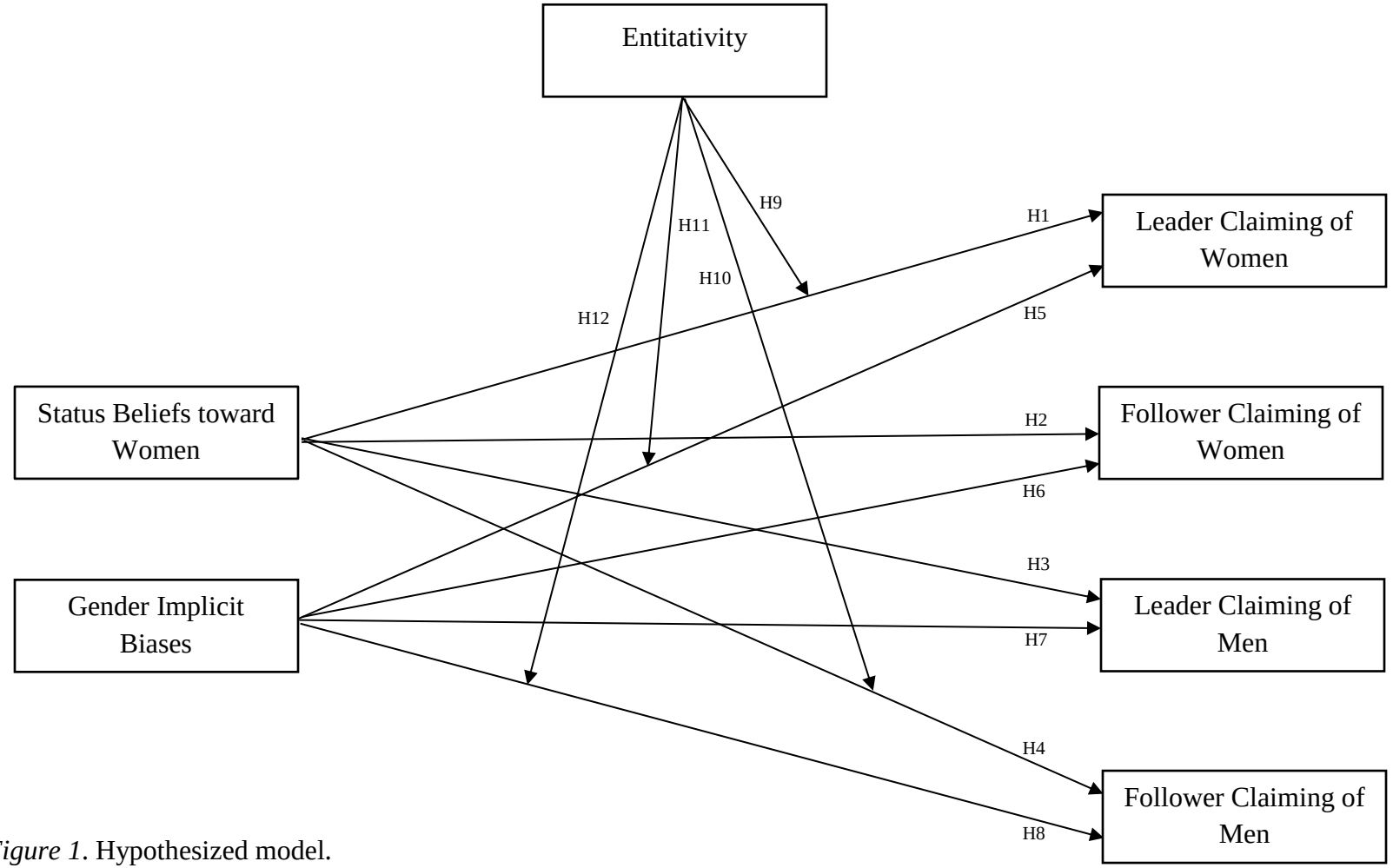


Figure 1. Hypothesized model.

Method

Participants

I recruited participants from Amazon's Mechanical Turk (MTurk). To ensure MTurk workers were indeed human (and not bots) and met the inclusion criteria, I used a screener to select potential participants into a MTurk participant pool. Further information about this process is described in the Procedure section. A total of 800 MTurk workers were invited to complete the screener. From these, 789 showed evidence of meeting the inclusion criteria: being real people and 18 years or older, English speakers, and located in the United States. I then invited 50 of these to complete surveys in a pilot study (further described in Procedure section). From these, seven actually participated in the pilot study.

I then sent a research study invitation to the remaining 739 participants. Out of these 739, 349 responded to some aspect of the research study. Out of the 349, 175 participants completed all aspects of the entire study and are included in the hypothesis testing. This resulted in a 24% response rate. Table 1 outlines how many participants were used in each aspect of data collection and analysis.

Demographic information is based on the group of respondents that provided complete survey information (N=175). Overall, participants were between the ages of 23 and 75 years (M = 43.75, SD = 12.58). Close to 42% described themselves as male, close to 58% as female, and 0.5% as non-binary or third gender. One participant described themselves as transgender. Eighty-one percent identified as Caucasian/White, 8% identified as Asian/Pacific Islander, 5.7% identified as African American/Black, 0.6% identified as American Indian/Alaska Native, and 4.6% identified as two or more races. Most of the participants were non-Hispanic (almost 93%). Additionally, 4% were currently enrolled at a college or university and close to 89% had some

sort of employment or volunteer experience. Lastly, close to 7% completed some high school or high school diploma/GED, just over 13% completed trade school or some college, 11% completed an associate degree, 51% completed bachelor's degree, and almost 18% completed either a master's or doctoral degree.

Social Desirability

Following the strategy of Rashotte and Webster (2005), I also investigated the participants' potential social desirability to ensure participants were not responding in ways that they believed the researchers wanted. Given the nature of the constructs of the study (i.e., gender bias), I attempted to capture the likelihood that participants would alter their perceptions to appear less biased. I analyzed two social desirability measures (that were purposely biased) and results are provided in Tables 2 and 3.

One measure described "stereotypical" gendered behaviors, *who would do better at changing a tire*, and the other described a decision-making process for hiring men and women, h*ow many men would you hire for the job working with numbers*. For both of the measures, specific directions were given that described typical masculine and feminine behavior. For the first measure, participants used a 9-point Likert scale to determine the degree that men, women, or neither were better at certain tasks. For the second measure, participants selected the amount of men or women (between 0 and 20) they would hire for certain jobs. Overall, the participants were not responding in a socially desirable manner.

Table 2 shows the means and standard errors of how participants responded to stereotypical tasks for men and women, along with the breakdown by respondents' gender. I conducted *t*-tests to compare the means of the responses to the test-value of 5 (i.e., the social desirability or egalitarian score). The more extreme the mean, the more the task was perceived to

be gendered. For example, participants reported a mean of 2.93 for changing a tire. This suggests that most of the sample thought that men would be better at changing tires. The mean of changing a diaper suggests that the participants thought women would be better at this task (M = 6.75, SD = 1.48). The closer the mean is to 9.00, the more participants thought the task would be performed better by a woman. All of the means in the table were significantly different from the test-value of 5 ($p < .001$). Similar to past research using this measure (Rashotte & Webster, 2005), overall, participants responded in stereotypical ways. This sample also reported that women were significantly better at growing vegetables ($p < .001$). This task was originally included to be a gender-neutral task, but the original authors found similar results. Therefore, we have some evidence that the respondents answered the questions in gender stereotypical ways; they may not have been responding in socially desirable ways.

Table 3 shows the means and standard errors of how participants selected men and women for certain types of jobs. This social desirability measure primes participants that men were better at working with numbers and women were better at working with words. Participants were told to hire 20 people for each type of job, working with numbers or working with words. I conducted *t*-tests to compare the means of the responses to the test-value of 10 (i.e., the social desirability or egalitarian score). All of the means in the table were significantly different from the test-value of 10 ($p < .001$). Given that the means significantly differ from the test-value, and the results of the prior measure, I can conclude that the participants were not shading their responses in socially desirable ways. Instead, they were responding honestly.

Table 1

Participation Throughout the Study

Phase of Data Collection/Analysis	Total Number of Participants
Invitation to participate	800
Invitation to participation pool	789
Invitation to pilot study	50
Used in pilot analysis	7-12
Invitation to main study	739
Partial data for main study before cleaning	349
Data cleaning: did not meet IAT requirements	4
Data cleaning: outlier detection	3
Partial data for main study after cleaning	342
Used in exploratory factor analysis	265
Used in hypothesis testing	175

Table 2

Social Desirability Analysis of Stereotypical Skills

Respondents	Measures (M = 1, W = 9)	*M* (*SE*)*
All (n = 175)†	Change tire	2.93 (.10)
	Change diaper	6.75 (.11)
	Grow vegetables	5.34 (.07)
Men (n = 73)	Change tire	2.82 (.15)
	Change diaper	6.90 (.16)
	Grow vegetables	5.44 (.12)
Women (n = 101)	Change tire	3.01 (.14)
	Change diaper	6.63 (.15)
	Grow vegetables	5.28 (.08)

Note. M = 1 implies that responses closer to 1 indicate men are much better at an activity and W = 9 implies that responses closer to 9 indicate women are much better at an activity.

* all t-tests indicate a significant difference from the equalitarian score of 5 at $p < .001$.

† The n-values for men and women do not total to 175 because one participant did not provide gender identification information.

Table 3

Social Desirability Analysis of Hiring for Gender-Typed Jobs

Respondents	Type of job (Men)	*M* (*SE*)*
All (n = 175)†	Work with numbers	11.43 (.18)
	Work with words	8.33 (.19)
Men (n = 73)	Work with numbers	11.89 (.23)
	Work with words	8.08 (.25)
Women (n = 101)	Work with numbers	11.11 (.25)
	Work with words	8.50 (.28)

Note. Men implies that the means used in analysis were for selecting men for the job.

* all t-tests indicate a significant difference from the equalitarian score of 10 at $p < .001$.

† The n-values for men and women do not total to 175 because one participant did not provide gender identification information.

Measures

Descriptions of all study measures with items and response scales are included in Appendix C.

Gender Implicit Bias

Implicit gender attitudes were measured by a gender-leadership Implicit Association Test (IAT) made available from a third-party organization (www.millisecond.com). Researchers created an objective, online instrument that uses the length of time it takes to associate groups of words such as, pleasant and unpleasant words with targets, such as white and black people (Greenwald, McGhee, & Schwartz, 1998). The IAT may determine biases toward such groups as women, minorities, and older people (Greenwald et al., 1998). The gender-leadership IAT uses a target-concept (i.e., women name) and an attribute (i.e., leader-related word) and tests the amount of time it takes to associate the two. If people have a stronger association between men and leader, it will be easier for them to actually link men names with leader-related words (Greenwald et al., 1998). Greenwald and colleagues (1998) also show that this type of test has less social desirability than explicit measures.

During the test, participants saw the target words (e.g., Joseph, Stephanie) and identified the word as either men's or women's name, using certain buttons on the keyboard. Then they received the attribute words (e.g., manager, assistant) and identified the word as either leader or follower, using certain buttons on the keyboard. Participants completed an initial combined pairing task (i.e., combining manager with Joseph, combining assistant with Stephanie). They then repeated this task. Next, they learned the reverse for the target words (i.e., changing which button on the keyboard they use for men and women names). Lastly, they completed the reverse combined pairing task (i.e., combining manager with Stephanie, combining assistant with

Joseph). They also repeated this task. Half of the sample responded to the pairing of men names with leader words first and half of the sample responded to the pairing of women names with leader words first.

People are likely to perform better on one of the combined tasks (Greenwald et al., 1998). The difference in time between the two association tests provides the implicit attitudinal score. This score can range from -2.0 to +2.0. If a person has a high association for a certain target and attribute, then he or she has an implicit bias favoring that target. For example, if a person quickly associates a typical man name with a leader-related word, this represents a stronger association than if this person slowly associates a typical woman name with a leader-related word. Therefore, this person has an implicit bias favoring men in leadership. In this research, a score of +2.0 equates to a very strong association between men names and leader-related words (and consequently, a strong association between women names and follower-related words), whereas a -2.0 score equates to a very strong association between women names and leader-related words (and also men names and follower-related words).

Status Beliefs toward Women

Status beliefs toward women were measured by using a partial scale that includes items representing diffuse status beliefs to examine general performance expectations for women (Rashotte & Webster, 2005). Participants responded to seven items on a 9-point Likert scale (1=below average, 9=above average) regarding two fictional characters. They received two photos and brief background information on these characters (i.e., that they were college students). A sample item is *how intelligent do you perceive [Laura] to be?* The seven items were averaged for each participant and a mean closer to 9 equates to having higher performance

expectations of women. The internal consistency calculated for this scale was .95, using Cronbach's alpha.

Leader Claiming

Following DeRue and Ashford's (2010) description of leader claiming, I developed a measure to examine the extent to which observers perceive that a certain individual claims the leader role. A five-item measure was administered, using a 7-point frequency scale (1=never, 7=always). A sample item is (using a photo of employee) *How often did Erika take on a leader role?* The readability of this new measure is just above a 5th grade reading level. Each actor received a leader claiming score (the higher the score, the more the participant perceived the actor to take on the leader role). The internal consistency using Cronbach's alpha for the men scale was .98 and for the women scale was .97.

Follower Claiming

Using DeRue and Ashford's (2010) description of follower claiming, I developed a measure to test the extent to which observers perceive that a certain individual claims the follower role. A five-item measure was administered, using a 7-point frequency scale (1=never, 7=always). A sample item is (photo of employee) *How often did Erika act as a follower?* The readability of this new measure is just above a 6th grade reading level. Each actor received a follower claiming score (the higher the score, the more the participant perceived the actor to take on the follower role). The internal consistency using Cronbach's alpha for both the men and women scales were .98.

Work Group Experience

To control for past experiences working in a group, participants responded to a simple measure developed for the current study, *I have experience participating in work groups, either*

at my job, volunteering site, or through class projects in college courses. A 7-point Likert was included (1=strongly disagree, 7=strongly agree).

Modern Views of Sexism

To control for more "explicit bias" toward women, I included the Modern Sexism Scale (Swim, Aikin, Hall, & Hunter, 1995). The Modern Sexism Scale is an 8-item, updated, and validated scale developed to overcome the drawbacks of old-fashioned measures of sexism. Modern sexism encompasses attitudes such as not believing women and men are treated unequally. Those who have lower modern sexism attitudes are likely to view more gender equality in the workplace than what happens in reality (Swim et al., 1995). Sample items are *discrimination against women is no longer a problem in the United States* and *it is easy to understand the anger of women's groups in America*. Raters use a 5-point Likert scale (1=strongly disagree, 5=strongly agree). These eight items were averaged (taking into account the reverse-scored items) and a mean closer to 5 equates to having a more realistic view of sexism – specifically, believing that sexism still exists. In the scale development studies, internal reliabilities were reported at .75 and .84 (Swim et al., 1995). Using Cronbach's alpha, I found a reliability of .94.

Gender

Gender, used as a control variable, was assessed through a one-item measure asking participants whether they are male, female, non-binary, or other. It was included in the demographic questionnaire.

Age

Age, used as a control variable, was assessed through a one-item measure asking participants to report their age in years. It was included in the demographic questionnaire.

Manipulation Check

The manipulation of entitativity was assessed through a recently developed and validated three-item scale (Blanchard et al., 2020). This new scale encompasses the essence of the construct, as opposed to traditionally used scales that include items that are entitativity's antecedents and outcomes. This scale has been used in an online context and from an outsider's perspective, similar to the current study. A sample item is *the employees feel like a group to me* and the scale is measured on a 7-point Likert scale (1=strongly disagree, 7=strongly agree). The internal consistency for this scale using Cronbach's alpha is .89.

Attention Check

To ensure that participants spent time reading and watching all presented materials and questions, three attention check items were presented. A sample item is *what was the composition of the group you saw in the videos*.

Materials

Screener

Language. Fluency in languages was measured by listing 11 common languages. Prospective participants responded to all the languages in which they were fluent. The participants that reported English were considered for the research study.

Goal. Prospective participants were asked to briefly describe, in two to five sentences, a recent personal or work goal they have accomplished. If they responded appropriately, I assumed they were not a bot and that they were indeed fluent in English. They passed the screener and were included in the main study recruitment.

Experimental Stimuli

Group Description. The entitativity manipulation was presented through a description of a work group (Appendix B). There were two conditions, low and high entitativity. Approximately half of the participants received a group description that included evidence of high entitativity, while the other half received a group description that includes evidence of low entitativity. The descriptions were identical, except with regards to the components of entitativity. Specifically, the high entitativity description emphasized the interaction among group members, group member similarity, previous interactions of group members, and difficulty entering the group. The low entitativity description did not.

Group Video. Two, three-minute videos with paid actors recruited through UNC Charlotte's Department of Theatre were created for the study. Two white men and two white women were hired. The actors engaged in dialogue in which they claimed both the leader and follower role (sample dialogue can be found in Appendix B). This video simulated a work group having a meeting at an organization trying to solve an issue. The two videos differed in the level of entitativity. In the low entitativity condition, the group members used "I" language (e.g., "I think getting a list") whereas in the high entitativity condition, the group members used "we" language (e.g., "we should get a list").

The goal was to ensure all four work group members (i.e., actors) behaved similarly regarding their leader and follower behaviors, as they were simulating a shared leading context. In the video, every member claimed the leader role the same number of times and claimed the follower role the same number of times. Members also had similar "word counts" in the video. Past research on shared leadership also used short videos to examine leader claiming and

granting within a team setting (Marchiondo et al., 2015). Participants also used this video to respond to questions about leader and follower perceptions.

Procedure

The study involved two phases of surveying. In the first phase, I assessed implicit biases, status beliefs, demographics, and control variables. In the second phase, the participants viewed the video and responded to the final survey. Both phases included manipulations. In the first phase, I manipulated the order in which the implicit biases and the status characteristics were measured. This allowed for counterbalancing as the one of these biases measures could affect the other. Appendix A depicts the structure of the different Phases through a study design table.

Phase 2 was launched approximately four days after Phase 1. In Phase 2, participants were randomly assigned to one of two experimental manipulations: the entitativity of a workgroup (low or high). During Phase 2, participants read a description of a work group and watched a video of actors portraying employees in a work meeting solving an organizational issue. Next, they responded to the newly-formed leader claiming and follower claiming scales. Participants also responded to additional control measures, manipulation check, attention checks, and filler measures on attitudes toward the work group. At the conclusion of the survey, they were given a debriefing statement (Appendix B).

Pilot Study

I pre-tested my procedure and surveys with a pilot study. First, I received feedback from multiple doctoral students and non-doctoral student peers on the study directions, measures in the online format, user friendliness, survey length, and issues with grammar or comprehension and made the appropriate changes. Next, the 50 pilot participants from MTurk were invited to complete three individual HITs (each HIT was a survey). Only seven participants responded to

all three surveys. Analyses to examine hypothesized relationships were not conducted, but descriptive statistics were examined.

The means of the entitativity manipulation check did not show much variability between the two conditions and both means were above the neutral point. Although this analysis was conducted using seven responses, I did make a slight adjustment to the study directions for the primary study. I bolded the entitativity cues in the group description to highlight important components of the work group. I also checked to ensure that the predicted time to complete was aligned with payment – no adjustments were made. I examined the patterns of the outcome variables between both conditions, and results were mixed. Some results aligned with theory (e.g., perceptions of leader claiming of men were higher than perceptions of leader claiming of women in the low entitativity condition), but some did not (e.g., perceptions of follower claiming of men were higher than perceptions of follower claiming of women in the low entitativity condition).

Main Study

After the pilot study, I collected data for the primary analyses. Of the 739 participants for the main study, 370 were randomly assigned to participate in the status beliefs measure first and 369 to participate in the implicit bias measure first. Participants payment ranged from $0.25-$4.75, depending on how many surveys they completed.

There was unexpected drop-off during Phase 1 of the study. While I expected drop out typical of longitudinal studies (i.e., between Phase 1 and Phase 2), some participants did not complete the entire Phase 1 assessment after they either took the IAT or after they completed the

status beliefs survey[2]. One hundred eight-two completed all of Phase 1 and Phase 2. Out of the 265 who completed Phase 2, 189 completed the gender implicit bias measure of Phase 1 and 247 completed the gender status beliefs measure of Phase 1. Unexpectedly, some of the participants who only completed part of Phase 1 still completed Phase 2: 14 only completed the gender implicit bias measure and 72 only completed the gender status beliefs measure.

[2] There were no statistical differences (among predictor variable means) between the participants who completed all of Phase 1 and Phase 2 versus participants only took the status beliefs survey and Phase 2 or who only took the gender implicit bias assessment and Phase 2.

Results

Data Cleaning and Preparation

Before conducting primary analyses, the original full dataset (*N*=182; the initial number of responders who completed all measures) was examined to assess insufficient effort responding and the presence of outliers. Insufficient effort responding was examined because of the risk of using low quality data due to participants acting inattentive, feeling fatigue, and essentially rushing through the surveys (Meade & Craig, 2012). First, researchers suggest examining the timing of the Implicit Association Test (Greenwald, Nosek, & Banaji, 2003). It is encouraged to take note and drop responders that complete the pairing tasks (e.g., pressing "I" or "E") too quickly. Greenwald et al. (2003) assume that if a response includes at least 10% of all response latencies to be faster than 300ms, then this datapoint should be excluded. Four responders met this criterion, decreasing the full dataset from 182 to 178. I also assessed the responses of the two attention checks that were included in the Phase 2 survey. Out of the 178 participants, no one missed the attention checks.

After considering insufficient effort responding, I performed analysis for outlier detection on all primary and control variables (i.e., gender, age, group experience, modern sexism, gender implicit bias, status beliefs toward women, leader and follower perceptions of all four actors). I calculated the scores for Mahalanobis, Cook's, and Leverage distances. Through this process, three participants met the cut-off scores for at least two of the indices. Therefore, three participants were removed from further analyses resulting in a final sample size of 175. Primary analyses are only reported for the 175 who completed all phases of the assessment and did not meet the criteria for outliers or insufficient effort responding.

Measurement Model for New Scales

Prior to examining hypothesized relationships, confirmatory factor analysis (CFA) based on maximum likelihood estimation was performed to examine the outcome variables (i.e., leader and follower perceptions) that were created for this study. The goal of this analysis was to establish the factor structure of the leader claiming and follower claiming items. I analyzed the items using Mplus with a sample size of 265 responses[3].

The new scales included four targets (i.e., the actors in the video). Participants responded to five leader claiming items and five follower claiming items for each target. Because I am not interested in the individual target perceptions, I created means for the individual items by gender. This provided a total of 20 items, five items reflecting leader claiming of women and five for follower claiming of women and the same for the men.

I assessed model fit for a four-factor model including factors of leader claiming of women, leader claiming of men, follower claiming of women, and follower claiming of men. Fit indices show good fit to the data, χ^2 (146) = 376.223 ($p < .001$); Comparative Fit Index = .972; Tucker Lewis Index = .967; Standardized Root-Mean-Square Residual = .023; Root Mean Square Error of Approximation = .077. Given the good fit indices, I retained this four-factor model.

The results from the CFA aligned with the theoretical measurement model (Figure 2), in which items loaded onto their respective role (leader or follower) based on gender (men or women). In order to run a path analysis of the study variables, I took averages of each factor. Therefore, the five items making up each factor were then averaged to create a composite score for each of the outcome variables, perceptions of leader claiming of women, perceptions of

[3] Out of the 349 total responses, 265 people provided data on the leader claiming and follower claiming scales. For hypothesis testing, only 175 people provided data on all the measures.

leader claiming of men, perceptions of follower claiming of women, and perceptions of follower claiming of men.

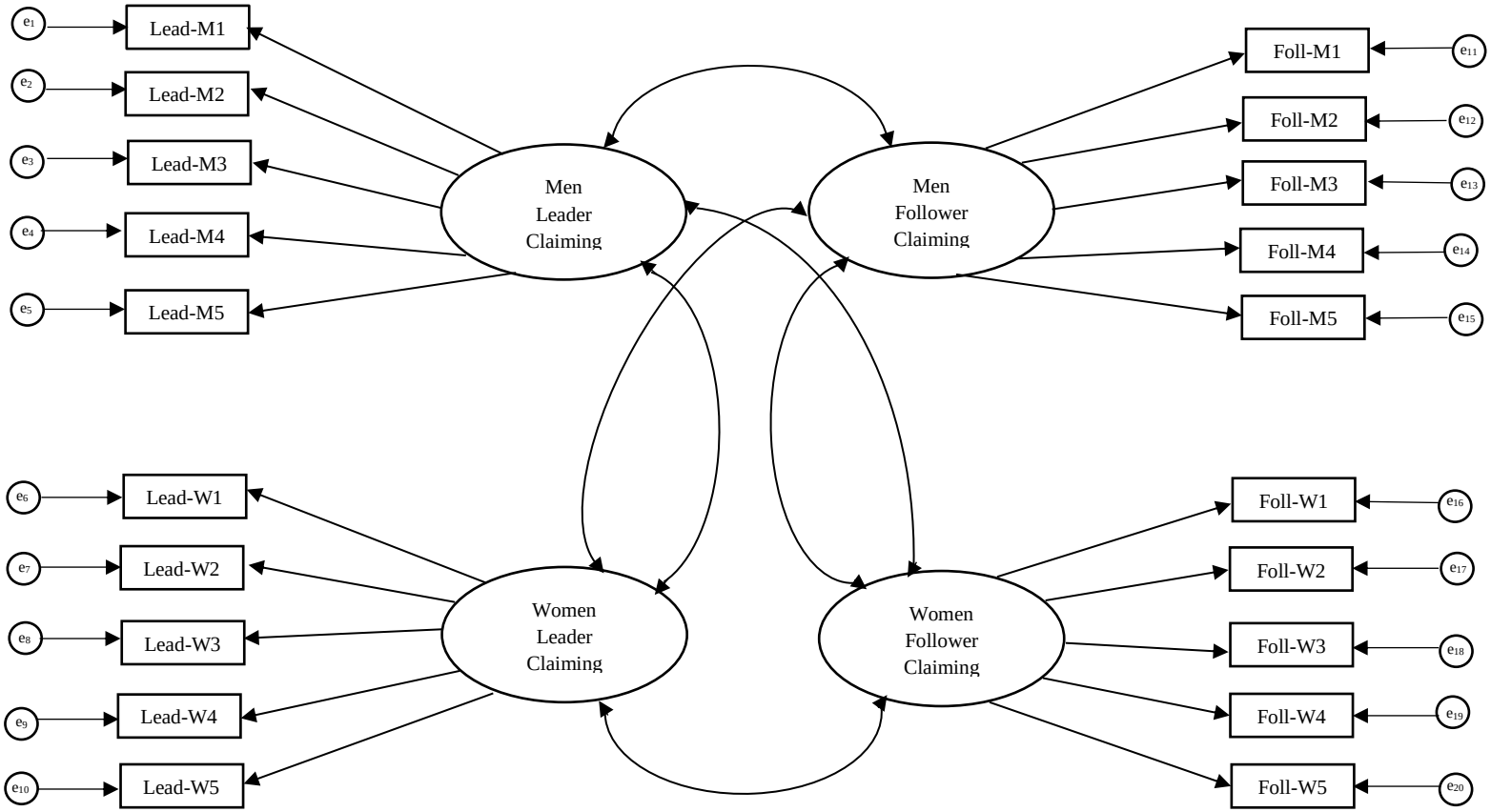


Figure 2. Theorized measurement model.

Note. Items containing "M" represent men and include targets, George and Joe. Items containing "W" represent women and include targets, Leslie and Erika.

Descriptive Statistics

Table 4 provides the means, standard deviations, reliabilities, and correlations among primary[4] and control variables. In general, there was a slight preference for associating men with leaders and women with followers (gender implicit bias; $M = 0.18$, $SD = 0.29$) and participants perceived women in general to have moderately high favorable characteristics (women status beliefs; $M = 6.88$, $SD = .98$). In general, participants did not perceive much leading and following of either men or women in the group. Overall, both women ($M = 4.25$, $SD = 0.74$) and men ($M = 4.11$, $SD = 0.80$) were rated slightly above the neutral point (4.0 on a scale from 1 to 7) for leader claiming and similarly for follower claiming (women, $M = 3.96$, $SD = 0.72$; men, $M = 4.04$, $SD = 0.77$). Table 5 provides the breakdown of means per entitativity group. Overall, the participants in this dataset held slightly more realistic views of sexism[5] ($M = 3.84$, $SD = 0.88$) and most had experience working in groups ($M = 4.51$, $SD = 0.55$). I also included a manipulation check for entitativity and although both low ($M = 6.10$, $SD = .70$) and high ($M = 6.46$, $SD = .52$) groups were above the neutral point, the participants in the high entitativity group did perceive a significantly higher level, $t(173) = -3.80$, $p < .001$.

Most of the outcome variables were significantly correlated and perception of follower claiming of women was significantly correlated with all other variables ($r = .31$ with perception of leader claiming of women, $r = .27$ with perception of leader claiming of men, $r = .17$ with perception of follower claiming of men). Perception of follower claiming of men was also correlated with all other variables ($r = .35$ with perception of leader claiming of women, $r = -.39$

[4] Although not always written out, all primary variables are individual-level perceptions.
[5] Recall that this scale measures whether people believe gender discrimination is still relevant or not. Lower scores denote the belief that sexism does not exist in today's world, whereas higher scores insinuate a more realistic view that sexism still exists.

with perception of leader claiming of men). Status beliefs toward women and gender implicit bias were significantly correlated ($r = .16$, $p < .05$).

Table 4

Means, Standard Deviations, Reliabilities, and Intercorrelations of Primary and Control Variables

Variable	*M*	*SD*	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Gender	1.59	0.51	--												
2. Age	43.75	12.58	-0.01	--											
3. Group experience	4.51	0.55	-0.02	0.03	--										
4. Modern sexism views	3.84	0.88	0.27**	-0.11	0.06	(.94)									
5. Women status beliefs	6.88	0.98	0.02	0.11	0.10	-0.03	(.95)								
6. Gender implicit bias	0.18	0.29	-0.15	0.10	-0.05	-0.11	0.15*	--							
7. Entitativity	0.51	0.50	-0.02	-0.02	-0.03	-0.09	0.02	0.03	--						
8. Interaction1	0.01	0.68	-0.05	0.06	0.04	-0.17*	0.69**	0.06	0.01	--					
9. Interaction2	0.01	0.21	-0.11	0.10	-0.02	-0.13	0.06	0.72**	0.03	0.09	--				
10. Leader claiming of women	4.25	0.74	0.12	0.02	0.11	0.15	0.13	-0.10	0.08	0.11	-0.05	(.97)			
11. Follower claiming of women	3.96	0.72	-0.08	-0.05	0.09	-0.07	-0.10	-0.11	-0.11	-0.11	-0.09	0.31**	(.98)		
12. Leader claiming of men	4.11	0.80	0.06	0.06	0.03	-0.04	0.20*	-0.03	0.04	0.09	-0.10	0.10	0.27**	(.98)	
13. Follower claiming of men	4.05	0.77	-0.03	-0.01	0.11	0.03	-0.18*	-0.12	0.004	-0.13	0.02	0.35**	0.17*	-0.39**	(.98)

Note. $N = 175$. Coefficient alpha reliabilities are on the diagonal in parentheses. Gender was coded (1 = male, 2 = female, 3 = non-binary). Age was open-ended. Modern sexism views and group experience were measured on a Likert scale from 1-5. Women status beliefs were measured on a Likert scale from 1-9. Gender implicit bias scores range from -2 and +2. Entitativity was coded (0 = low entitativity, 1 = high entitativity). Interaction1 = women status beliefs X entitativity. Interaction2 = gender implicit bias X entitativity. All claiming scales were measured on a 1-7 Likert scale.

*$p < 05$. **$p < .01$.

Table 5

Means and Standard Deviations of Outcome Variables per Experimental Condition

	Low Entitativity N = 85		High Entitativity N = 90	
Variable	Leader Claiming	Follower Claiming	Leader Claiming	Follower Claiming
Women	4.19 (.76)	4.04 (.74)	4.31 (.71)	3.88 (.70)
Men	4.08 (.80)	4.04 (.80)	4.14 (.80)	4.05 (.75)

Note. Leader and follower claiming scales used a 1 to 7 Likert scale for the response format.

Hypothesis Testing

Given sample size restrictions (N = 175 for all primary variables), structural equation modeling was no longer suitable for the dataset. Conventional wisdom is to have at least 200-300 participants (Anderson & Gerbing, 1984; Boomsma, 2000; Kline, 2005) with structural equation modeling. My goal was to recruit a total of 400 participants (200 per experimental condition). Instead, I conducted a path analyses to test all hypotheses in this study. Using Mplus, I ran two path analyses. This first path analysis was used to investigate the main effects (H1-H8). The second path analyses compared the models for each experimental condition (H9-H12).

Hypotheses 1-8

The first eight hypotheses tested the main effects of women status beliefs/gender implicit bias on the four outcome variables (leader claiming of women, follower claiming of women, leader claiming of men, follower claiming of men). I conducted one path analysis (see Figure 3) that used all of the variables, including four control variables. Results for Hypotheses 1-8 are provided in Table 6.

Hypotheses 1 and 5 examined a direct effect of women status beliefs/gender implicit bias on perceptions of leader claiming of women. Status beliefs toward women was not a significant predictor, $\beta = .14$, $p > .05$. Gender implicit bias also was not a significant predictor, $\beta = -.10$, $p > .05$. None of the four control variables had a significant effect on perceptions of leader claiming of women. Therefore, Hypothesis 1 and 5 were not supported.

Hypotheses 2 and 6 examined a direct effect of women status beliefs/gender implicit bias on perceptions of follower claiming of women. Status beliefs toward women was not a significant predictor, $\beta = -.09$, $p > .05$. Gender implicit bias also was not a significant predictor,

$\beta = -.10$, $p > .05$. None of the four control variables had a significant effect on perceptions of follower claiming of women. Therefore, Hypothesis 2 and 6 were not supported.

Hypotheses 3 and 7 examined a direct effect of women status beliefs/gender implicit bias on perceptions of leader claiming of men. Status beliefs toward women did significantly predict perceptions of leader claiming of men, $\beta = .20$, $p < .01$, however, the relationship was not in the hypothesized direction. Gender implicit bias was not a significant predictor, $\beta = -.06$, $p > .05$. None of the four control variables had a significant effect on perceptions of leader claiming of men. Therefore, Hypothesis 3 and 7 were not supported.

Hypotheses 4 and 8 examined a direct effect of women status beliefs/gender implicit bias on perceptions of follower claiming of men. Status beliefs toward women did significantly predict perceptions of follower claiming of men, $\beta = -.19$, $p < .05$, however, the relationship was not in the hypothesized direction. Gender implicit bias was not a significant predictor, $\beta = -.09$, $p > .05$. None of the four control variables had a significant effect on perceptions of follower claiming of men. Therefore, Hypothesis 4 and 8 were not supported.

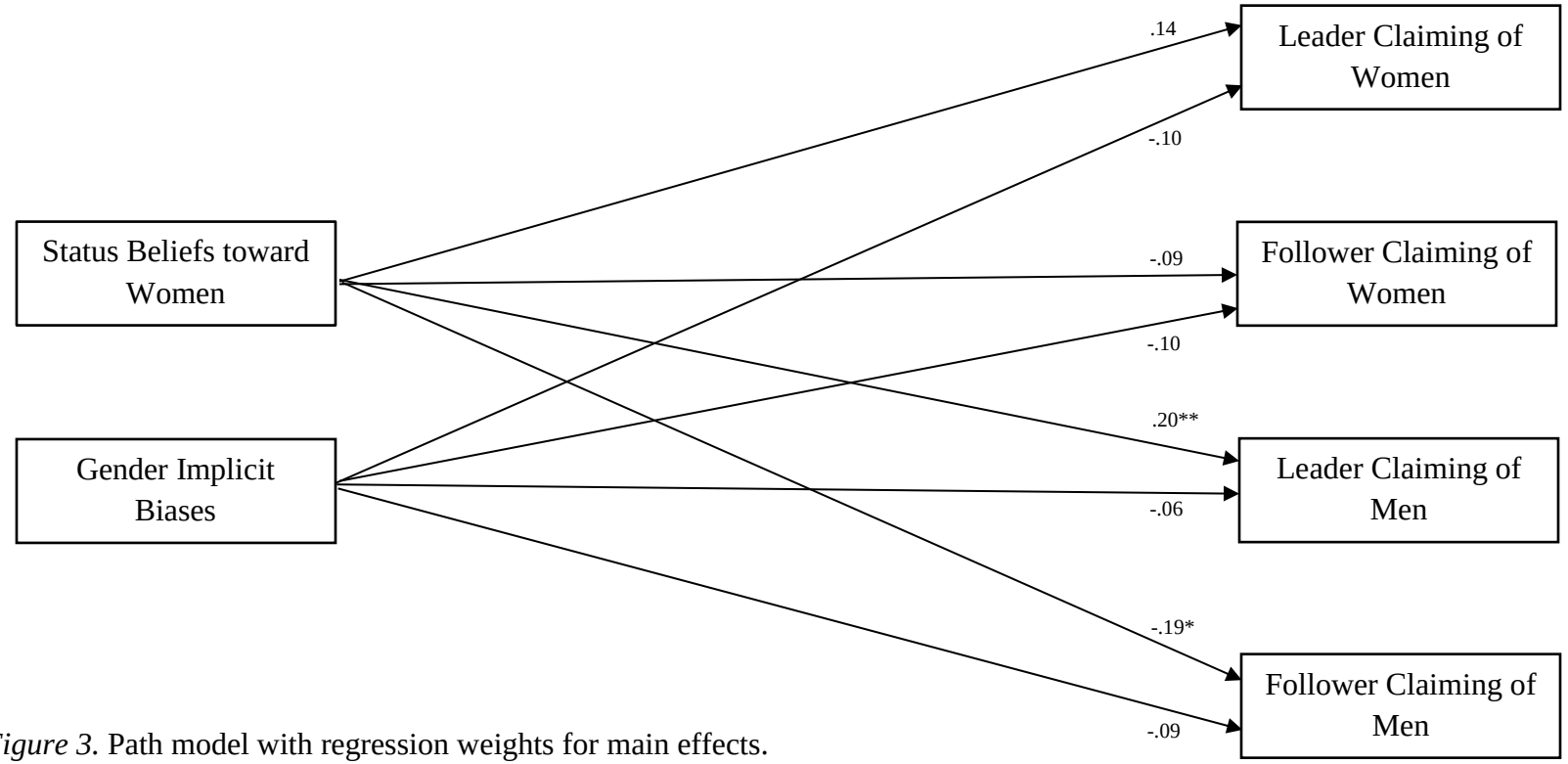


Figure 3. Path model with regression weights for main effects.

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

Table 6

Main Effect Path Coefficients on each Outcome Variable

	B (*SE β)*			
Variable	Leader Claiming of Women	Follower Claiming of Women	Leader Claiming of Men	Follower Claiming of Men
Controls				
Gender	0.07 (.08)	-0.08 (.08)	0.06 (.08)	-0.04 (.08)
Age	0.03 (.07)	-0.04 (.08)	0.04 (.08)	0.01 (.07)
Group experience	0.09 (.07)	0.10 (.07)	0.01 (.07)	0.12 (.07)
Modern sexism views	0.12 (.08)	-0.07 (.08)	-0.05 (.08)	0.02 (.08)
Predictors				
Women status beliefs	0.14 (.07)	-0.09 (.08)	0.20 (.07)**	-0.19 (.07)*
Gender implicit bias	-0.10 (.08)	-0.10 (.08)	-0.06 (.08)	-.09 (.08)

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

Hypotheses 9-12

The last four hypotheses tested the moderating effect of entitativity on the relationships between women status beliefs/gender implicit biases and perceptions of leader claiming of women and follower claiming of men. The full predictor model was included in the analysis (i.e., with control variables) and results can be found in Tables 7 and 8. I ran two path models (see Figure 4), one for low entitativity and one for high entitativity. First, I examined the standardized regressions for significant paths. If I found a significant path in one model, I calculated a Z-test to determine if the path coefficient was significantly different between the two models.

Hypothesis 9 and 11 predicted entitativity to moderate the relationship between women status beliefs (gender implicit bias) and perceptions of leader claiming of women. I hypothesized that entitativity would strengthen the relationship for women status beliefs and weaken the relationship for gender implicit bias. To test these hypotheses, I compared the path analysis of each condition.

In the high entitativity group, women status beliefs were a significant predictor of perceptions of leader claiming of women, but not in the low entitativity group ($\beta = .20$, $p < .05$ and $\beta = .07$, $p = .54$, respectively). I checked the Z-score of the coefficient difference, but it was non-significant, $Z = -.90$, $p = .19$. For both groups, gender implicit bias was not a significant predictor and the difference between the coefficients was also non-significant. All control variables were not significant predictors of perceptions for leader claiming of women. Therefore, Hypotheses 9 and 11 did not show moderation and were not supported.

Hypothesis 10 and 12 predicted entitativity to moderate the relationship between women status beliefs (gender implicit bias) and perceptions of follower claiming of men. I hypothesized

that entitativity would strengthen the relationship for women status beliefs and weaken the relationship for gender implicit bias.

In the low entitativity group, gender implicit bias was a significant predictor of perceptions of follower claiming of men, but not in the high entitativity group (β = -.24, p < .05 and β = .05, p = .63, respectively). The Z-score of the coefficient difference was significant (Z = -1.966, p < .05). Women status beliefs were not a significant predictor of follower claiming of men in either group. All control variables were not significant predictors of perceptions for follower claiming of men. Therefore, Hypothesis 10 did not show moderation and was not supported. Hypothesis 12 showed evidence of moderation and was supported – when low entitativity is present in a group, gender implicit bias is a strong predictor of perceptions of follower claiming of men and when high entitativity is present in a group, this relationship does not exist. Figure 6 includes this plotted interaction to better examine the simple slopes. As shown, the figure displays the slopes for gender implicit bias and perceptions of follower claiming of men given the two levels of entitativity (low and high).

Table 7

Low Entitativity Group: Path Coefficients on each Outcome Variable

	β (SE β)	
Variable	Leader Claiming of Women	Follower Claiming of Men
Controls		
Gender	.13 (.11)	-.09 (.11)
Age	.14 (.10)	.01 (.10)
Group experience	.08 (.11)	.07 (.11)
Modern sexism views	.10 (.11)	.07 (.11)
Predictors		
Women status beliefs	.07 (.11)	-.15 (.11)
Gender implicit bias	-.13 (.11)	-.24 (.11)*

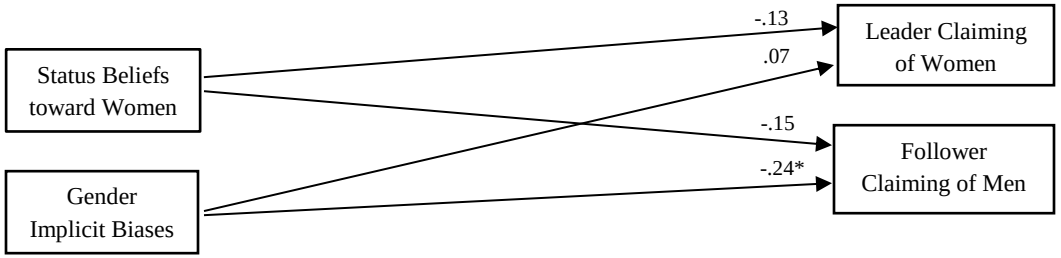
Note. *$p < .05$.

Table 8

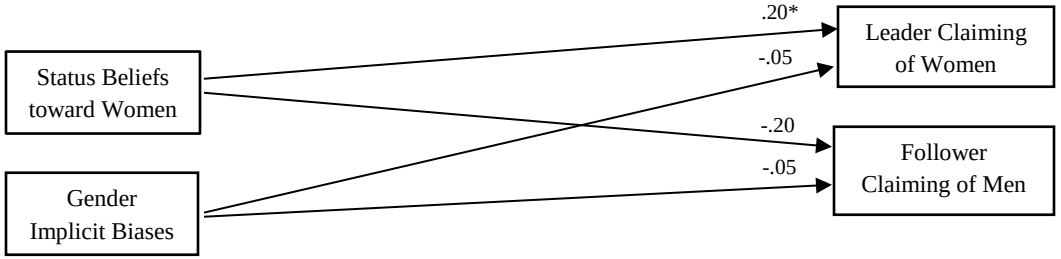
High Entitativity Group: Path Coefficients on each Outcome Variable

	β (SE β)	
Variable	Leader Claiming of Women	Follower Claiming of Men
Controls		
Gender	.02 (.11)	-.01 (.11)
Age	-.07 (.10)	.01 (.10)
Group experience	.12 (.11)	.15 (.11)
Modern sexism views	.17 (.11)	-.01 (.11)
Predictors		
Women status beliefs	.20 (.10)	-.20 (.10)*
Gender implicit bias	-.05 (.10)	.05 (.11)

Note. *$p < .05$.



Note. Path analysis for low entitativity condition. Control variables omitted.



Note. Path analysis for high entitativity condition. Control variables omitted.

*$p < .05$. **$p < .01$.

Figure 4. Path models with regression weights for moderation effects.

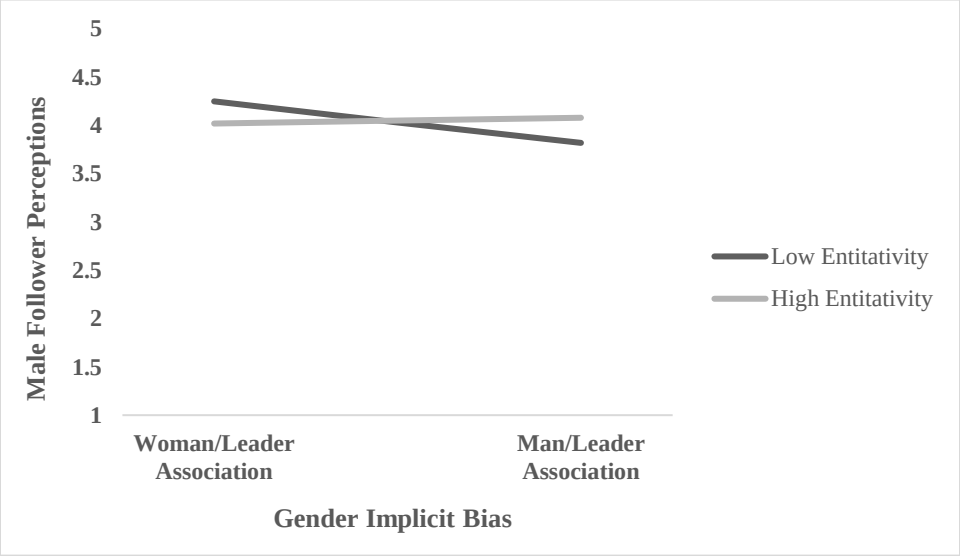


Figure 5. Moderation effect of entitativity.

Discussion

In this study, I used status characteristics theory (e.g., Wagner & Berger, 1993; Ridgeway, 2001) and research on implicit biases (e.g., Greenwald & Banaji, 1995; Nosek et al., 2007), to test the initial cognitive processes that occur when people observe gender-diverse groups. The general research questions of this study were: *how likely is it for observers of a group to initially perceive women as claiming the leader role, are women perceived as leaders early on in group formation when men are engaged in leading behaviors*, and *are there ways to increase the perception of men acting as followers*? Therefore, the goals of this research study was three-fold: (1) to test the relationships between unconscious attitudes of gender (i.e., status beliefs toward women and gender implicit biases) with perceptions of leadership (e.g., leader claiming and follower claiming); (2) to examine whether entitativity might strengthen or weaken the relationships between unconscious attitudes and leadership; and (3) provide initial evidence of a new scale that relates to the leadership identity construction theory (DeRue & Ashford, 2010).

Surprisingly, my sample did not perceive much leading and following behaviors. For both men and women in the group, the means for leader claiming were similar and the means for follower claiming were similar and they were all around the neutral point. The dialogue of the task group used phrases and cues to suggest that everyone was attempting to claim the leader and follower role (hence, a shared leading context). To try to prevent a lack of leadership perceptions, I included directions for participants to pay attention to the leading and following behaviors in the video. However, overall the sample did not perceive much leading and following and this has implications for testing my theoretical relationships (further discussed below).

The data here does not show evidence of any main effects of status beliefs toward women or gender implicit bias on perceptions of leader and follower claiming of women and men as hypothesized. There is partial support that entitativity acts as a moderator to reduce gender implicit bias on men taking on the follower role. Lastly, the data show early evidence for use of a new scale that taps into initial perceptions of people claiming or attempting to claim leader and follower roles in work groups.

Theoretical Implications

Status Characteristics Theory

Given the establishment of status characteristics theory, it is surprising that the main effects linking status beliefs toward women to perceptions of women and men leading and following were insignificant. Status characteristics theory (e.g., Wagner & Berger, 1993) and gender status beliefs research (e.g., Ridgeway, 2001) help us understand why we come to expect more from men in task-focused groups, such as evaluating men more highly on their leader skills and problem-solving, because we as a society have given men higher status. This difference in evaluation becomes salient when both men and women are working together.

This study provides a test of whether status characteristics theory has implications for initial perceptions of leader and follower claiming. Past research shows relationships between gender status beliefs and influence (Yukl & Tracey, 1992) and power (Walker et al., 2000), both of which are typically associated with being a leader. By investigating status beliefs with observers of a task-focused group engaged in shared leading, my goal was to relate status characteristics theory to more general perceptions of leadership behavior. Overall, however, I am unable to extend this theory to include new outcome-oriented constructs, such as perceptions of leader and follower claiming.

It may be difficult to associate status beliefs and perceptions of initial leadership behavior because status beliefs are considered to have weak or small effects on behavior and evaluations (e.g., Rashotte & Webster, 2005; Ridgeway, 1997). As discussed further in the limitations, there may not have been enough power to detect these small effects. The hypotheses here might best be tested with a much larger sample size.

Another alternative explanation for why I found null results may be due to the type of leadership context. Before people start taking on the leader and follower roles, group members or observers may expect men to claim the leader role and women to claim the follower role. Once there is evidence of women attempting to claim the leader role (and men attempting to claim the follower role), it may be the case that status beliefs lose their influence. In other words, status beliefs may not apply to situations with shared leading.

Although I am unable to provide general support of this theory as it relates to leadership perceptions, I did find two significant relationships with perceptions of men in the group. Results show that status beliefs toward women was significantly related to men claiming the leader and follower roles. What is intriguing with these results is that both results were in the opposite direction of my hypotheses. Specifically, the more participants had high performance expectations of women, the more likely the participants perceived the men claiming the leader role and the less likely they perceived the men claiming the follower role.

One reason for these results may have to do with a third variable problem. I question whether high status beliefs toward women might only occur if people also have high status beliefs toward men. In other words, there is a prerequisite for people to perceive women with high status; and that is perceiving men with high status. Perhaps this can explain the relationships

I found, assuming that people with high status beliefs toward men would also perceive men in a gender-diverse group to claim the leader role[6].

Implicit Biases

Extant literature on implicit biases show a slight implicit bias relating men to leaders more than women (Girod et al., 2016) and employers favoring men during hiring and promotional decisions because of manager's implicit biases (Heilman, 2012). I used a man-woman/leader-follower IAT (higher score equates to more men/leader and women/follower preference) with attempts to capture participants' implicit biases against women as leaders (and men as followers). Contrary to the hypothesized associations, I did not find main effect relationships between gender implicit bias and leader or follower perceptions of women or men. This seems quite remarkable given that the IAT created for this study directly associated typical men and women names with words related to leaders and followers. There may be two reasons for these null results.

One, there simply may not be a predicting relationship between gender-leader implicit bias and perceptions of leader and follower claiming. Although my measure of leader and follower claiming was created to assess early evidence of leading and following, perhaps the theoretical distance between the constructs was too great. In other words, the direct line from gender implicit bias could reach leader and follower claiming perceptions, but other constructs or contexts may need to be considered. For example, in some industries there is much discourse around "implicit bias" and diversity training and bias awareness. Organizations are training employees to be aware of their unconscious attitudes that might influence their thinking of

[6] One goal of this research study was to test if status beliefs is related to more general perceptions of leadership, while past research shows a relationship to specific behaviors, such as influence (Yukl & Tracey, 1992) and power (Walker et al., 2000) that are typically associated with leaders.

certain groups or even affect microaggression behavior. With the use of MTurk, I was able to recruit a sample with older adults, whom most were employed or had been employed previously. Perhaps the gender implicit bias and leadership relationship would be more relevant for a younger sample or for those who have not participated in discussions at work regarding their own implicit biases.

Two, the IAT as an objective measure of unconscious attitudes may not be an effective tool. Researchers have discussed the predictive validity of IATs (e.g., Oswald, Mitchell, Blanton, Jaccard, & Tetlock, 2013) and issues with the assessments' scoring (e.g., Blanton, Jaccard, Gonzales, & Christie, 2006). Additionally, my sample only completed a single IAT. Perhaps participants should complete this man-woman/leader-follower IAT (or similar, but different IATs) multiple times to create a more comprehensive score of participants' biases. Given predictability concerns, in this research, it may be the case that unconscious attitudes are not linked to more conscious perceptions of behavior (e.g., perceiving leader role claiming). Overall, with these results, I am unable to show the utility of gender-leadership implicit biases as it directly relates to perceptions of leader and follower behavior.

The current research did not include an explicit hypothesized relationship between the two predictor variables, status beliefs toward women and gender implicit bias. My data does show a significant and positive correlation between the two. Not surprising that these two constructs could be correlated, as they both describe unconscious attitudes toward gender, but the positive association is harder to interpret. Recall that a high rating of women status beliefs implies a participant viewed women in general as competent and expected women to generally perform well. A high rating of gender implicit bias infers that a participant has a strong, automatic association between men names and leader-related words. One could assume that if a

person has a strong association between man and leader, that they may not have high status beliefs toward women. My data suggests differently and this correlation could indicate that people may hold both of these types of unconscious views and just because someone may be high on one measure, does not imply that they are likely to be low on the other. To date, this may be the first study to incorporate both status beliefs and implicit biases. With this significant correlation, there could be evidence for future research to consider these constructs together and connect these two areas.

Entitativity

Perhaps the most interesting theoretical component in this study is the addition of entitativity as a moderator to the relationships between unconscious gender attitudes (status beliefs toward women and gender implicit bias) and leader and follower perceptions. Most of the moderating hypotheses, however, were not supported. My data did not show a significant difference between low and high entitative groups on the relationship between status beliefs toward women and perceptions of leader claiming of women, status beliefs toward women and perceptions of follower claiming of men, nor gender implicit biases and perceptions of leader claiming of women. These null results may be due to the study design.

It may be the case that entitativity does have an effect, but only for inside group observers (i.e., actual group members). Outside group observers can perceive entitativity of groups (Blanchard et al., 2020) and identify shared leading in groups (Marchiondo et al., 2015), but perhaps the process of self-categorization is stronger for those internal to the group of interest. Additionally, operationalizing "leadership" differently may yield different results, especially for the relationships with status beliefs. For instance, using influence (or perceptions

of influence) as an outcome variable is more aligned with status characteristics theory to potentially examine these research questions.

Another possibility is that the entitativity manipulation was not strong enough to elicit differences between the low and high conditions, especially for status beliefs. This may have occurred because the actors were in the same room, around a table, interacting – regardless of their history or similarity, this is a "groupy" group. Although entitativity did successfully moderate one of the relationships (discussed below), three were unsupported, making it difficult to make claims that entitativity may be a powerful mechanism to change default thought patterns as they relate to sexist attitudes and leadership perceptions.

I hypothesized that entitativity would change the way people see women leaders in the group through self-categorization theory (Turner et al., 1987). While I did find a positive relationship between status beliefs and women leader claiming in the high entitativity group, it was not significantly different than in the low entitativity group. This also could have been due the weak entitativity manipulation.

Entitativity did moderate the relationship between gender implicit biases and perceptions of follower claiming of men as I predicted: high levels of entitativity weakened the relationship. Specifically, the stronger the man-leader association a participant had (i.e., high score on the gender implicit bias IAT) in the low entitativity condition, the less likely the participant perceived men as claiming the follower role. High levels of entitativity change this relationship so that men are perceived as more follower-like, showing initial evidence of a way in which default thought patterns can be changed to encourage perceptions of shared leading.

The data contributes to a better understanding of the benefit of task groups to have high entitativity – "groupyness" helps block the strong associations people may have between men

and leader so that cognitively they may also be able to associate men with follower. The study also provides new insights into the relationship between leadership identity construction theory (DeRue & Ashford, 2010) and research on entitativity. The core of this theory describes the continuous process of role negotiation among group members as they claim and grant the leader and follower roles (DeRue & Ashford, 2010). My study helps shed light on a potential mechanism that helps observers to perceive follower claiming of men when there are implicit gender biases favoring men at play. To date, this may be the first study to examine the effect entitativity can have on relationships involving biases and leadership perceptions.

Shared Leading

Given the several theories that describe why women initially may not be perceived as leaders in groups, I anticipated that overall, participants would rate the women targets lower on leader claiming and higher on follower claiming (and the reverse for men). As previously mentioned, a shared leading context was potentially not perceived by the sample and could provide an explanation for the unsupported relationships. Theoretically, perhaps not enough time was given for participants to identify the leader and follower behaviors (group video was three minutes in length) and made it difficult to evaluate the targets on these dimensions. Similarly, another issue could be the extent to which the actors engaged in leadership behaviors. Perhaps the actors simply did not exude enough leader claims and follower claims for participants to identify and cognitively process. Therefore, I could not provide support for general shared leading theory.

Not perceiving a shared leading situation (or leaders at all) would make it difficult to find relationships among the variables in this study. I expected to relate status beliefs toward women to leader and follower claiming and gender implicit bias to leader and follower claiming to

expand upon the leadership identity construction theory (DeRue & Ashford, 2010). With outcome variable means near the neutral point, this may have prevented effects from emerging. Even though participants may not have perceived many leader claiming behaviors, given the literature on the differences in which men and women are evaluated as leaders (e.g., role congruity theory), one might assume that participants would still perceive the men in group as leading, based on their default thought patterns. Although not aligned with my hypotheses, this study could be showing signs that men are not automatically being perceived as initial leaders.

One of my goals for this research was to showcase a mechanism to allow people to identify women (who are engaged in leader behaviors) as actual leaders. Unfortunately, my data does not support this goal, but as a society, we may be changing our beliefs toward men – regardless of acting as a leader or not, my sample does not rely on automatic and unconscious thoughts to dictate who they perceive as leaders or followers.

Leader and Follower Claiming Scale Creation

Finally, to better test my hypotheses, I created two new scales aligned with the leadership identity construction theory (DeRue & Ashford, 2010). One of my goals with this research was to home in at a very specific point in an observer's cognitive process to evaluate a group and its members. I wanted to tap into initial perceptions of group members negotiating their leader and follower roles – not leader effectiveness, not leader emergence, but perceptions of early instances of claiming those roles. Until now, measures did not exist that took into consideration the attempts of being a leader or follower in a group. The leader claiming and follower claiming scales can assist other researchers who are interested in using the leadership identity construction theory or examining leader and follower role attempts of group members. Although these scales

have only been used once, theoretically, researchers can use these scales with different groups (with multiple group members/targets at once or for single group members).

Practical Implications

Although most of the study's hypotheses were unsupported, there are a few key takeaways that practitioners might find useful. Managers of leaderless groups or those that expect their work team to engage in shared leading should consider the value that high entitativity may bring to their group's effectiveness. In work groups early in formation where gender is a salient characteristic and observers (or those new to the group) may have implicit biases for men as leaders, increasing the entitativity of the group or making the entitativity more apparent, may increase the likelihood that group observers will perceive the men as followers. Helping group members to perceive men as followers (or at least positively evaluate their follower claims) could increase the likelihood that observers may perceive shared leading early on in group processes. Past research suggests that antecedents of entitativity, such as similarity among group members, group members having a history, and group members involved in much interaction, can increase the perceptions of entitativity for group observers (Blanchard et al., 2020).

Members of gender-diverse work groups may also find some of the results interesting, especially if these groups anticipate being engaged in shared leading. If a goal of the group is to allow or encourage everyone, regardless of status, to successfully claim the leader and follower role, groups should have realistic expectations that just because members might associate the women in the group to have high status, this will not necessarily increase the likelihood that women will be perceived as claiming the leader or follower roles.

Limitations and Future Research

The current research has several limitations that need to be addressed. Several unsupported hypotheses can indicate that the theoretical framework and constructs involved were inappropriate to use or the study design and methodological approach were unable to detect relationships that may actually be there. I err on the latter because of the several specific limitations listed below, most of which relate to the method (i.e., sample size, manipulation).

The first limitation concerns the participants in the study. Originally, I planned to use UNC Charlotte undergraduate students but using a student sample became questionable during the start of the Covid-19 pandemic. MTurk represented a viable alternative to recruit participants. Although MTurk is used in several psychological survey studies, there have been issues with using such platforms (e.g., bots, workers rushing through surveys). I did take a careful approach to screen out potential bots and included attention checks which all participants passed.

With this new sample, however, I was faced with attrition problems. I did expect more participants to complete Phase 1 than Phase 2, but many MTurk workers unexpectedly dropped out of the study during Phase 1 (which ultimately lowered the amount of cases I had for all data points). While this does not appear to have resulted in differences in the results, this is a problem as I was not able to use the proposed analytical approach.

I originally planned to use structural equation modeling, but unfortunately, I did not reach the expected 400 participants. I only captured 175 responses for all study variables. Conducting a power analysis for regression (Faul, Erdfelder, Buchner, & Lang, 2009) shows that I would need more than an additional 500 participants to feel more confident about Type II error, given the amount of "predictor variables" I included here. Because of my small sample size and my

assumption that the effects in this study would be small, future research should strive to recruit between 400 and 750 participants (depending on the analytical approach) to increase the chances of detecting significant effects.

Another limitation of this research concerns the stimulus materials created for this study. Multiple materials were developed for the experimental components, such as the video of a group solving a work issue and a text description of the group in the video. The description and the video were manipulated so that participants either viewed low or high entitativity cues. A manipulation check showed that regardless of the condition, participants viewed a "groupy" group, despite adjusting the survey design after similar results from a small pilot test. This has implications for how the current results may be interpreted. Instead of considering that entitativity may not play a moderating role on the relationship between status beliefs toward women and perceptions leader/follower claiming of women, it may be the case that low entitativity was not manipulated strongly enough and an effect could exist. Additionally, to ensure participants' attention, it was quite intentional to create a video that was no more than three minutes in length. Perhaps this length of video was too short to elicit strong entitativity cues or to allow meaningful leader/follower perceptions to emerge (since the means for leader and follower claiming were near the neutral point). Future research with a similar study design should examine if longer videos might provide a stronger entitativity manipulation and therefore elicit gender differences in perceptions of leaders and followers.

In addition to considering a larger sample size and perhaps a stronger entitativity manipulation, there are numerous avenues for future research within this area. Researchers should continue evaluating and validating the new claiming scales that were created for this study. Development and validation were not a focal part of my research and therefore the ten

items created should continue to undergo rigorous testing. I found initial evidence of construct validity through a confirmatory factor analysis and calculated acceptable Cronbach's alphas. However, I did not include similar leader and follower measures and constructs to assess the convergent and discriminant validity. Future research would benefit using these scales with different types of samples under different conditions, such as using the items with internal group members, to assess the scales' validity and reliability.

The generalizability of the results is limited by the participants' external relationship to the group. To help control aspects of the study design and include a manipulation, I choose to use outsiders' observations of a work group, as opposed to using a straight survey design with real members of groups. My results cannot generalize to the cognitive processes that people may experience with actual groups when they first form. This is outside the scope of my research and I suggest future studies should examine the status beliefs and implicit biases of internal group members and how those perceptions relate to leader and follower role claiming. This sort of research would be especially powerful if all members of a group would provide their leader and follower claiming evaluations.

Although gender status beliefs, gender implicit bias, and entitativity have implications for the workplace (e.g., Blanchard et al., 2020; Heilman, 2012; Rashotte & Webster, 2005), my quantitative results with a fictional work group were limited. I attempted to tap into quick, cognitive processes to elicit initial perceptions of gender, "groupyness," and leaders and followers. Future research using these constructs might consider using qualitative methods to shed light on the processes that occur when initially perceiving women and men in work groups. For example, researchers may use journaling or interviewing techniques to have participants walk through their thought processes when seeing a gender-diverse group for the first time. As

the group (fictional or real) starts interacting, participants can respond to questions about their expectations of the different group members and to what extent they feel the group is entitative. Additionally, textual analysis could be evaluated on dialogue among members in newly-formed groups that are low and high on entitativity.

Lastly, although I used experimental components in my study design (i.e., a manipulated moderator variable, randomization to groups), this research was not a true experiment and therefore does not allow for claims of cause and effect of status beliefs toward women and gender implicit bias on perceptions of leader and follower claiming. I did implement two Phases to tease apart my predictor and outcome variables, and I also included four covariates to better understand how initial perceptions of leader and follower claiming emerge. Future research should consider adding more experimental components, such as a control condition where no entitativity information is provided, including manipulated independent variables that might affect initial perceptions of leader and follower claiming, and measuring or controlling other extraneous variables, such as perceived femininity/masculinity of targets. Another approach would be to focus on better controlling target effects and have participants only evaluate one target, as opposed to both men and women in the group. Other future studies might also consider using a longitudinal design or at least capturing initial leadership perceptions over multiple time points to see the nuanced differences as people's perceptions might quickly change over a work group meeting.

Conclusion

As shared leadership within groups become more common in workplaces, research should focus on how to create a context that would encourage the leader and follower roles being shared, especially in gender-diverse groups. The current study examines processes that may be in

place when gender is a salient characteristic in task groups that are engaged in shared leading. The study attempts to address gaps in how observers of groups perceive women as leaders and men as followers when such extant literature shows ample evidence that women are not perceived as leaders to the extent that men are. The results do not suggest that status beliefs toward women or gender implicit bias play a direct role in perceptions of women or men as leaders and followers. One significant interaction suggests that men will be less likely to be perceived as followers when group entitativity is low and when people have strong associations between man and leader. This research shows partial support that entitativity may help reduce unconscious attitudes regarding gender. Future research should continue exploring these relationships and use quality measures of implicit biases and perceptions of leader and follower claiming.

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Appendix A: Study Design

Phase 1	
Survey A	**Survey B**
Survey 1	
Informed Consent	Informed Consent
Implicit Association Test	Status Beliefs
	Control: Social Desirability
	Control: Work Group Experience
	Control: Sexism
	Demographics
Survey 2	
Status Beliefs	Implicit Association Test
Control: Social Desirability	
Control: Work Group Experience	
Control: Sexism	
Demographics	

Phase 2	
Survey A	**Survey B**
Survey 3	
Entitativity Condition/Description	Entitativity Condition/Description
Video Stimulus	Video Stimulus
Manipulation/Attention Checks	Manipulation/Attention Checks
Control: Loudness	Control: Loudness
Leader Claiming	Leader Claiming
Follower Claiming	Follower Claiming
Group Liking	Group Liking
Group Effectiveness	Group Effectiveness
Interest in Joining Group	Interest in Joining Group
MTurk Work Experience	MTurk Work Experience
Debriefing Statement	Debriefing Statement

Appendix B: Experimental Design Components

Group Descriptions

Low Entitativity Condition:
A manager at Febtop Consulting asked for **volunteers** to come together to solve some issues at their company. The volunteer employees have just met – **this is their first time working together**. The employees do **not interact frequently** about their work projects and do **not** have many personal and work characteristics in common. The employees have their **own goals** (e.g., standing out to the boss) for this project.

High Entitativity Condition:
A manager at Febtop Consulting carefully **selected employees** to come together to solve some issues at their company. The employees chosen have known each other for a while – **they have a long history of working together**. The employees **interact frequently** about their work projects and have many personal and work characteristics in **common**. The employees have **shared goals** (e.g., everyone performing well) for this project.

Sample Dialogue in Video

Low Entitativity Condition:
Erika: These are good. Considering George's idea about campus recruiting, I think getting a list of Febtop employee colleges will be a great start.
Joe: Great, I like that idea a lot.
George: With the website changes, highlighting the benefits that are attractive to college-aged applicants that Joe mentioned should help get more graduating students applying.
Leslie: [Nodding.] That's a good way to combine those two ideas.
Joe: In the recruitment proposal, how big of a concern is the financial aspect of the ideas? Being a small company, I am sure Febtop does not have the budget to send multiple recruiters to multiple universities throughout the year.
Erika: I agree. Also, if the proposal includes website and social media changes, is Febtop going to have to hire a website developer or social media manager?
Leslie: I think the proposal should include all realistic ideas, even if they are pricey. The list of solutions should be prioritized by smallest price, largest impact. But the proposal should still include solutions that may be expensive, or appear to be expensive.
George: I think so, too. At the budget meeting on Monday, I got the sense that management is prepared to set aside extra money for the ideas this task force presents. Eventually, the board is going to vote on whether recruitment funds will be budgeted for every year.

High Entitativity Condition:
Erika: These are good. Considering George's idea about campus recruiting, we should get a list of Febtop employee colleges.
Joe: Great, sounds like a good idea.
George: With the website changes, we'll highlight the benefits that are attractive to college-aged applicants that Joe mentioned. This should help get more graduating students applying.
Leslie: [Nodding.] That's a good way to combine those two ideas.

Joe: In our recruitment proposal, how big of a concern is the financial aspect of our ideas? Being a small company, we probably do not have the budget to send multiple recruiters to multiple universities throughout the year.
Erika: I agree. Also, if our proposal includes website and social media changes, are we going to have to hire a website developer or social media manager?
Leslie: The proposal should include all realistic ideas, even if they are pricey. Our list of solutions should be prioritized by smallest price, largest impact. But the proposal should still include solutions that may be expensive, or appear to be expensive.
George: I agree. At the budget meeting on Monday, we got the sense that management is prepared to set aside extra money for the ideas we present. Eventually, the board is going to vote on whether recruitment funds will be budgeted for every year.

Debriefing Statement

Thank you for participating in all surveys of this research study. You will be paid within 5 business days. The employees in this study were actors and Febtop Consulting does not exist. Any similarity to any person or company was merely coincidental.

The primary goal of this research study is to learn about how gender biases might influence our perceptions of female leaders and if it is possible to lessen that influence if work teams are perceived as “very groupy.”

Appendix C: Study Measures

Pre-data Collection

Screener

1. Please briefly describe (in 2-5 sentences) a recent goal you have accomplished. This can be a personal or work goal.
    a. _____
2. Which language(s) are you capable of speaking fluently?
    a. English
    b. Spanish
    c. Portuguese
    d. French
    e. Hindi
    f. Mandarin
    g. Japanese
    h. Arabic
    i. Bengali
    j. Russian
    k. Urdu
    l. Other
        i. _____

Phase 1

Consent to Participate in a Research Study

If you are 18 years of age or older, speak English, located in the U.S., and have read and understand the information provided and freely consent to participate in the study, you may proceed to the survey by clicking "I agree." Clicking "I do not agree" will end the research study and no data will be recorded.

- I agree.
- I do NOT agree.

Gender Implicit Bias

In this task you will press the 'E' key (left response key) or the 'I' key (right response key) to categorize words into groups as fast as you can. Here are the four groups and the words that belong to them:

Category	Item
Leader	Leader, Manager, Director, Principal, Supervisor
Follower	Follower, Assistant, Supporter, Subordinate, Staff
Female	Stephanie, Ellen, Jessica, Elizabeth, Anne
Male	Joseph, Greg, Phillip, Matt, Jeffrey

The task has 7 parts and the instructions change for each one. Pay attention!

Instructions 1
Female----------Male

Put your left finger on the ‘E’ response key for items that belong to the category ‘Female’. Put your right finger on the ‘I’ response key for items that belong to the category ‘Male’. Items will appear one-by-one in the middle of the screen. If you make an error, a red X will appear – to confirm, press the other response key. Go as fast as you can while making a few errors as possible. Press the SPACE BAR to begin.

Instructions 2
Leader----------Follower

Put your left finger on the ‘E’ response key for items that belong to the category ‘Leader’. Put your right finger on the ‘I’ response key for items that belong to the category ‘Follower’. If you make an error, a red X will appear – to continue, press the other response key. Go as fast as you can while making a few errors as possible. Press the SPACE BAR to begin.

Instructions 3
Leader----------Follower
Or Or
Male----------Female

Press the left ‘E’ key for ‘Leader’ and ‘Male’. Press the right ‘I’ key for ‘Follower’ or ‘Female’. Each item belong to only one category. If you make an error, a red X will appear – to continue, press the other response key. Go as fast as you can while making a few errors as possible. Press the SPACE BAR to begin.

Instructions 4
Leader----------Follower
Or Or
Male----------Female

This is the same task as previous one. Press the left ‘E’ key for ‘Leader’ and ‘Male’. Press the right ‘I’ key for ‘Follower’ or ‘Female’. Each item belongs to only one category. Go as fast as you can while making as few errors as possible. Press the SPACE BAR to begin.

Instructions 5
Female----------Male

Attention! The labels have changed sides. Press the left ‘E’ key for ‘Female’. Press the right ‘I’ key for ‘Male’. Go as fast as you can while making as few errors as possible. Please the SPACE BAR to begin.

Instructions 6

Leader----------Follower
Or Or
Female----------Male

Press the left 'E' key for 'Leader' and 'Female'. Press the right 'I' key for 'Follower' and 'Male'. If you make an error, a red X will appear – to continue, press other response key. Go as fast as you can while making as few errors as possible. Press the SPACE BAR to begin.

Instructions 7

Leader----------Follower
Or Or
Female----------Male

The is the same task as the previous one. Press the left 'E' key for 'Leader' and 'Female'. Press the right 'I' key for 'Follower' and 'Male'. Each item belongs to only one category. Go as fast as you can while making as few errors as possible. Press the SPACE BAR to begin.

Women Status Beliefs

Following are photos of college students. Please consider each student with the below statements. For each statement use the following 1 through 9 scale, where 1=below average, 5=average, and 9 = above average.

1 Below Average	2	3	4	5 Average	6	7	8	9 Above Average

1. How intelligent do you perceive [photo of employee, Laura] to be?
2. How well do you expect [photo of employee, Laura] to do at situations in general?
3. In terms of things that you think count in this world, how does [photo of employee, Laura] rate?
4. How capable do you think [photo of employee, Laura] is at most tasks?
5. How do you rate [photo of employee, Laura] concerning reading ability?
6. How do you rate [photo of employee, Laura] at abstract abilities?
7. How would you rate [photo of employee, Laura's] grade point average?

1. How intelligent do you perceive [photo of employee, Amanda] to be?
2. How well do you expect [photo of employee, Amanda] to do at situations in general?
3. In terms of things that you think count in this world, how does [photo of employee, Amanda] rate?
4. How capable do you think [photo of employee, Amanda] is at most tasks?
5. How do you rate [photo of employee, Amanda] concerning reading ability?
6. How do you rate [photo of employee, Amanda] at abstract abilities?
7. How would you rate [photo of employee, Amanda's] grade point average?

Social Desirability Regarding Gender & General Tasks
For these next questions, please think about "men in general" and "women in general" and how they would do on completing the following tasks.

For these questions, we already know who is really better at these tasks. We just want to see if your impressions are accurate. We are checking your knowledge of gender in today's world.

Who would do better at each of these tasks?

1 Men are much better	2	3	4	5 Neither are better than the other	6	7	8	9 Women are much better

1. Changing a tire.
2. Changing a diaper.
3. Growing vegetables.

Social Desirability Regarding Gender & Jobs
Many studies have found that high school girls do better than boys at verbal tasks, while boys do better than girls at quantitative tasks.

Pretend you are in a position to hire for two jobs, one that involved working with numbers, and another involving working with words. Using the information at hand, if you had to hire 20 people for each kind of job, and if your talent pool had equal number of women and men applying, consider how many of each gender you would pick for each job.

Pretend you are in a position to hire for a job that involved working with numbers. If you had to hire 20 people for this kind of job, how many of each gender would you pick for the job?
1. How many men would you hire for the job working with numbers? Remember, the number you select here and the number you select for the immediate following question must total 20.
    a. Select value between 0 and 20.
2. How many women would you hire for the job working with numbers? Remember, the number you select here and the number you select for the question above must total 20.
    a. Select value between 0 and 20.

Pretend you are in a position to hire for a job that involved working with words. If you had to hire 20 people for this kind of job, how many of each gender would you pick for the job?
1. How many men would you hire for the job working with words? Remember, the number you select here and the number you select for the immediate following question must total 20.
    a. Select value between 0 and 20.
2. How many women would you hire for the job working with words? Remember, the number you select here and the number you select for the question above must total 20.
    a. Select value between 0 and 20.

Work Group Experience Measure

Please describe your experiences participating in work groups.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

1. I have experience participating in work groups, either at my job, volunteering site, or through class projects in college courses.

Modern Views of Sexism

Please respond to the following questions regarding attitudes about women.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

1. Discrimination against women is no longer a problem in the United States. (reverse-scored)
2. Women often miss out on good jobs due to sexual discrimination.
3. It is rare to see women treated in a sexist manner on television. (reverse-scored)
4. On average, people in our society treat husbands and wives equally. (reverse-scored)
5. Society has reached the point where women and men have equal opportunities for achievement. (reverse-scored)
6. It is easy to understand the anger of women's groups in America.
7. It is easy to understand why women's groups are still concerned about societal limitations of women's opportunities.
8. Over the past few years, the government and news media have been showing more concern about the treatment of women than is warranted by women's actual experiences. (reverse-scored)

Demographics

Please respond to the following questions.

1. What is your age in years?
    a. _____
2. How do you describe yourself?
    a. Male
    b. Female
    c. Non-binary/third gender
    d. Prefer to self-describe
        i. _____
    e. Prefer not to answer
3. Do you consider yourself transgender?
    a. No
    b. Yes
    c. Prefer not to answer

4. Are you currently enrolled at a college or university?
    a. No, I am not currently enrolled at a college or university
    b. Yes, I am an undergraduate student
    c. Yes, I am a graduate student
    d. Prefer not to answer
5. Are you currently employed or volunteer or have you been employed or volunteered in the past?
    a. No
    b. Yes
    c. Prefer not to answer
6. What is the highest degree or level of education you have completed?
    a. Some high school
    b. High school diploma/GED
    c. Trade school
    d. Some college
    e. Associate degree
    f. Bachelor's degree
    g. Master's degree
    h. Doctoral degree
    i. Prefer not to answer
7. What is your race?
    a. African American or Black
    b. American Indian/Alaska Native
    c. Asian/Pacific Islander
    d. Caucasian or White
    e. Two or more races
    f. Prefer not to answer
8. What is your ethnicity?
    a. Non-Hispanic
    b. Hispanic
    c. Prefer not to answer
9. Where is your current home located?
    a. North America
    b. Central America
    c. South America
    d. Europe
    e. Africa
    f. Asia
    g. Australia
    h. Caribbean Islands
    i. Pacific Islands
    j. Other
        i. _____
    k. Prefer not to answer
10. To ensure payment, please provide your MTurk Worker ID?
    a. _____

Phase 2

Entitativity Manipulation Check

Please respond to the following questions regarding the employees you just read about.

Strongly Disagree	Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Agree	Strongly Agree

1. The employees are a unit.
2. The employees are a group.
3. The employees feel like a group to me.

Perceived Loudness of Employee Measure

Please rate the loudness of each employee.

Not Loud	Somewhat Loud	Very Loud

1. [Photo of employee in meeting] Erika.
2. [Photo of employee in meeting] George.
3. [Photo of employee in meeting] Leslie.
4. [Photo of employee in meeting] Joe.

Leader Claiming

From this clip, consider the leader behaviors of each employee. Please rate the frequency to the following statements regarding the employees' behaviors.

Never	Almost Never	Rarely	Sometimes	Frequently	Very Frequently	Always

1. How often did [photo of employee, George] act as a leader.
2. How often did [photo of employee, George] take on a leader role.
3. How often did [photo of employee, George] lead others in the group.
4. How often did [photo of employee, George] prefer to lead within the group.
5. How often was [photo of employee, George] leading.

1. How often did [photo of employee, Leslie] act as a leader.
2. How often did [photo of employee, Leslie] take on a leader role.
3. How often did [photo of employee, Leslie] lead others in the group.
4. How often did [photo of employee, Leslie] prefer to lead within the group.
5. How often was [photo of employee, Leslie] leading.

1. How often did [photo of employee, Joe] act as a leader.
2. How often did [photo of employee, Joe] take on a leader role.
3. How often did [photo of employee, Joe] lead others in the group.
4. How often did [photo of employee, Joe] prefer to lead within the group.
5. How often was [photo of employee, Joe] leading.

1. How often did [photo of employee, Erika] act as a leader.
2. How often did [photo of employee, Erika] take on a leader role.
3. How often did [photo of employee, Erika] lead others in the group.
4. How often did [photo of employee, Erika] prefer to lead within the group.
5. How often was [photo of employee, Erika] leading.

Follower Claiming Scale

From this clip, consider the follower behaviors of each employee. Please rate the frequency to the following statements regarding the employees' behaviors.

Never	Almost Never	Rarely	Sometimes	Frequently	Very Frequently	Always

1. How often did [photo of employee, George] act as a follower.
2. How often did [photo of employee, George] take on a follower role.
3. How often did [photo of employee, George] follow others in the group.
4. How often did [photo of employee, George] prefer to follow within the group.
5. How often was [photo of employee, George] following.

1. How often did [photo of employee, Leslie] act as a follower.
2. How often did [photo of employee, Leslie] take on a follower role.
3. How often did [photo of employee, Leslie] follow others in the group.
4. How often did [photo of employee, Leslie] prefer to follow within the group.
5. How often was [photo of employee, Leslie] following.

1. How often did [photo of employee, Joe] act as a follower.
2. How often did [photo of employee, Joe] take on a follower role.
3. How often did [photo of employee, Joe] follow others in the group.
4. How often did [photo of employee, Joe] prefer to follow within the group.
5. How often was [photo of employee, Joe] following.

1. How often did [photo of employee, Erika] act as a follower.
2. How often did [photo of employee, Erika] take on a follower role.
3. How often did [photo of employee, Erika] follow others in the group.
4. How often did [photo of employee, Erika] prefer to follow within the group.
5. How often was [photo of employee, Erika] following.

Attention Checks

1. Where did the employees conduct their meeting?
    a. In a conference room
    b. Outside in a park
    c. In a warehouse
2. What was the composition of the group you saw in the videos?
    a. All males
    b. All females
    c. Both males and females

3. Please briefly describe what you think the purpose of this study was. (asked at the very end of Phase 2 survey)
    a. _____

Liking of Group

Please provide your opinions of the Febtop work group you watched in the video.

Strongly Disagree	Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Agree	Strongly Agree

1. I like these group members as a whole.
2. I could feel attached to this work group if I joined it.
3. I would like to work with this work group's members on future problems.

Group Effectiveness

Please provide your opinions of the Febtop work group you watched in the video.

Strongly Disagree	Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Agree	Strongly Agree

1. The work outputs of this group are highly appreciated by their organization.
2. This group delivers high-quality work.
3. This group achieves its organizational goals.

Interest in Joining Group

Please provide your opinions of the Febtop work group you watched in the video.

Strongly Disagree	Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Agree	Strongly Agree

1. I would accept an invitation to join this work group at Febtop.
2. I would make Febtop one of my first choices as an employer.
3. If Febtop invited me for a job interview to work with this group, I would go.
4. I would exert a great deal of effort to work for this group.
5. I would recommend Febtop to a friend looking for a job.

HIT Experience

1. Approximately how many MTurk HITs have you completed in the past 4 days (not including Survey 1 or 2 from this 3-part research study)?
    a. _____