THE EFFECTIVENESS OF CHARISMATIC SIGNALING BY GENDER: A PROSPECTIVE META-ANALYTIC REVIEW

by

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ABSTRACT

MARY MONROE HAUSFELD. The Effectiveness of Charismatic Signaling by Gender: A Prospective Meta-Analytic Review. (Under the direction of DR. GEORGE C. BANKS)

While charismatic leadership tactics (CLTs) have been validated across a variety of settings and shown to improve leader evaluations and cause follower behaviors, the role gender may play in charismatic leadership has been understudied. The present investigation assesses the influence of leader gender as well as a host of contextual variables on the efficacy of CLTs in influencing follower evaluations of leaders as well as follower prosocial behavior (i.e., financial donations). Using signaling theory, the current work examines critical moderators of the charismatic effect and integrates gender as a signal that may influence the efficacy of charismatic signaling. Through a set of independent experimental studies, which I conducted and then meta-analyzed (k = 8; n = 1,002), this paper identifies that the relationships between charismatic signaling, leader gender, and contextual moderators are nuanced and complex. I found a moderate main effect for charisma such that charismatic signaling did result in more positive follower evaluations (d = .20, 95% CI = [.11 to .30]) and increased prosocial donation behavior (d = .13, 95% CI = [.07 to .19]) but the meta-analytic results revealed an interaction, such that these effects were often stronger for women than for men (e.g., attributed charisma d = .27, 95% CI = [.15 to .39] for women, compared to d = .13, 95% CI = [.01 to .26] for men). Furthermore, I found a main effect of gender for influence (d = .16, 95% CI = [.06 to .25]) and donation behavior (d = .11, 95% CI = [.05 to .18]) favoring women, but this gender difference was reduced or disappeared entirely when the leader engaged in costly signaling behavior (influence d = .08, 95% CI = [-.04 to .21])

or held only informal authority (influence d = .11, 95% CI = [-.06 to .29]). Future directions and the need for a more nuanced theory of charismatic signaling are discussed.

DEDICATION

I would like to dedicate this work to Karl Gregory Hausfeld in honor of his unwavering support of my dreams and my career. From moving across an ocean and starting a brand-new career to ensuring that I eat enough vegetables, I am continuously awed and humbled by your love and care for me and for our family.

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CHAPTER 1: INTRODUCTION

Though not a new theory of leadership, charismatic leadership has remained in the forefront of leadership research as leaders make use of charismatic techniques to influence the behaviors of their subordinates and beyond. Charismatic leadership has been defined as "values-based, symbolic, and emotion-laden leader signaling" behaviors (Antonakis, Bastardoz, Jacquart, & Shamir, 2016, p. 304). Charismatic leadership tactics (CLTs) are verbal and nonverbal signaling behaviors that include a variety of techniques that Antonakis and colleagues have demonstrated to be trainable (Antonakis, Fenley, & Liechti, 2011). Validated across multiple settings and contexts (Jensen et al., 2021; Meslec, Curseu, Fodor, & Kenda, 2020; Tur, Harstad, & Antonakis, 2021), use of CLTs by leaders has been shown to result in leader emergence (Antonakis et al., 2011; Jacquart, Fenley, & Antonakis, 2016), more positive evaluations of the leader, as well as follower behaviors and outcomes (Ernst et al., 2022; Jacquart & Antonakis, 2015). Despite the incredible progress made in the past decade in terms of charismatic leadership's definition, operationalization, and theory, lingering questions remain regarding the efficacy of charismatic leadership for women leaders and under different contextual conditions. The present research aims to add to the literature on charismatic leadership in several ways.

First, there is limited direct evidence supporting the efficacy of CLTs for women leaders, as it is unclear the extent to which leader gender impacts the charismatic effect. Recent meta-analytic findings suggest that women may be evaluated as slightly more charismatic compared to men, but these results are based on primary studies measuring evaluations of charisma and

failing to measure the actual leader charismatic behaviors independently from these evaluations (Banks et al., 2017). This problem is not unique to charismatic leadership specifically, as the entire leadership literature and beyond suffers from the conflation of evaluations and behaviors (Fischer et al., 2020; Banks et al., in press). This problem becomes especially apparent when reviewing meta-analyses. For example, Paustian-Underdahl, Walker, and Woehr (2014) find that women may have slightly better leadership evaluations on average compared to men, but they identify only evaluations without controlling for actual leader behaviors. Similarly, Joshi, Son, and Roh (2015) found no significant differences in performance evaluations for men and women, but again, the primary studies included in this meta-analysis did not separately measure behaviors and evaluations of those behaviors. As a result, the conflation of behaviors and evaluations of those behaviors make identifying the potential influence of bias impossible, as we cannot know whether any difference or lack thereof is due to a difference in individual behavior or a difference in evaluation of those behaviors (Fischer & Sitkin, 2022).

In previous work on charismatic leadership, design issues such as the above result in a literature that does not identify whether charismatic behaviors are as effective for women. Field studies investigating the efficacy of CLTs in real world contexts such as TED talks (Tur et al., 2021), politics (Jacquart & Antonakis, 2015; Jensen et al., 2021), and entertainment award shows (Hausfeld, 2020) have included women leaders, but they are underrepresented likely in part because of the underrepresentation of women in the larger leadership populations of interest (Samuelson, et al., 2019). For example, in the United States, there have been fewer women presidents (zero at the national level) and governors than men, and most awards in the entertainment industry are given to men rather than women; the samples used in research reflect this disparity (Represent Women, 2021; Woetzel et al., 2015). The small numbers of women in

these samples precludes direct comparisons of CLT efficacy for men and women leaders, as there is insufficient statistical power to detect an effect should it exist, especially considering the effect could be small to medium in magnitude. It is worth noting, however, that in many field contexts researchers could choose to oversample women leaders to allow for direct gender comparisons. Furthermore, to rule out alternative explanations, make causal inferences, examine evaluations separately from behaviors, and explicitly include women, experimental design is ideal (Antonakis et al., 2010). To date, the entirety of causal evidence of the efficacy of CLTs for women comes from Ernst et al. (2022) and Jacquart et al. (2016), which do not allow for direct gender comparisons, and Tur et al. (2021) who include women leaders in their field study but not in sufficient numbers to power a direct gender comparison.

Answering to what extent (and under what conditions) CLTs prove effective for women leaders is paramount. Failing to include nearly half the workforce (U.S. Bureau of Labor Statistics, 2020a) and 40% of all managers (U.S. Bureau of Labor Statistics, 2020b) in charismatic leadership research is a tremendous oversight and contributes to the gender data gap. The gender data gap has different consequences in different areas, with effects ranging from inefficient use of public resources in terms of male-biased snow clearing schedules leading to costly and avoidable pedestrian accidents and hospitalizations, to the absolutely unacceptable disproportionate loss of life in healthcare based on incomplete and inaccurate information regarding how certain illnesses present in women (Criado-Perez, 2019). The scope of the fallout for failing to examine women's leadership behaviors separately is as of yet unknown, but the present state could obscure bias in evaluations of women leaders hampering their ascent to higher levels of the organization. Consequences of biased evaluation systems may include inefficient use of human capital and unrealized benefits to the global GDP, which could amount

to trillions of dollars (Woetzel et al., 2015). In neglecting to consider the unique challenges women leaders face in investigations of charismatic leadership and perpetuating the gender data gap, the current literature is not "gender neutral"—it is gender oblivious.

Second, while recent investigations into charismatic leadership have begun to probe the boundary conditions of charismatic signaling, there has been insufficient theoretical integration of different contextual factors (the surroundings associated with the situation) into charismatic leadership. Signaling theory has proven useful as an overarching framework through which to view charismatic signaling (Antonakis et al., 2016; Connelly, Certo, Ireland, & Reutzel, 2011; Grabo, Spisak, & van Vugt, 2017), but several elements of the context and characteristics of the individuals involved have not yet been translated into the language of signaling theory and thus integrated into the overall theoretical framework of charismatic leadership. Of primary interest for this dissertation is how leader characteristics such as gender or even societal expectations regarding gender influence the receiver and potentially interfere with the signaling process. Many prevalent and influential theories like role congruity theory (Eagly & Karau, 2002), the lack of fit framework (Heilman & Caleo, 2018), the backlash effect (Phelan, Moss-Racusin, & Rudman, 2008; Rudman & Glick, 2001), status characteristics theory (Berger et al., 1972), the shifting standards model (Biernat, Fuegen, & Kobrynowicz, 2010), and others contribute to our understanding of challenges women may face in the workplace.

The disparate nature of these theories, however, make integrating research relying on different frameworks difficult and slow the accumulation of knowledge, especially in the charismatic leadership space. By transposing the arguments made by these disparate theories into the language of signaling theory, I can integrate their suppositions into models of charismatic leadership and develop clear, testable hypotheses consistent with best practice (Bacharach, 1989)

to determine the extent to which leader gender influences the evaluations of charismatic leaders. Furthermore, to make progress in the realm of charismatic leadership and to present a clear path forward, a more comprehensive model of charismatic leadership is needed, ideally one that accounts for the potential influence of context and competing signals such as leader gender. The present work aims to consolidate and integrate theories of evaluations of women leaders through the lens of signaling theory, presenting a straightforward and parsimonious framework for researchers to utilize in future research regardless of their discipline. This theoretical contribution advances the study of women leaders and charisma, as well as paving the way for a clear and concise message to facilitate the dissemination of findings and maximize their impact.

A third major gap in the charismatic leadership literature consists of the need to further explore boundary conditions of the charismatic effect in addition to leader gender. Further expansion of and examination of the boundaries of charismatic leadership are needed to best understand the extent to which and under what conditions CLTs can lead to more positive leader evaluations. One contextual factor that has been understudied is signal cost. When engaging in signaling, leaders can add credence to the integrity or veracity of their signaling by engaging in signaling behaviors that are costly (Connelly et al., 2011). The reasoning behind this argument is that the signal is more likely to be a truthful indicator of underlying leader quality when it is costly for the leader to engage in that particular signaling behavior. For example, actors Mila Kunis and Ashton Kutcher urged their followers in a heartfelt Instagram video (https://www.instagram.com/p/CaqQZ-clv8u/) to support Ukrainian refugees through donations. Kunis shared that she was originally born in Ukraine and has always been proud to be an American, “but that today, I have never been more proud to be a Ukrainian.” The couple organized a GoFundMe page to collect money for humanitarian groups supporting Ukrainian

refugees and pledged to match donations up to three million dollars with the goal of raising thirty million dollars. While talk may be cheap, by investing their own personal resources toward the cause they encourage others to support, Kunis and Kutcher demonstrated their own commitment to supporting Ukraine and the "truthfulness" of their signaling. Research on charismatic signaling, however, has yet to explore the proposed impact of signal cost on the efficacy of charismatic signaling nor the magnitude of this effect. Furthermore, signal cost may be differentially beneficial by leader gender. For example, demonstrating that a signal is costly may "legitimize" a woman leader's use of charisma (Vial, Napier, & Brescoll, 2016).

Additionally, while formal leadership has historically been the primary focus of charismatic leadership research, informal leadership has risen in prominence over the last few years (e.g., Tur et al., 2021). As a result, while there is evidence supporting CLT efficacy in both formal and informal leadership settings, there is no experimental research comparing the efficacy of CLTs in settings of informal vs formal leadership. There is a need to further investigate and better understand the impact formal leader authority has on the efficacy of charismatic signaling. There is potential for a gender effect here as well, as researchers have argued that formal authority can reduce bias in evaluations of women leaders as it alleviates concerns regarding their competence and legitimacy (Heilman, 2001; Ridgeway, 2001). This information could prove especially valuable to practitioners but also contributes to our understanding of the boundaries of charismatic signaling. A more nuanced investigation of contextual factors that may impact the effectiveness of CLTs, such as those discussed here, is needed to further probe the boundaries of charismatic leadership theory and facilitate the development of appropriate practical implications.

Building upon the foundation of earlier research on charismatic signaling, I aim to venture beyond the current confines of the literature to examine to what extent CLTs remain effective outside of the set of circumstances most commonly assumed by researchers (i.e., the leader is a man and has formal authority over followers delivers a charismatic speech at relatively low personal cost.) The present paper addresses these gaps in the literature through a series of experiments. Within each experiment, I directly compare the efficacy of CLTs for men and women leaders. These experiments differ according to the contextual factors discussed above, and the results are then meta-analyzed. This design is advantageous in numerous ways. First, the experimental methodology allows for increased control which assists in ruling out alternative explanations and supports robust causal inferences (Antonakis, Bendahan, Jacquart, & Lalive, 2010; Lonati, Quiroga, Zehnder, & Antonakis, 2018). Second, a prospective meta-analysis—a type of systematic review where study variables, hypotheses, and analyses are designed in advance—avoids many of the pitfalls of traditional retrospective meta-analyses (Seidler et al., 2019). I make use of this method to include and account for potential methodological moderators, overcome limitations of and issues with individual samples, develop more precise estimates of the true nature of the effect, avoid publication bias and selective reporting, and hasten the accumulation of knowledge. Furthermore, there is practical significance in that the knowledge gained regarding evaluations of women leaders' use of charismatic signaling tactics will prove invaluable for future work in training, development, and assessment methodology for leaders of all genders.

The current investigation consists of four independent experimental studies each involving 250 participants. The independent variables manipulated within each study include the gender of the leader (man or woman) as well as the use of CLTs (high or low), resulting in a 2 X

2 between-subjects design. This presents an internal replication, such that if an interaction between leader gender and CLT use exists, I am likely to detect it in at least one of the four experiments or in the meta-analysis. Other contextual factors that may impact CLT efficacy and leader evaluations are manipulated between studies. These factors include whether the leader has formal authority vs. informal authority and whether the signal is represented as high cost. Specifically, the experiments will follow the following scheme:

Table 1
Summary of Experiments

Experiment	Target N	Leader gender	Formal authority	High cost
1	125	Man	Yes	No
1	125	Woman	Yes	No
2	125	Man	No	No
2	125	Woman	No	No
3	125	Man	Yes	Yes
3	125	Woman	Yes	Yes
4	125	Man	No	Yes
4	125	Woman	No	Yes

To lay the foundation for this endeavor, I first review the literature on charismatic leadership, with an emphasis on recent empirical investigations. Next, I introduce signaling theory and its use within the charismatic leadership research space. Then, I present a comprehensive theoretical model for charismatic leadership drawing from signaling theory and integrating insights from other research on evaluations of women leaders and other areas of leadership research. The significance of this model for the purposes of the present investigation is then discussed. I then present the methodology of the studies and their results, and I conclude with a discussion of the significance of this work including limitations and avenues for future research.

Theoretical Background

Review of Charismatic Leadership

The study of charisma has spanned both millennia and disciplines to evolve into our current conceptualization of charisma and charismatic leadership. The word charisma originates with the Greek *charis*, and was used by philosophers such as Aristotle in describing the ideal characteristics of leaders (Antonakis et al., 2016). Initially considered scientifically and systematically by sociologists such as Max Weber (1968), charisma was framed as a tactic to be used by individuals to resist institutional and bureaucratic controls (Antonakis et al., 2016). Later, in the 1970s, management and applied psychology scholars revisited and reimagined charisma within the context of leadership styles (Bass, 1985; House, 1977). While the behavioral framework sought to focus on what leaders *do* instead of who leaders *are* (Lord, Day, Zaccaro, Avolio, & Eagly, 2017), the researchers of the day still relied primarily upon self-report or other-report questionnaires to assess so-called behaviors rather than observational techniques or the capturing of actual leader behaviors (Fischer, Hambrick, Sajons, & Van Quaquebeke, 2020). The most common tool to assess charismatic leadership was the Multifactor Leadership Questionnaire, which captures other reports of charisma through the subscales of idealized influence (attributed), idealized influence (behaviors), and inspirational motivation (Bass & Avolio, 1995). During this period, the very thing that made a leader charismatic was someone else's evaluation of their charisma, rather than distinct charismatic behaviors. At this time, charisma existed entirely in the eye of the beholder, while more recent operationalizations have begun to emphasize the distinction between charismatic behaviors and resulting evaluations.

Charismatic and transformational leadership began to draw criticism from the field of leadership, with Van Knippenberg and Sitkin's (2013) critique of the MLQ and the constructs of transformational and charismatic leadership becoming especially influential. Several prominent critiques targeted the MLQ as a measurement instrument, given the lack of appropriate and

consistent factor structure as well as the constructs of charismatic and transformational leadership supposedly defined as "what the MLQ measures." This is especially problematic as the confounding of leader behaviors with follower evaluations leads to a whole host of problems including the inability to identify the impact of contextual factors on the efficacy of charisma. Antonakis et al. (2016) built off this criticism to review the extant literature, develop a new definition and conceptualization of charismatic leadership, and indicate a way forward for the construct in management research and beyond. They defined charisma as "values-based, symbolic, and emotion-laden leader signaling," arguing that leaders use charismatic techniques to justify the mission, communicate symbolically, and demonstrate "conviction and passion for the mission via emotional displays" (Antonakis et al., 2016, p. 304). Taken together, these charismatic techniques lead to increased leader prototypicality assumptions and the attribution of positive traits such as courage, wisdom, and competence. This has marked advantages over previous conceptualizations of charisma, as the definition explicitly avoids tautology and is focused on leader behaviors, grounded in signaling theory.

Charismatic Leadership Tactics

Antonakis and others have operationalized this new definition through charismatic leadership tactics (CLTs), a set of trainable verbal and nonverbal behaviors that signal charisma (Antonakis et al., 2016). CLTs are comprised of nine verbal behaviors and three nonverbal behaviors, described in detail by Antonakis, Tur, and Jacquart (2017), Ernst et al. (2022), and Antonakis et al. (2022). The first of these verbal behaviors is the use of metaphor or simile. By using metaphor or simile, leaders can simplify a message and invoke symbolism. Stories and anecdotes are CLTs that make a message more memorable through the use of emotion or visualization techniques. When using the technique of moral conviction, leaders assert right from

wrong and lay out clear values, which can allow followers to identify with the leader and their message. Another technique is sentiment of the collective, where the leader shares what they believe the followers are thinking, demonstrating similarity between the followers and leader to encourage followers to see the leader as a representative of the group. The technique of setting high expectations involves explicit goal setting, which can motivate followers to work especially hard to perform. Similarly, leaders can also use the CLT of creating confidence that goals can be achieved by demonstrating belief in the followers' ability to achieve the goals to increase follower self-efficacy. A more rhetorically oriented CLT is that of contrasts, a figure of speech where two ideas are presented in opposition to provide framing and focus for an idea as well as clarifying a position by contrasting it with an opposing idea. Charismatic leaders can also signal completeness as well as provide takeaway messages that are easy to remember through the use of lists and repetition. The final verbal CLT is rhetorical question, which a leader may use to increase anticipation as well as follower engagement.

In addition, there are several nonverbal behaviors that signal charisma. The first is the use of body gestures. When a leader uses hand, arm, or body movements to emphasize a point, they demonstrate passion for the topic and leave a memorable impression. Facial expressions are another nonverbal CLT that operate in a similar way. By smiling, frowning, or otherwise changing facial expressions in conjunction with the message, a leader can make themselves and the message more memorable. Finally, leaders can use an animated voice tone through raising and lowering their pitch or volume as well as pausing intentionally during delivery of the message. This CLT also helps convey passion and can increase anticipation or interest on the part of followers.

Charisma and Signaling Theory

Signaling theory provides a rich opportunity to encompass and organize other theories of person perception and the evaluation of women leaders by serving as a foundational theory. Others have used signaling theory as an overarching framework for leadership behaviors, including charismatic leadership (Ernst et al., 2022; Grabo et al., 2017), transformational leadership (Stock, Banks, Voss, Woznyj, & Tonidandel, 2022), and ethical leadership (Banks, Fischer, Gooty, & Stock, 2021). In this section, I introduce signaling theory, explain its significance in management research, identify important elements of signaling theory, and demonstrate how terms from signaling theory map onto charismatic leadership.

Signaling theory (Spence, 1973) originally came to prominence in the natural sciences (for a review, see Dawkins, 1976). The basic tenets of the theory are that information asymmetries exist in nature, and actors engage in behaviors or series of behaviors in order to convey information to others. The theory has been used to examine and explain behaviors as far ranging as animal mating behaviors and job applicant behaviors (Rynes, Bretz Jr, & Gerhart, 1991; Spence, 1973). Signaling theory has become quite influential in a variety of disciplines, including Management and Economics. In Management research specifically, signaling theory has been used as an organizing framework to describe and explain a variety of signaling actors, ranging from macro investigations such as firm-wide signals sent during the recruiting process (Banks et al., 2019) to micro investigations including the study of individual leader behavior (Ernst et al., 2022). Information asymmetries in the context of Management research can involve economic uncertainty or ambiguity of firm performance signals (e.g., Jacquart & Antonakis, 2015) or simply an unequal distribution of knowledge concerning job applicants or employees (e.g., Rynes et al., 1991), as discussed by Bergh, Ketchen Jr, Orlandi, Heugens, and Boyd

(2019). Overall, use of the theory in management has increased (Connelly et al., 2011), and it remains useful to macro and micro researchers alike (Bergh et al., 2019).

To discuss the relevance of signaling theory to leadership behaviors and charismatic leadership specifically, several terms must first be defined. A *sender* is an individual who provides the signal. For the purposes of charismatic leadership, the sender is often a leader or someone vying to become a leader. The sender intends to influence the *receiver*, the person attending to and interpreting leader signals. In terms of charismatic leadership, the most obvious receiver is the leader's subordinates or followers, but other potential receivers include a leader's peers and supervisor. A *signal* is defined as an action or behavior that communicates relevant information regarding underlying quality. CLTs serve as charismatic signals that convey information regarding the moral component of the mission in a symbolic and vivid way as well as affirming the leader's passion for and commitment to the mission. In their influential re-working of the definition and operationalization of charismatic leadership Antonakis et al. (2016), argued that while charismatic signals in themselves may not necessarily be true or accurate, observers use charismatic signals to infer certain qualities about the leader, especially in situations where there is some level of uncertainty. Some have argued that charismatic signaling behaviors operate by increasing evaluations of leader prototypicality (Antonakis et al., 2011; Tur et al., 2021).

Signaling can prove particularly useful in situations such as these where inferences must be made. One way to describe this would be the presence of *information asymmetries*. Information asymmetries refer to the unequal distribution of relevant information in decision-making processes. Signals are then intended to convey information, reducing asymmetry. In terms of charismatic leadership, outside observers have limited information about the underlying

quality of a leader, while the leader, if self-aware, has knowledge of their own quality. The leader attempts to reduce this asymmetry through the use of signals intended to convey leader quality. In this way, the leader can reduce ambiguity regarding their underlying quality as a leader through signaling, hopefully reducing information asymmetry to facilitate a shared understanding of the level of competence of the leader.

Several different terms and criteria have been introduced for the purpose of evaluating signals. One such criterion is signal *cost*. Costly signals, signals that require significant effort or pose some sort of risk for the leader are generally seen as more truthful and more powerful (Spence, 1973). When signals do not require significant cost, they are more susceptible to "faking" or dishonest signaling, which undermines the value of that specific signal, eventually leading to receivers disregarding such signals (Connelly et al., 2011). Duration and frequency of signals has also been discussed, as receivers are more likely to attend to signals that are happen more often or endure longer.

Followers play a critical role in the selection of leaders and the process of leadership (de Waal-Andrews & van Vugt, 2020), and the signals followers attend to are not necessarily relevant to underlying leadership traits. That being said, from the embodiment perspective, key leader attributes and interaction characteristics can shape perceptions and evaluations of charisma (Reh, Van Quaquebeke, & Giessner, 2017). For example, individuals who are tall, attractive, or wearing red are attributed more charisma by observers than individuals who are short, unattractive, and not wearing red (e.g., Maran, Liegl, Moder, Kraus, & Furtner, 2021; Tur et al., 2021). The act of wearing red does not make someone inherently more charismatic, but follower (receiver) attention to these signals of appearance and attire may interfere with leader signaling behaviors. Some have argued that attention to these types of signals and use of them as

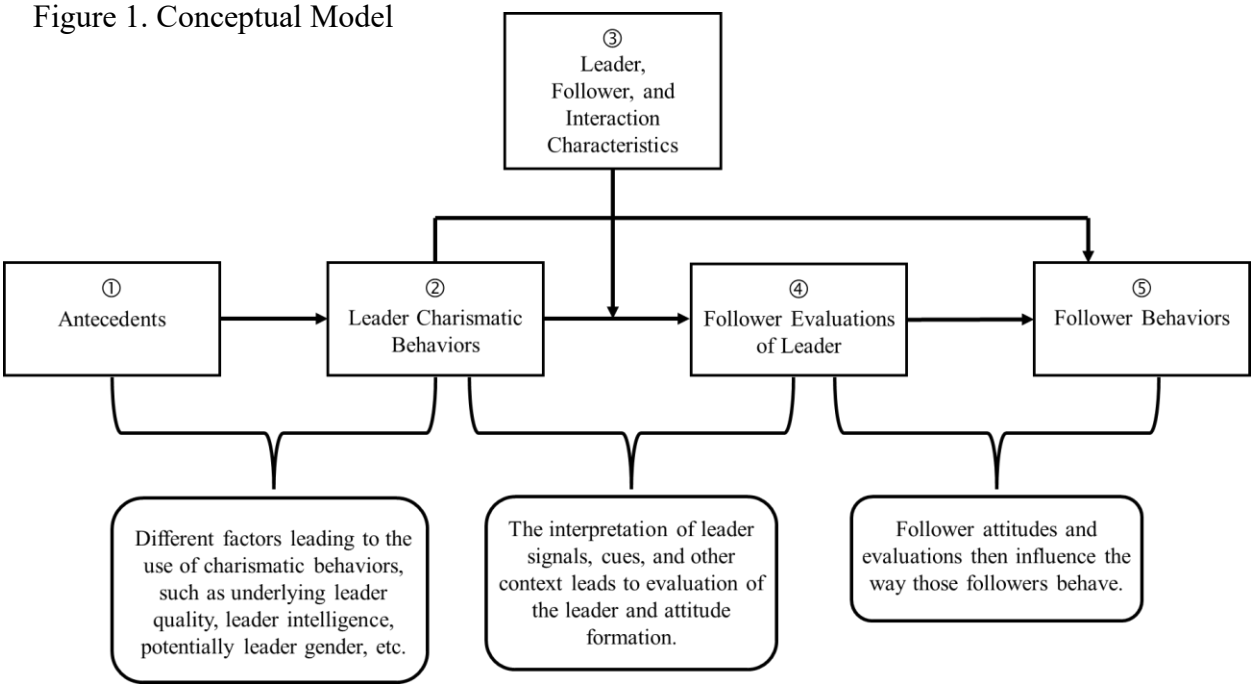
a basis to make inferences is a holdover from human evolution. While someone's stature may not prove relevant in today's leadership arena (Jacquart & Antonakis, 2015), our present attention toward this seemingly irrelevant signal may be the residual effect of when stature may have been critical to leader emergence (Bastardoz & Van Vugt, 2019). One example of this process in action is our preference for sugary foods. In nature, foods with high sugar are relatively rare. Evolutionary scholars have argued that our predilection for sugary and sweet foods is the result of how it would have been advantageous to consume larger amounts of sugary food when they are encountered in the wild, as they can provide an abundance of quick energy (Grabo et al., 2017). In modern times, artificially sweet foods are readily available, and overconsumption of these foods can lead to obesity among other problems (Power & Schulkin, 2013). Thus, vestiges of our evolutionary history hijack our current behaviors in a way that is no longer adaptive. Furthermore, research in anthropology and archaeology has increasingly called into question the assumption of male leadership and traditional gender roles in the paleolithic and neolithic eras, as evidence supports women's creation and use of hunting tools (Arthur, 2010; Haas et al., 2020), as well as women engaging in intense physical labor and traveling great distances (Macintosh, Pinhasi, & Stock, 2017). In essence, irrelevant or outdated signals can hijack the evaluation process as followers attend to the wrong signals or those signals interfere with more relevant signals of competence.

Leader gender could operate in the same way as stature, as receivers may attend to the signal of a leader's gender (regardless of actual relevance) as a vestige of our evolution. This focus on gender may then interfere with other, more relevant signals of competence such as CLTs or previous performance information when the leader is a woman. In this way, our attention to leader gender is not adaptive (and likely never was) as it prioritizes attention toward

less relevant information, interfering with our ability to make accurate inferences regarding underlying leader quality. Recent scholarship in the "followership" space has renewed focus on the active role followers play in the process of leadership (Bastardoz & Van Vugt, 2019; de Waal-Andrews & van Vugt, 2020). If followers make choices (conscious or unconscious) regarding whom to follow and to what extent they offer their coordination and cooperation, the methodological separation between leader behaviors, contextual factors, and follower evaluations becomes even more critical. The followership framework is consistent with models of signaling theory in that leader signals do not exist in a vacuum but are instead interpreted and evaluated by the receiver based on the interactional context as well as factors specific to the receiver.

Introduction to Theoretical and Experimental Model

Figure 1. Conceptual Model

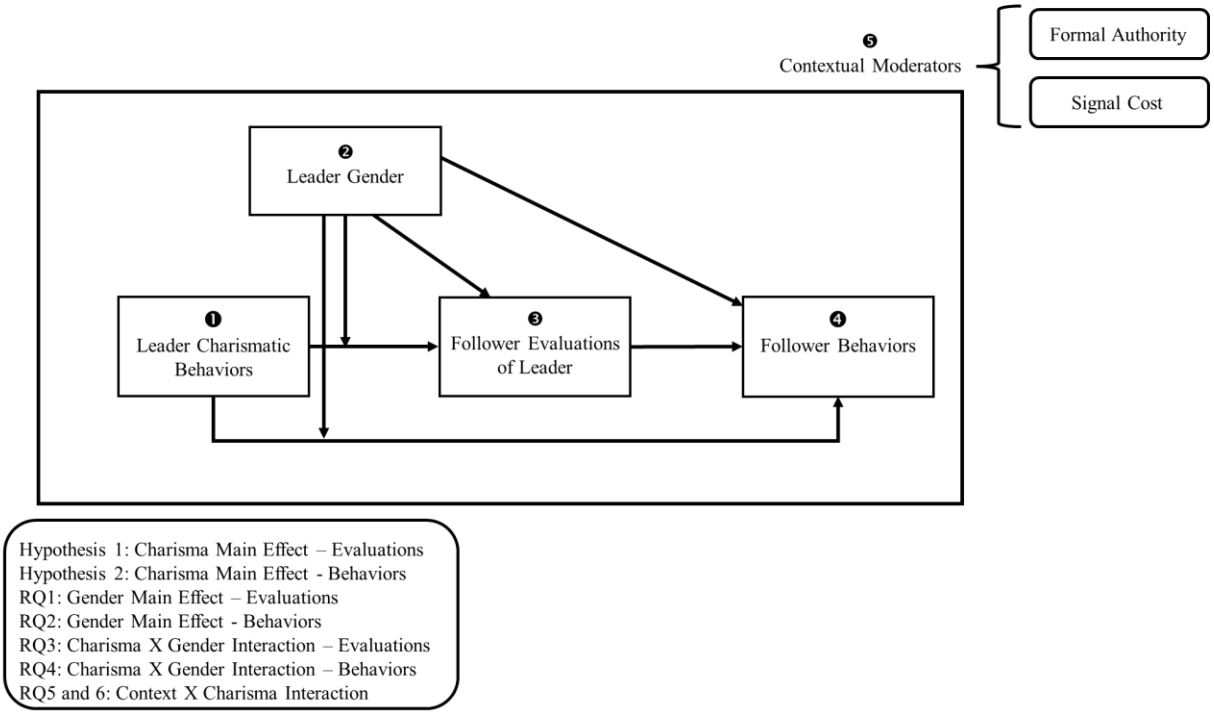


To investigate the impact charismatic signaling, leader gender, and contextual moderators may have on evaluations of leaders, a more comprehensive theoretical model is needed. See

Figure 1 for a full theoretical model and Figure 2 for the elements of this model tested in this paper.

Box 1 in Figure 1 refers to the antecedents of charismatic signaling behaviors. Previous research has identified several antecedents of charismatic behaviors such as intelligence and extraversion (Antonakis et al., 2011; Jacquart et al., 2016). However, one of the most revolutionary findings regarding the antecedents of charisma is that charismatic leadership tactics are trainable, and interventions to increase levels of charismatic signaling have proven effective in several different samples (Antonakis et al., 2011). As CLTs are trainable behaviors that anyone can be taught to employ, antecedents of charisma are not a focus of the present investigation.

Figure 2. Conceptual Model for the Present Investigation



Box 2 of Figure 1 refers to leader charismatic behaviors, most commonly operationalized as charismatic leadership tactics (CLTs). As discussed earlier, CLTs are trainable verbal and nonverbal signaling behaviors that signal charisma through framing and creating a vision and

providing substance to a message (Jacquart & Antonakis, 2015). Furthermore, CLTs can increase the salience and memorability of a message as well as arouse follower emotions (Antonakis, d'Adda, Weber, & Zehnder, 2021). In both experimental and field settings, leaders who make use of CLTs tend to be evaluated more positively, and sophisticated design combined with analytic techniques increase confidence that this relationship is causal in nature (Antonakis et al., 2011; Tur et al., 2021). CLTs have also been demonstrated to directly influence follower behaviors (Box 5 Figure 1), such that CLT use can lead to improvements in job performance comparable with interventions such as economic incentives including pay-for-performance (Antonakis et al., 2022). This causal linkage to both follower evaluations and behaviors is depicted in Figure 2. Given prior evidence and research on charismatic signaling, I predict:

> *Hypothesis 1: Leaders who exhibit high levels of charismatic signaling will have more positive evaluations compared to leaders who low levels of charismatic signaling regardless of leader gender.*

The Main Effect of Gender

Box 2 of Figure 2 depicts leader gender as a potential predictor of leadership evaluations and follower behaviors, regardless of charisma's influence. There is literature suggesting that leader gender may impact leadership evaluations and reactions of followers overall, due to the influence of leader prototypes, stereotypes, and biases in evaluation processes. For example, role congruity theory (Eagly & Karau, 2002) argues that stereotypes regarding leaders and stereotypes regarding women are inherently contradictory, which can lead for a double bind for women as when they act in stereotypically feminine ways such as communal behavior, they are evaluated as less suitable for leadership, but when they act in ways consistent with stereotypes about leaders such as behaving in an agentic manner, they violate prescriptive stereotypes for how women should behave and may face backlash (Phelan et al., 2008; Rudman & Glick, 2001).

Similarly, Heilman and Caleo's (2018) lack-of-fit framework argued "the negative performance expectations that arise from the perception of lack of fit between what women are like and what is required to perform in a male-typed position are likely to promote gender bias in evaluative decision making and prompt discrimination" (p. 727).

Women are evaluated more poorly than men despite equal performance in a variety of arenas including leadership (De Paola, Gioia, & Scoppa, 2021), scholarship (Hospido & Sanz, 2019), and higher education (Fisher, Stinson, & Kalajdzic, 2019; Mengel, Sauermann, & Zölitz, 2019). The descriptive stereotypes regarding women's lower levels of competence compared to men would suggest lower evaluations of leadership effectiveness and competence (Heilman, 2001; Heilman & Caleo, 2015). However, some previous work indicates that the circumstances surrounding the type of work (e.g., historically dominated by men or women, blue collar or white collar) can play a large role in influencing evaluations of individuals (Yavorsky, 2019). Even so, in the situations where men and women have comparable evaluations or evaluations favor women, behaviors associated with those evaluations (e.g., rewards such as promotion or compensation) still favor men (Joshi et al., 2015). There is still much to learn regarding the potential main effect of gender on leader evaluations and follower behaviors. Furthermore, meta-analytic estimates of gender differences in leadership evaluations have ranged depending on inclusion criteria, but Paustian-Underdahl et al. (2014) found that other-ratings of leadership effectiveness actually favored women, though it is possible this is due to a selection effect where only the most qualified women are promoted to leadership roles. Thus, I ask:

> *Research Question 1: To what extent does leader gender influence follower evaluations of leaders?*
>
> *Research Question 2: To what extent does leader gender influence follower behavior?*

Gender as a Potential Moderator

Box 3 of Figure 1 refers to leader, follower, and interaction characteristics that may moderate charisma's effect on subsequent outcomes. Evaluations of leaders (Figure 1 Box 4) can be influenced by a whole host of factors, and there is evidence that contextual variables such as ambiguity (Jacquart & Antonakis, 2015), changing performance signals (Heilman, Manzi, & Caleo, 2019), follower characteristics and beliefs (Brescoll, Okimoto, & Vial, 2018; Jensen et al., 2021), and gendered context (Fisher et al., 2019; Mengel et al., 2019) can all influence evaluations of identical behaviors. While charismatic signaling has been well established in the literature as an effective intervention in terms of promoting positive evaluations as well as follower behavior, much remains unknown or unclear regarding the moderators of the charismatic effect (Antonakis et al., 2016). To improve collective understanding of charismatic signaling, for whom it is effective and when, I investigate through a series of experiments and subsequent meta-analysis the role of leader and interactional characteristics in moderating CLT efficacy. See Figure 2 for the model tested in the present investigation. Leader gender (Box 2 Figure 2) represents one of the most critical and untested potential moderators of the charismatic effect. To date, no investigation has directly compared the efficacy of CLTs when used by men and women. There is a rich history in other literatures, however, of differential evaluations of men and women enacting the same behavior (Schein, 1973).

While based on existing research, I can confidently predict that charismatic signaling will improve leadership evaluations on average, it may not be the case that women and men benefit equally from the use of charismatic signaling. Previous research has found that women's voices are perceived as less charismatic than men's (Niebuhr, Tegtmeier, & Schweisfurth, 2019) and that evaluations of a leader's charisma can depend on the leader gender and whether leader behavior is congruent with gendered expectations (Brands, Menges, & Kilduff, 2015).

Furthermore, humor has been considered an element of charismatic signaling in the past (Antonakis et al., 2011), and experimental evidence suggests that men and women's use of humor at work is evaluated differently, with women's use of humor deemed disruptive rather than functional (Evans, Slaughter, Ellis, & Rivin, 2019). The differential evaluations of men and women's use of the exact same behaviors (in this case, humor), could extend to charismatic signaling such that women's use of CLTs is evaluated differently than men's use of CLTs. While some research has provided evidence that women can be trained to use CLTs and receive more positive evaluations (Jacquart et al., 2016), there has been no direct comparison of efficacy for men and women, and the effect sizes for women's charisma use in this case and others (e.g., Ernst et al., 2022) tend to be smaller and do not consistently reach statistical significance.

Another element to consider is the role of emotion in charismatic signaling. Antonakis et al. (2016) described the use of correctly calibrated and appropriate emotional displays as a component of charisma. The problem here is *correctly calibrated* and *appropriate* are inherently evaluative terms, and what is deemed an appropriate display of emotion at work is dependent on gender, as men and women face dramatically different expectations in this arena (Brescoll, 2016). Identical displays of emotion are perceived as more extreme when enacted by women, and women often face backlash for violating proscriptive stereotypes through the display of traditionally masculine emotions such as anger and pride (Brescoll, 2016). There are elements of charismatic signaling that could be considered emotional, including "moral conviction" and "creating confidence goals can be achieved." As charismatic leader signaling is described as values-based, *emotion laden* leader signaling (Antonakis et al., 2016), there is the potential that women face backlash for using CLTs and receive lower evaluations compared to men as a result.

However, there is also evidence to support the idea that women may benefit just as much or even more than men when it comes to the use of charismatic signaling. In Brands et al. (2015), under certain gender-congruent circumstances, women were evaluated as more charismatic than men. Given increased emphasis on the collaborative and empowering aspects of leadership, which are seen as traditionally feminine (Koenig, Eagly, Mitchell, & Ristikari, 2011), the context of leadership may actually advantage women in these experiments such that they are evaluated as more effective than men. Some work has demonstrated that disparities in evaluations dissipate in the case of very high performing men and women, as these women become the exception that confirms the rule (Ibarra, Ely, & Kolb, 2013). Thus, it may be the case that the highly charismatic depiction of a woman leader proves effective because it goes against traditional gendered expectations. Additionally, meta-analytic estimates of gender differences in evaluations of charisma of leaders actually favored women (Banks et al., 2017). Another possible outcome is that leader gender does not impact the efficacy of CLTs and these techniques prove equally effective for both men and women. Further research is needed to identify whether women receive the same benefit to CLT use as men, or if the efficacy of these signaling tactics differ by leader gender. Thus, I ask:

> *Research Question 3: To what extent does gender moderate the relationship between charismatic signaling and leader evaluations?*

Charisma and Follower Behavior

Previous investigations have demonstrated that charismatic signaling can influence follower behaviors, such as improving follower performance (Antonakis et al., 2022; Meslec et al., 2020), as well as increasing the likelihood of engaging in prosocial behaviors, such as social distancing (Jensen et al., 2021). As demonstrated in the conceptual model in Figure 1, charismatic signaling is proposed to influence follower behavior directly as well as indirectly

through follower evaluations. Tur et al. (2021) described this mechanism thus: “individuals who express some prototypical behaviors of charismatic leadership (i.e., the signal) will be assumed to hold some underlying leadership qualities (e.g., strong leadership skills).” There is some discussion, however, regarding whether charismatic signaling is powerful enough to influence behavior even in a virtual context, as Ernst et al. (2022) did not find significant positive effect sizes in their samples where the charismatic manipulation occurred virtually. Additionally, Fest, Kvaløy, Nieken, and Schöttner (2021) had mixed findings regarding the impact of charismatic signaling in a virtual context, while Nieken (2022) found that video presentations of CLTs were effective at influencing follower behavior. In the present study, I aim to investigate whether charismatic signaling will influence follower prosocial behavior (see Figure 2 Box 4) in a virtual context. Thus, I hypothesize:

> *Hypothesis 2: The high charisma condition will lead to higher levels of follower prosocial behavior compared to the low charisma condition, regardless of leader gender.*

There is the potential for gender to moderate the efficacy of charismatic signaling on influencing follower behavior, as Joshi et al. (2015) found that even when men and women received equivalent performance evaluations, men still received rewards that far outpaced those of their women peers. It could be the case that while leader gender may not impact the evaluation of leaders (or women may even be advantaged in evaluation), charismatic women leaders receive fewer rewards for these behaviors or their use of CLTs does not have the same impact on follower behavior as men’s use. Alternatively, leader gender may not impact charismatic signaling’s influence follower behavior. As so little is known regarding gender’s impact on the efficacy charismatic signaling on follower behavior, I ask:

> *Research Question 4: To what extent does gender moderate the relationship between charismatic signaling and follower behaviors?*

Contextual Moderators

As discussed earlier, contextual factors such as elements of the interaction environment can impact how a signal is received and interpreted (Connelly et al., 2011). The contextual factors varied in the present study (see Figure 2 Box 3) are relatively novel in the charismatic leadership space, and thus there is insufficient evidence to warrant formal predictions regarding the nature of the relationships between these variables. Furthermore, as these contextual factors vary between experiments rather than within experiments, the role of these potential moderators will be explored in the meta-analytic review. First, signal cost has long been suggested as impacting the efficacy of charismatic signaling, but it has been understudied. In their updated conceptualization of charismatic leadership as charismatic leader signaling Antonakis et al. (2016) wrote, "leaders cannot say one thing and do another … because in the long run they risk losing their credibility and hence the charismatic effect" (p. 305). While directly contradictory actions would almost certainly interfere with the efficacy of charismatic signaling, the impact of signal cost has yet to be directly studied. Signal cost is sometimes assumed in research on signaling theory, as Connelly et al. (2011) pointed out that scholars including Bird and Smith (2005) even referred to it as the "theory of costly signaling." Previous research in charismatic leadership, however, has yet to directly manipulate signal cost to identify its impact on CLT efficacy. Furthermore, there may be a gender difference in terms of the role signal cost plays in the efficacy of charismatic signaling. I will investigate this possibility in an exploratory and inductive manner. Thus, I ask:

> *Research Question 5: To what extent does signal cost moderate the charismatic effect, and does signal cost operate differently based on leader gender?*

Another potential contextual moderator to consider is the formality of the authority of the leader. Recent work has solidified the idea that "doing leadership" is far more than holding

positional power (Van De Mieroop, Clifton, & Verhelst, 2020), and this remains true within charismatic leadership specifically. Observational studies have explored CLT efficacy in the context of informal leadership settings where leaders seek to influence others (e.g., CEO tweets and TED Talk speakers in Tur et al., 2021), but experimental work has largely focused on leaders providing explicit instruction to followers as if they were a formal supervisor (e.g., Antonakis et al., 2022; Meslec et al., 2020). Charismatic leadership has proven effective in both contexts, but to date there has been no direct comparison to identify whether the magnitude of the effect varies depending on the formality of the context. Again, there is the potential for a gendered effect here, as formal authority may benefit women more than it benefits men, as formal authority can add perceived legitimacy as it can be interpreted as evidence of competence. Thus, I ask:

> *Research Question 6: What role does formality of authority play in moderating the charismatic effects, and does formality operate differently based on leader gender?*

Details regarding the design of the experiments and operationalization of relevant variables to test the hypothesized relationships are discussed below.

CHAPTER TWO: METHODOLOGY

Overview of Experiments

To test the above hypothesis and research questions, I conducted four separate experiments, all of which tested for a 2 X 2 gender and charisma interaction. The experiments differed in the contextual factors of signal cost and whether the leader has formal authority. Namely, Experiment 1 featured a leader with formal authority and low signal cost, Experiment 2 featured a leader without formal authority and low signal cost, Experiment 3 featured a leader with formal authority and high signal cost, and Experiment 4 featured a leader without formal authority and high signal cost. Data were collected through nationally representative panels of working adults accessed through Prolific. I conducted analysis first within the experiments, and then for the purpose of meta-analysis, I split each experiment into two samples depending on the gender of the leader in the manipulation. I conducted meta-analysis on these 8 samples to identify the influence of leader gender and contextual variables on the charismatic effect.

Open Science Practices

All studies were preregistered and are available via the project page on the Open Science Framework (https://osf.io/vbqkx/?view_only=19ffb14611c044ad91bee2ce07152f1f), where data, analytic code, scale items, and study materials are available. Additionally, the completed transparency checklist (Aczel et al., 2020) is available in Appendix E. Furthermore, study materials and the full survey administered to participants are available in Appendices A through C.

Participants

Through a power analysis, I determined that each condition of the 2 X 2 between subjects design needed 50 participants to demonstrate adequate statistical power with an assumed power of .80, alpha of .05, and an effect size of $d = 0.20$. Thus, I sought to recruit approximately 250 participants per experiment, with a total of 1,000 participants for the four experiments. As the main focus would be the meta-analytic summary, attracting enough participants to ensure sufficient power to detect a significant effect at the level of each experiment was not prioritized. Panel data was obtained via Prolific and consisted of a nationally representative sample. I collected usable data from 1,004 participants, and demographic features of the full sample as well as participants for each experiment can be found in Table 2. Overall, both the randomization and the selection of a representative sample worked well. The final demographic breakdown of the sample closely matches 2015 US Census data (US Census Bureau, 2015), with the exception of Hispanic/LatinX representation (5% in the present sample compared to 17% US population), which can be expected as Prolific does not include this criterion in the creation of representative samples.

Experimental Procedure and Measurement

Procedure

Participants were recruited via Prolific but interacted with all study materials through Qualtrics, an online survey platform. They completed a consent form, and then watched a five-minute video of a speech containing the experimental manipulation, which is described in greater detail below. Participants completed a questionnaire comprised of questions about the content of the speech, their evaluation of the leader, and their demographic information. Participants in each experiment were randomly assigned to one of the four conditions: woman low charisma, woman high charisma, man low charisma, or man high charisma. The content of the survey and nature of

the manipulation are described in greater detail below, and study materials are available in Appendices A – C.

Leader Gender

Depending on condition, the participant was presented with a speech given by a white man (George) or by a white woman (Jane). The man and the woman delivering the speeches were the same race (white) and similar in age, height, and hair color. All speeches were recorded within the same session, and the actors collaborated to ensure their pacing and manner of speaking was consistent to minimize differences between their performances.

Charismatic Signaling

The actors delivered two versions of the same speech, which described the mission and history of the charitable organization Feeding America as well as providing background on food insecurity and hunger in the United States. The speeches close with information on ways to support Feeding America and encourage participants to contribute their money, food items, or time to the cause. The informational content of the two speeches was the same, with the key difference being that one was high in charismatic signaling behaviors and the other was a standard speech. The charismatic and standard speeches consisted of 749 and 742 words, respectively. The difference in charismatic signaling between the two speeches was confirmed both by hand coding as well as objective means. The first author and additional coder found 1 and 12 CLTs in the non-charismatic speech and 33 and 45 CLTs in the charismatic speech, respectively. I ensured the charismatic speech was significantly more charismatic than the standard speech using the NLP algorithm developed by Garner, Bornet, Loupi, Antonakis, and Rohner (2019). The NLP algorithm confirmed the difference between the two speeches with the charismatic speech featuring 31.23 CLTs and the standard speech featuring 13.86 CLTs.

Examples of CLTs featured in the charismatic speech include metaphors (“struggling to stay afloat” and “fighting on the front lines of hunger”) and rhetorical questions (“Can you imagine having to choose between paying your bills and buying food?”.

Signal Cost

Signal cost was manipulated through a short vignette preceding the video of the speech, which has been shown to be effective in experiments regarding charismatic signaling (Maran et al., 2021). In Studies 1 and 2, no mention of personal cost was made. In Studies 3 and 4, however, the vignette explained that the leader devoted much of their personal time and resources to the cause, in that they often donate food items and volunteer one Saturday per month.

Formal and Informal Authority

Similar to signal cost, formal or informal authority was manipulated in the vignette preceding the speech. In Studies 1 and 3, the leader was described as the volunteer coordinator for the organization, a formal, paid leadership position that the leader has held for two years. In Studies 2 and 4, the leader was described as a frequent volunteer within the organization who has been volunteering their free time for two years.

Evaluations: Attributed Charisma

To capture evaluations of leader charisma, participants completed five scales from the Podsakoff, MacKenzie, Moorman, and Fetter (1990) measure of transformational leadership. These subscales—articulating a vision, providing a role model, setting high performance expectations, intellectual stimulation, and fostering acceptance of group goals—are consistent with updated definitions and conceptualizations of charismatic leadership (Antonakis et al., 2016). The 18 items were rated on a five-point Likert scale from 1 “strongly disagree” to 5

"strongly agree." A sample item is "inspires others with his/her plans for the future." The wording of items was slightly adapted to 1) add feminine pronouns 2) ensure the items were appropriate for a single observation. Items are listed in full in the appendix. The measure demonstrated sufficient internal consistency with an omega-hierarchical value of .84 in this sample, indicating that 84% of the variance attributed to the overarching factor is shared by all items (Cortina et al., 2020).

Evaluations: Leader Prototypicality

Participants rated their perceptions of the leader's prototypicality using three items developed by Cronshaw and Lord (1987) as used in previous research (Antonakis et al., 2011). The three items are "the person I am rating demonstrates leader behavior", "the person I am rating acts like a typical leader", and "the person I am rating fits my image of a leader." Items were slightly adapted following the lead of Ernst et al. (2022) in that the wording of the first item was changed slightly to reflect a single observation. Items were rated on a five-point Likert-type scale ranging from 1 "strongly disagree" to 5 "strongly agree." The omega value for the prototypicality scale in this sample was .92.

Additional Evaluations

Several different scales used in previous research on charisma attributions and evaluations of leaders were used for the purposes of this research. Using a series of single-item measures, participants rated their positive affect toward the leader ("I like this person as a leader"), trust in the leader ("the person that I am rating is easily trusted"), leader competence ("the person that I am rating is competent as a leader"), and leader influencing ability ("the person I am rating is able to easily influence others"). Finally, participants were also asked to respond to what extent they believe the leader deserves to be promoted to the next level of

leadership “The person I am rating should be promoted to the next level of management.” These items have been used in previous studies on charismatic leadership (Antonakis et al., 2011; Ernst et al., 2022; Jacquart et al., 2016) and are thus useful for comparison of results between studies. Items were rated on a five-point Likert-type scale ranging from 1 “strongly disagree” to 5 “strongly agree” and examined independently.

Follower Behavior

Participants were offered “bonus compensation” of $2 which they then had the opportunity to keep or to donate to Feeding America, with donation options ranging from $0 to $2 in half dollar increments. In fact, the participants received the full “bonus” compensation amount regardless of their choice, but the researchers pledge to match the amount participants intended to donate to honor their wishes. Participants were debriefed at the end of the survey and offered an opportunity to email the research team for an update regarding the contribution made to Feeding America.

Attention Check

To ensure participants attended to the speech and the gender of the leader, participants answered a few questions regarding the vignette, and the leader. These items were administered after the main survey. Sample items include “what was the leader’s name?” and “was the leader a man or a woman?” in addition to the question “was the leader a paid employee of Feeding America or a volunteer?”

Participant Demographics

After completing the main survey questions, participants were asked to indicate their demographic information, including their gender identity, age, race, and ethnicity.

Incentive and Donation

Participants were compensated for their time, with each participant receiving $2.50. Additionally, participants were offered an additional $2 in compensation, which they were led to believe they may choose to keep, partially donate, or donate in full to Feeding America. In actuality, participants received the full bonus compensation regardless of their choice, while the research team did indeed match the intended donations. Thus, all participants were compensated $4.50 regardless of the condition or their choice regarding donation.

CHAPTER THREE: RESULTS

Data Preparation and Screening

Data were collected online through Qualtrics and exported as a .csv file for analysis in the statistical software package R. I reviewed the data and excluded participants who did not finish the survey (n = 4). This resulted in a final sample of 1,004 participants. The median completion time for the survey was just under 11 minutes and including the bonus payment, the average hourly reward for participants was $23.83.

Descriptive Statistics and Correlations

Participant demographics by experiment can be found in Table 2, and means, standard deviations, and correlations for study variables can be found in Table 3. Descriptive statistics and correlations for each individual experiment can be found in Appendix D.

Table 2
Sample Characteristics by Experiment

	Experiment 1	Experiment 2	Experiment 3	Experiment 4	Total Sample	
N	254	246	248	256	1004	
Women	124	118	134	130	506	50%
Men	126	122	110	122	480	48%
Non-Binary or Prefer not to Say	4	6	4	4	18	2%
Age	45.39 *(16.29)*	44.13 *(15.26)*	45.61 *(16.02)*	43.46 *(16.43)*	44.64 (16.02)	
White	194	188	189	205	776	77%
Black or African American	30	34	32	31	127	13%
Asian or Pacific Islander	17	14	18	12	61	6%
Multiracial	11	9	8	8	36	4%
American Indian or Alaska Native	2	1	1	0	4	0%
Hispanic/LatinX	12	11	11	17	51	5%

Overall, randomization worked quite well, with the experiments featuring comparable distributions of participants of different demographic characteristics. In terms of participant responses, ratings for leader charisma and leader prototypicality were quite high, with means of 4.00 and 3.95, respectively. Average ratings for leader outcomes were also high, with means ranging from 3.84 (promotability) to 4.25 (competence). In terms of the behavioral outcome, about half of participants chose to donate at least some of the bonus compensation (n = 497), and the average amount donated across all participants was $0.69. The most commonly selected donation was $1.00 ($n$ = 225) closely followed by donating the full $2.00 ($n$ = 218). I tested the normality of the outcome variables and found that most of the outcome variables were slightly negatively skewed and showed indication of ceiling effects. The one exception to this was the donation variable, which was strongly positively skewed and featured a trimodal distribution, with participants most likely to donate $0, $1, or $2 in order of frequency. I conducted all analyses with a transformed and non-transformed donation variable to ensure the non-normal distribution did not impact the findings. For ease of interpretability, results with non-transformed variables are presented first.

Table 3

Means, Standard Deviations, and Correlations with Confidence Intervals

Variable	*M*	*SD*	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1. Participant gender	0.51	0.5																			
2. Age	44.64	16.02	.08* [.01, .14]																		
3. Leader woman	0.5	0.5	-0.02 [-.08, .04]	0.01 [-.05, .07]																	
4. CLT	0.5	0.5	0 [-.07, .06]	-0.05 [-.11, .01]	0 [-.06, .06]																
5. Formal authority	0.5	0.5	0.02 [-.04, .08]	0.05 [-.01, .12]	0.01 [-.06, .07]	0 [-.06, .07]															
6. Cost	0.5	0.5	0.04 [-.02, .10]	-0.01 [-.07, .05]	0 [-.06, .06]	0 [-.06, .07]	-0.02 [-.08, .05]														
7. Attributed charisma	4	0.66	0.03 [-.03, .09]	0.03 [-.03, .09]	0.06 [-.01, .12]	0.06 [-.00, .12]	-0.04 [-.10, .02]	0.02 [-.04, .09]													
8. AC vision	4.26	0.66	0.04 [-.02, .10]	0.03 [-.03, .09]	.07* [.01, .13]	0.06 [-.00, .12]	-0.03 [-.09, .04]	-0.01 [-.07, .05]	.87** [.86, .89]												
9. AC model	4.23	0.81	0.05 [-.01, .11]	.13** [.06, .19]	0.02 [-.04, .08]	0.03 [-.03, .09]	-.09** [-.16, -.03]	.12** [.06, .18]	.79** [.76, .81]	.67** [.63, .70]											
10. AC group	4.29	0.72	0.06 [-.01, .12]	-0.01 [-.07, .05]	0.03 [-.03, .09]	0.04 [-.02, .10]	-0.04 [-.10, .02]	0.04 [-.03, .10]	.84** [.82, .86]	.74** [.71, .77]	.67** [.63, .70]										
11. AC performance	3.38	0.95	-0.03 [-.09, .03]	-0.01 [-.07, .05]	.07* [.00, .13]	0.06 [-.00, .12]	-0.03 [-.10, .03]	-0.01 [-.08, .05]	.70** [.67, .73]	.48** [.43, .52]	.39** [.34, .44]	.47** [.42, .52]									
12. AC intellectual	3.69	1	0.02 [-.04, .08]	0.02 [-.04, .08]	0.04 [-.02, .10]	0.05 [-.01, .11]	0 [-.07, .06]	0 [-.06, .06]	.84** [.82, .86]	.64** [.60, .68]	.55** [.51, .59]	.58** [.53, .62]	.52** [.47, .56]								
13. Prototypicality	3.95	0.98	0.06 [-.00, .12]	.07* [.01, .13]	.10** [.03, .16]	.08* [.02, .14]	0.01 [-.06, .07]	0.05 [-.01, .11]	.73** [.70, .76]	.67** [.63, .70]	.65** [.61, .68]	.62** [.58, .66]	.46** [.41, .50]	.57** [.53, .61]							
14. Like	4.19	0.95	0.05 [-.01, .11]	.07* [.01, .13]	0.05 [-.01, .12]	.07* [.01, .13]	0.01 [-.05, .07]	0.05 [-.01, .11]	.72** [.69, .75]	.69** [.65, .72]	.70** [.66, .73]	.63** [.60, .67]	.36** [.30, .41]	.58** [.53, .62]	.76** [.74, .79]						
15. Trust	4.18	0.9	.07* [.00, .13]	.09** [.03, .15]	0.04 [-.02, .10]	0.03 [-.03, .09]	0.01 [-.06, .07]	0.02 [-.04, .08]	.60** [.56, .64]	.55** [.50, .59]	.58** [.53, .62]	.53** [.49, .58]	.29** [.23, .34]	.51** [.46, .55]	.58** [.54, .62]	.71** [.67, .74]					
16. Competent	4.25	0.88	0.05 [-.01, .11]	0.02 [-.05, .08]	.07* [.01, .13]	0.05 [-.01, .11]	0 [-.06, .06]	0.04 [-.02, .10]	.71** [.68, .74]	.68** [.65, .72]	.66** [.62, .69]	.65** [.61, .68]	.36** [.31, .42]	.55** [.51, .59]	.75** [.72, .78]	.81** [.78, .83]	.68** [.65, .71]				
17. Influence	4.01	0.95	0.05 [-.01, .11]	0.04 [-.02, .10]	.08* [.02, .14]	.11** [.05, .17]	-0.06 [-.12, .00]	0 [-.06, .06]	.71** [.68, .74]	.68** [.64, .71]	.58** [.53, .62]	.63** [.59, .66]	.44** [.39, .49]	.57** [.53, .61]	.70** [.67, .73]	.70** [.67, .73]	.58** [.54, .62]	.72** [.69, .75]			
18. Promote	3.84	1	0.06 [-.00, .12]	-0.01 [-.08, .05]	.09** [.03, .15]	.10** [.04, .16]	-0.04 [-.10, .02]	0.03 [-.03, .09]	.71** [.68, .74]	.64** [.60, .67]	.60** [.56, .64]	.57** [.53, .61]	.45** [.40, .50]	.61** [.56, .64]	.69** [.66, .72]	.73** [.70, .76]	.58** [.54, .62]	.70** [.67, .73]	.70** [.67, .73]		
19. Donate (binary)	0.5	0.5	.09** [.03, .15]	.18** [.12, .24]	0.05 [-.01, .11]	0.01 [-.05, .07]	0.02 [-.04, .08]	0.02 [-.04, .08]	.14** [.08, .20]	.16** [.10, .22]	.16** [.10, .22]	.11** [.04, .17]	-0.01 [-.07, .05]	.14** [.08, .20]	.13** [.07, .19]	.20** [.14, .26]	.16** [.10, .22]	.13** [.07, .19]	.13** [.07, .19]	.13** [.07, .19]	
20. Donate (amount)	0.69	0.8	.10** [.04, .16]	.18** [.12, .24]	0.06 [-.00, .12]	0.03 [-.03, .10]	0 [-.06, .06]	0.04 [-.02, .10]	.12** [.06, .18]	.16** [.10, .22]	.16** [.10, .22]	.10** [.04, .16]	-0.04 [-.10, .02]	.11** [.05, .17]	.12** [.06, .18]	.17** [.11, .23]	.13** [.07, .19]	.10** [.04, .16]	.12** [.06, .18]	.10** [.04, .16]	.87** [.85, .88]

Note: n = 1,004; * indicates p < .05; ** indicates p < .01; Participant gender 0 = man, 1 = woman; Leader woman 0 = no, 1 = yes; CLT 0 = low charisma, 1 = high charisma; AC vision = articulating a vision; AC model = provide appropriate model; AC group = fostering acceptance of group goals; AC performance = high performance expectations; AC intellectual = intellectual stimulation; Donate (binary) 0 = no, 1 = yes; Donate (amount) in USD.

Experiments 1-4: Results

The first step in testing my hypotheses and research questions was to run a series of ANOVAs within each experiment. Thus, I was able to identify main effects of the study variables as well as identify where an interaction might exist. ANOVA output for attributed charisma and leader prototypicality for each study can be found in Table 4 and Table 5 respectively. Furthermore, Cohen's *d* values for CLT use and leader gender's impact on the additional evaluations are presented in Table 6. To test Hypothesis 1, I examined the charisma coefficient to identify whether charismatic signaling was associated with more positive evaluations regardless of leader gender as hypothesized within each of the four experiments. While the pattern of results suggested a positive main effect for charismatic signaling, the small sample within each study resulted in limited power. For Experiment 4, a two-way ANOVA suggested a significant main effect of charismatic signaling ($F(1,252) = 3.892$, $p = .050$), such that charismatic signaling resulted in more positive evaluations. When collapsing the experiments into one dataset, results of a two-way ANOVA revealed the main effect of charismatic signaling did not reach statistical significance $F(1,437) = 3.743$, $p = .053$. Results for leader prototypicality were slightly more supportive of a main effect of charismatic signaling, with some significant effects emerging for Experiment 1 ($F(1,250) = 4.083$, $p = .044$) and the full sample ($F(1,1000) = 6.643$, $p = .010$). In terms of the additional evaluations, charismatic signaling led to significantly higher ratings of influence, competence, and promotability in Experiment 1, and increased ratings of likeability, influence, and promotability in the full sample (see Table 6). The main effect of charismatic signaling differed in magnitude and significance across the experiments and specific evaluations, so no consistent evidence emerged in support for Hypothesis 1.

Table 4

Two-Way Analysis of Variance of Attributed Charisma by Charismatic Condition and Leader Gender

Experiment 1: Formal Authority No Cost					
	df	*SS*	*MS*	*F*	*p*
Charismatic	1	1.35	1.353	2.275	0.133
Woman	1	1.41	1.406	2.364	0.124
Charisma*Woman	1	2.29	2.286	3.845	0.051
Residuals	250	148.64	0.595		
Experiment 2: No Authority No Cost					
	df	*SS*	*MS*	*F*	*p*
Charismatic	1	0.40	0.403	1.018	0.314
Woman	1	2.10	2.099	5.307	0.022
Charisma*Woman	1	0.46	0.459	1.160	0.283
Residuals	242	95.72	0.396		
Experiment 3: Formal Authority High Cost					
	df	*SS*	*MS*	*F*	*p*
Charismatic	1	0.66	0.664	1.822	0.178
Woman	1	0.09	0.095	0.259	0.611
Charisma*Woman	1	0.00	0.002	0.004	0.948
Residuals	244	88.95	0.365		
Experiment 4: No Authority High Cost					
	df	*SS*	*MS*	*F*	*p*
Charismatic	1	1.47	1.470	3.892	0.050
Woman	1	0.00	0.030	0.008	0.929
Charisma*Woman	1	0.03	0.033	0.087	0.769
Residuals	252	95.19	0.378		
Full Sample					
	df	*SS*	*MS*	*F*	*p*
Charismatic	1	1.60	1.639	3.743	0.053
Woman	1	1.40	1.396	3.189	0.074
Charisma*Woman	1	0.10	0.122	0.279	0.597
Residuals	1000	437.80	0.438		

Table 5

Two-Way Analysis of Variance of Perceived Leader Prototypicality by Charismatic Condition and Leader Gender

Experiment 1: Formal Authority No Cost					
	df	*SS*	*MS*	*F*	*p*
Charismatic	1	4.13	4.134	4.083	0.044
Woman	1	9.07	9.071	8.958	0.003
Charisma*Woman	1	0.81	0.814	0.804	0.371
Residuals	250	253.16	1.013		
Experiment 2: No Authority No Cost					
	df	*SS*	*MS*	*F*	*p*
Charismatic	1	0.04	0.040	0.040	0.841
Woman	1	6.75	6.754	6.908	0.009
Charisma*Woman	1	0.02	0.021	0.022	0.883
Residuals	242	236.60	0.978		
Experiment 3: Formal Authority High Cost					
	df	*SS*	*MS*	*F*	*p*
Charismatic	1	1.86	1.861	2.129	0.146
Woman	1	0.55	0.549	0.628	0.429
Charisma*Woman	1	0.15	0.153	0.175	0.676
Residuals	244	213.28	0.874		
Experiment 4: No Authority High Cost					
	df	*SS*	*MS*	*F*	*p*
Charismatic	1	3.19	3.187	3.575	0.060
Woman	1	0.18	0.179	0.201	0.654
Charisma*Woman	1	0.20	0.200	0.225	0.636
Residuals	252	224.63	0.891		
Full Sample					
	df	*SS*	*MS*	*F*	*p*
Charismatic	1	6.30	6.267	6.643	0.010
Woman	1	8.70	8.745	9.269	0.002
Charisma*Woman	1	0.10	0.130	0.138	0.711
Residuals	1000	943.40	0.943		

Table 6

Impact of CLT use and Leader Gender on Additional Evaluatoions

Experiment 1: Formal Authority No Cost					
	Like	Trust	Influence	Competent	Promote
Charisma	0.185	0.111	0.387	0.299	0.298
Woman	0.184	0.159	0.249	0.278	0.424
Experiment 2: No Authority No Cost					
	Like	Trust	Influence	Competent	Promote
Charisma	0.120	0.118	0.038	0.161	0.080
Woman	0.184	0.167	0.204	-0.289	0.244
Experiment 3: Formal Authority High Cost					
	Like	Trust	Influence	Competent	Promote
Charisma	0.248	0.121	0.241	0.089	0.154
Woman	0.166	0.089	0.154	0.115	0.104
Experiment 4: No Authority High Cost					
	Like	Trust	Influence	Competent	Promote
Charisma	0.222	0.109	0.166	0.161	0.245
Woman	0.110	0.068	0.026	0.115	0.045
Full Sample					
	Like	Trust	Influence	Competent	Promote
Charisma	0.137	0.059	0.215	0.102	0.196
Woman	0.108	0.087	0.160	0.144	0.188

Cohen's d values of |.249| or greater in magnitude are significant at the $p < .05$ level for the individual experiments. For the full sample, Cohen's d values of |.13| or greater in magnitude are significant at the $p < .05$ level.

To test Hypothesis 2 and identify the impact of charismatic signaling on donation behavior, I conducted another series of ANOVAs with follower donating behavior as the outcome variable. I operationalized donating behavior as a ratio variable (0 – did not donate, .50 – donated $.50, 1 – donated $1.00, 1.5 – donated $1.50, and 2 – donated $2.00). I ran ANOVAs to identify main effects and potential interactions, results of which can be seen in Table 7. To identify whether leader charismatic signaling was associated with follower donating behavior and test Hypothesis 2, I examined the F value for charismatic signaling. The main effect for charismatic signaling was not significant within any of the experiments or across the full sample. Thus, Hypothesis 2 was not supported by analysis within experiments.

Table 7

Two-Way Analysis of Variance of Donating Behavior (Continuous) by Charismatic Condition and Leader Gender

Experiment 1: Formal Authority No Cost					
	df	*SS*	*MS*	*F*	*p*
Charismatic	1	0.46	0.464	0.776	0.379
Woman	1	0.52	0.521	0.872	0.351
Charisma*Woman	1	0.23	0.227	0.380	0.538
Residuals	250	149.24	0.597		
Experiment 2: No Authority No Cost					
	df	*SS*	*MS*	*F*	*p*
Charismatic	1	0.65	0.647	1.010	0.316
Woman	1	0.23	0.230	0.359	0.550
Charisma*Woman	1	0.44	0.438	0.683	0.409
Residuals	242	155.02	0.641		
Experiment 3: Formal Authority High Cost					
	df	*SS*	*MS*	*F*	*p*
Charismatic	1	1.46	1.463	2.351	0.126
Woman	1	0.29	0.291	0.468	0.495
Charisma*Woman	1	1.04	1.039	1.669	0.198
Residuals	244	151.86	0.622		
Experiment 4: No Authority High Cost					
	df	*SS*	*MS*	*F*	*p*
Charismatic	1	0.35	0.352	0.511	0.476
Woman	1	1.35	0.330	1.3347	0.165
Charisma*Woman	1	0.85	0.854	1.240	0.266
Residuals	252	173.44	0.688		
Full Sample					
	df	*SS*	*MS*	*F*	*p*
Charismatic	1	0.70	0.717	1.128	0.289
Woman	1	2.10	2.118	3.331	0.068
Charisma*Woman	1	0.40	0.387	0.609	0.435
Residuals	1000	635.80	0.636		

To investigate Research Question 1, I examined the leader gender coefficient of the ANOVAs. For attributed charisma, a main effect of leader gender emerged for Experiment 2 ($F(1,242) = 5.307$, $p = .022$), such that the woman leader was attributed more charisma on average compared to the leader who was a man. Tukey's HSD revealed that after accounting for multiple comparisons the main effect of gender remained significant, but there were no significant differences between cell means of the different conditions. For leader prototypicality, significant main effects emerged for Experiment 1 ($F(1,250) = 8.958$, $p = .003$), Experiment 2 ($F(1,242) = 6.908$, $p = .009$), and the full sample ($F(1,1000) = 9.269$, $p = .002$), such that the woman leader was rated as more prototypical compared to the leader who was a man. Tukey's HSD revealed that the main effect of gender persisted for Experiment 1, Experiment 2, and the full sample, and also that there was a significant difference in means between the woman high charisma condition and the man low charisma condition (Experiment 1, full sample) as well as the woman high charisma and man high charisma conditions (Experiment 1). For the other leader outcomes, women were advantaged in ratings of influence, competence, and promotability in Experiment 1 and were advantaged in ratings of promotability but disadvantaged in ratings of competence in Experiment 2. The advantage in perceived influence, competence, and promotability held for women when collapsing the experiments into a single sample. Thus, these results from within the experiments suggest there may be a bias in favor of women in this context, providing an initial answer to Research Question 1. That being said, there was one instance of a significant gender difference that actually benefited men (Experiment 2, competence $d = -.289$.)

I then turned to participant behavior to address Research Question 2, as there is evidence to suggest that even when men and women are evaluated similarly, men are rewarded to a greater

extent than their women peers (Joshi et al., 2015). Turning to the second set of ANOVAs, I examined the gender main effect to identify whether participants donated similarly for men and women leaders, regardless of charismatic condition. The main effect for gender was not significant across the full sample $F(1,1000) = 3.331$, $p = .068$. Though the pattern of the results may suggest a potential main effect for gender, the results at the within-experiment level do not support the idea of a main effect for gender on participant donation behavior.

Gender and Charisma Interaction within Experiments

To test the potential interaction between leader gender and charismatic signaling and answer Research Question 3, I examined the interaction coefficient of the ANOVAs. I did not predict the form of this interaction as there was insufficient evidence to support a solid hypothesis. For attributed charisma, there no significant interaction between leader gender and charismatic signaling, though the interaction term for Experiment 1 approached statistical significance ($F(1,250) = 3.845$, $p = .051$). Leader prototypicality exhibited no interaction effect, nor did any of the other evaluations. Upon examination of the form of the relationship for the one interaction effect that bordered on significance, it appears that leader gender has a strengthening interaction such that women leaders could benefit more from the use of charismatic leadership tactics than men, which is described by Gardner, Harris, Li, Kirkman, and Mathieu (2017) as accentuating. That being said, there was no statistically significant evidence within each experiment supporting this potential interaction. To identify whether this pattern held for participant behaviors and answer Research Question 4, I repeated the same procedure for participant donations. There was no evidence of an interactive effect between leader gender and charismatic signaling for participant donation behavior within Experiments 1-4.

Meta-Analytic Results and Summary Effect Sizes

To create a summary effect size and understand the gender and charismatic signaling relationship across the experiments, I used the metafor package in R to conduct a meta-analysis (Viechtbauer, 2010). The meta-analytic estimates of effect size are more credible as they are least influenced by random sampling error and provide an overall summary estimate of main effects. Furthermore, a meta-analytic procedure allows us to compare the influence of charismatic signaling between groups with women leaders vs men leaders. Full results from the meta-analysis of the charismatic signaling effect size can be found in Table 8. One note is that caution should be used when interpreting the I^2 values as they can be biased in either direction when the number of studies is small (von Hippel, 2015). As *k* for this prospective meta-analysis ranges between 4 and 8, I^2 values may not be representative of actual heterogeneity. That being said, the present data quality is far higher than previous meta-analyses as data are not endogenous.

Table 8

Meta-Analytic Results - Charismatic Signaling Effect Size

Overall						
Outcome	*k*	*n*	*d*	*SE*	95% CI	I^2
Attributed Charisma	8	1002	0.1854	0.0318	[.1232 - .2476]	0.00%
Prototypicality	8	1002	0.1766	0.0501	[.0784 - .2748]	59.84%
Like	8	1002	0.1943	0.0318	[.1320 - .2565]	0.00%
Trust	8	1002	0.1146	0.0318	[.0524 - .1768]	0.00%
Influence	8	1002	0.2081	0.0729	[.0652 - .3511]	81.05%
Competence	8	1002	0.1776	0.044	[.0915 - .2638]	47.82%
Promote	8	1002	0.1949	0.0481	[.1006 - .2891]	56.39%
Donate	8	1002	0.1308	0.0318	[.0685 - .1930]	0.00%
Woman Leader						
Outcome	*k*	*n*	*d*	*SE*	95% CI	I^2
Attributed Charisma	4	498	0.271	0.0614	[.1506 - .3914]	45.49%
Prototypicality	4	498	0.2105	0.0679	[.0773 - .3436]	55.42%
Like	4	498	0.284	0.0454	[.1951 - .3729]	0.00%
Trust	4	498	0.1801	0.0476	[.0869 - .2733]	9.00%
Influence	4	498	0.2511	0.106	[.0433 - .4589]	81.70%
Competence	4	498	0.2321	0.0567	[.1211 - .3432]	35.92%
Promote	4	498	0.2844	0.0674	[.1523 - .4166]	54.74%
Donate	4	498	0.1545	0.0777	[.0022 - .3068]	65.90%
Man Leader	4	498				
Outcome	*k*	*n*	*d*	*SE*	95% CI	I^2
Attributed Charisma	4	504	0.1342	0.0643	[.0082 - .2601]	50.77%
Prototypicality	4	504	0.1436	0.0592	[.0276 - .2596]	41.98%
Like	4	504	0.1051	0.056	[-.0047 - .2149]	35.19%
Trust	4	504	0.087	0.0451	[-.0014 - .1753]	0.00%
Influence	4	504	0.2156	0.0451	[.1272 - .3040]	0.00%
Competence	4	504	0.1217	0.0451	[.0333 - .2101]	0.00%
Promote	4	504	0.1046	0.0451	[.0162 - .1929]	0.00%
Donate	4	504	0.1344	0.059	[.0188 - .2500]	41.55%

Formal Authority						
Outcome	*k*	*n*	*d*	*SE*	95% CI	I^2
Attributed Charisma	4	502	0.1797	0.0449	[.0917 - .2677]	0.00%
Prototypicality	4	502	0.2186	0.0449	[.1306 - .3066]	0.00%
Like	4	502	0.2164	0.0449	[.1284 - .3044]	0.00%
Trust	4	502	0.1156	0.0449	[.0276 - .2037]	0.00%
Influence	4	502	0.3144	0.0733	[.1706 - .4581]	62.52%
Competence	4	502	0.1939	0.1049	[-.0117 - .3996]	81.69%
Promote	4	502	0.2263	0.0715	[.0861 - .3665]	60.59%
Donate	4	502	0.1526	0.0449	[.0646 - .2406]	0.00%
Informal Authority						
Outcome	*k*	*n*	*d*	*SE*	95% CI	I^2
Attributed Charisma	4	500	0.1906	0.0576	[.0777 - .3035]	39.26%
Prototypicality	4	500	0.1344	0.1031	[-.0678 - .3365]	81.04%
Like	4	500	0.1719	0.0507	[.0725 - .2713]	21.54%
Trust	4	500	0.1135	0.0449	[.0255 - .2015]	0.00%
Influence	4	500	0.1025	0.0637	[-.0224 - .2274]	50.34%
Competence	4	500	0.1609	0.0449	[.0729 - .2489]	0.00%
Promote	4	500	0.1632	0.0824	[.0016 - .3247]	70.31%
Donate	4	500	0.109	0.0449	[.0210 - .1970]	0.00%
High Cost						
Outcome	*k*	*n*	*d*	*SE*	95% CI	I^2
Attributed Charisma	4	502	0.2101	0.0448	[.1223 - .2980]	0.00%
Prototypicality	4	502	0.2123	0.0448	[.1244 - .3001]	0.00%
Like	4	502	0.2349	0.0448	[.1471 - .3227]	0.00%
Trust	4	502	0.115	0.0448	[.0271 - .2028]	0.00%
Influence	4	502	0.2025	0.0448	[.1147 - .2903]	0.00%
Competence	4	502	0.1255	0.0448	[.0377 - .2133]	0.00%
Promote	4	502	0.2005	0.0453	[.1117 - .2893]	2.20%
Donate	4	502	0.1416	0.0531	[.0375 - .2458]	28.86%
No Cost						
Outcome	*k*	*n*	*d*	*SE*	95% CI	I^2
Attributed Charisma	4	500	0.1605	0.045	[.0723 - .2486]	0.00%
Prototypicality	4	500	0.1406	0.1095	[-.0739 - .3551]	83.10%
Like	4	500	0.1533	0.045	[.0651 - .2415]	0.00%
Trust	4	500	0.1142	0.045	[.0260 - .2024]	0.00%
Influence	4	500	0.2129	0.1746	[-.1294 - .5552]	93.36%
Competence	4	500	0.2302	0.0689	[.0951 - .3653]	57.39%
Promote	4	500	0.1892	0.1086	[-.0237 - .4021]	82.84%
Donate	4	500	0.1201	0.045	[.0319 - .2082]	0.00%

To further test Hypothesis 1, I examined the meta-analytic effect size estimate for evaluations of leaders. For the influence of charismatic signaling on attributed charisma we found a medium effect (d = .185; k = 8; n = 1,002; standard error = .0318, 95% CI .12 to .25; I^2 = 0.00%), an effect of practically significant magnitude. The impact of charismatic signaling on evaluations of leaders was positive and consistent across outcome variables, with no confidence intervals for the impact of CLT use on evaluations of the leader including zero. The largest summary effect size within the overall meta-analysis was influence at d = .21 (k = 8; n = 1,002; standard error = .0729; 95% CI .07 to .35; I^2 = 81.05%), while the smallest was trust at d = .11 (k = 8; n = 1,002; standard error = .0318; 95% CI .05 to .18; I^2 = 0.00%). Taken together, these meta-analytic estimates provide support for Hypothesis 1, that charismatic signaling leads to more positive evaluations of leaders regardless of leader gender. To evaluate Hypothesis 2, I examined the meta-analytic summary effect size for participant donation. The resulting effect size estimate is small to moderate in magnitude and positive at d = .13 (k = 8; n = 1,002; standard error = .0318; 95% CI .07 to .19; I^2 = 0.00%). This effect size provides support for Hypothesis 2, that charismatic signaling increases follower prosocial behavior of donation regardless of leader gender.

Meta-Analytic Results: Subgroup Differences

Another advantage of the meta-analysis was that I was able to compare the charismatic signaling effect size across different contexts and between the man leader and woman leader conditions. This comparison would help answer Research Question 3 and identify the extent to which leader gender impacted the magnitude of the charismatic effect. I compared the effect size estimates for charismatic signaling on follower evaluations for participants who rated the woman leader vs participants in the same experiment who rated the leader who was a man. For every

follower evaluation, the meta-analytic estimate of the magnitude of the charismatic effect was larger for women than for men. The difference in Cohen's *d* values ranged from a small and statistically non-significant difference of .04 (influence) to a substantial difference of .18 (promotability). The test for subgroup differences was statistically significant for likeability (Q_M = 7.70, *df* = 1, *p* = .01) and promotability (Q_M = 5.53, *df* = 1, *p* = .02). The forest plots for the impact of charismatic signaling on likeability and promotability are presented in Figure 3 and Figure 4, respectively.

While not every leader outcome featured a statistically significant difference in the magnitude of the charismatic effect, viewing the form of the results leaves the impression of an overall advantage for women. This provides support for the argument that in these experiments, the woman leader did not see less of a benefit from charismatic signaling than the man, and for some outcomes (promotability and likeability), their use of CLTs led to greater benefits. Thus, I present initial evidence for an interaction between charismatic signaling and leader gender such that women's charismatic signaling could lead to more positive evaluations from followers compared to the exact same signaling from men.

Figure 3.

Meta-Analytic Estimates of the Impact of Charismatic Signaling on Likeability

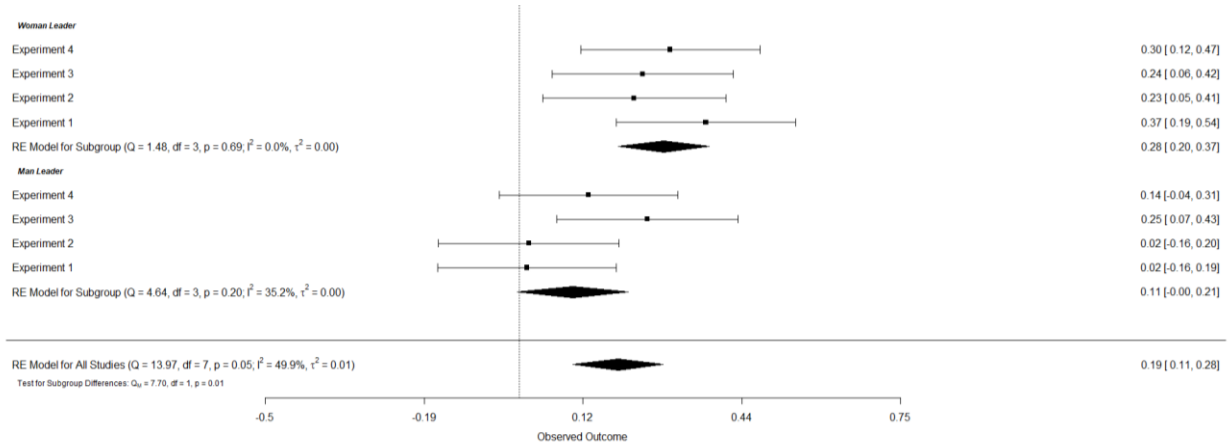
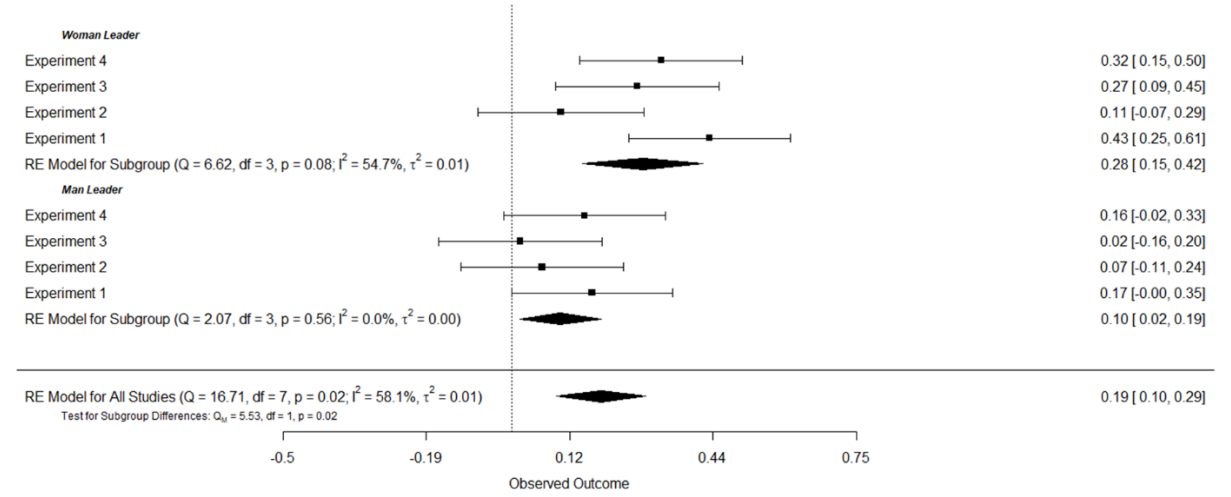


Figure 4.

Meta-Analytic Estimates of the Impact of Charismatic Signaling on Promotability

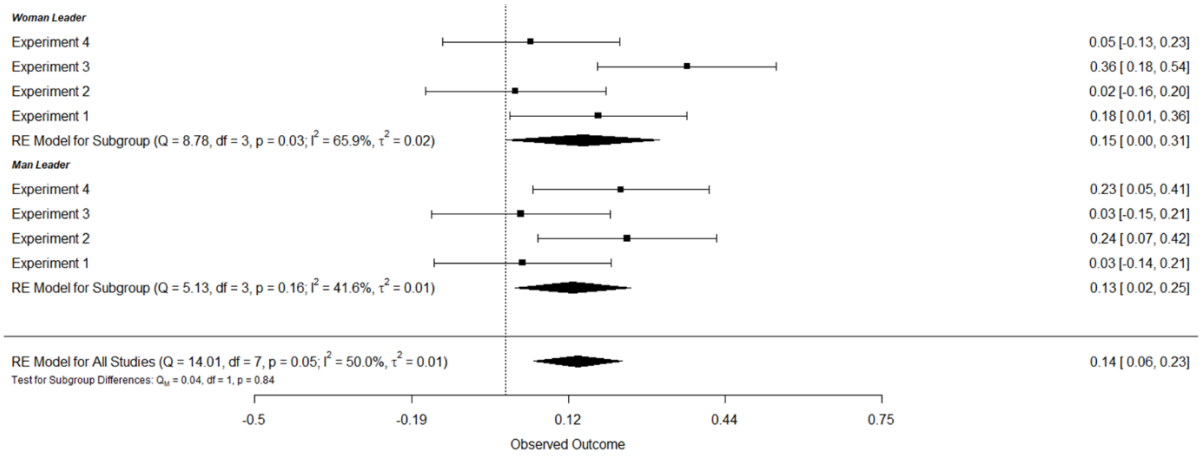


To answer Research Question 4 and identify whether this interaction persisted for donation behavior, I examined the meta-analytic effect size estimates for men and women across the four experiments. The test of subgroup differences between the magnitude of the charismatic effect on donating behavior for men and women did not reveal a statistically significant difference (Q_M = .04, *df* = 1, *p* = .84). This result suggests that the efficacy of CLTs in increasing

donations was not significantly different between men and women. The range of these confidence intervals for each subgroup, however, were comparatively large, leading me to examine the distribution of estimated effect sizes between the individual experiments. Interestingly, the impact of CLT use on donation behavior (as well as leader outcomes) varied substantially for men and women depending on the experiment. I present the forest plot of estimated effect sizes for the CLT to donation relationship by subgroup in Figure 5 as an example. These findings will be discussed further in the presentation of the results of the contextual moderators as well as the discussion section.

Figure 5.

Meta-Analytic Estimates of the Impact of Charismatic Signaling on Donation Amount



Meta-Analytic Results: Contextual Moderators Between Experiments

To identify the role that formal authority and signal cost play in the charismatic effect, I compared the summary effect size between the experiments and ran tests to determine whether the results significantly differed based on demonstrated cost or leader authority. I examined the magnitude of the effect size of charismatic signaling for both evaluations of the leader as well as participant donation behavior.

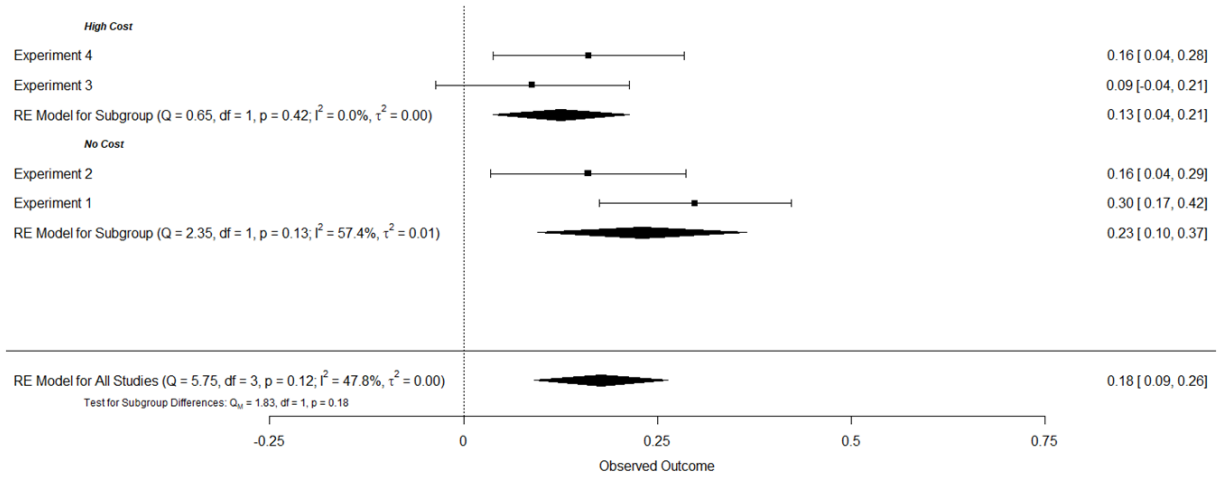
Signal Cost

To answer Research Question 5 and identify whether signal cost impacted the magnitude of the charismatic effect, I compared the magnitude of the charismatic signaling effect size between Experiments 1 and 2 (no cost) and Experiments 3 and 4 (high cost). At first glance, cost did not seem to greatly impact the impact of charismatic signaling on leader outcomes. With one exception, differences in the effect size between the high cost and no cost conditions ranged from .008 (trust) to .082 (likeability), and every confidence interval overlapped, which suggests a lack of practical significance as well. There was one greater difference that emerged based on signal cost, and it was for evaluations of leader competence. Upon examination of the forest plot for leader competence (Figure 6), it appears that there was simply a wider range of possible effect sizes for the no cost experiments compared to the relatively tight grouping of the high cost experiments. A test for subgroup differences revealed no significant difference between the effect size for competence in the high cost and no cost experiments ($Q_M = 1.83$, $df = 1$, $p = .18$).

For the impact of cost on participant donation behavior, I examined the meta-analytic effect size estimates for the impact of charismatic signaling on participant donation between the high cost and no cost experiments. There was no significant difference between the effect size estimates, and the confidence intervals substantially overlapped. Thus, I conclude that when collapsing across leader gender, costly behavior did not substantially impact the efficacy of charismatic signaling on follower evaluations or follower behavior, and there was no meaningful practical difference between the high cost and no cost conditions for follower behavior.

Figure 6.

Meta-Analytic Estimates of Charismatic Signaling on Evaluations of Leader Competence



Formal and Informal Authority

To answer Research Question 6 and identify whether leader authority impacted the magnitude of the charismatic effect, I compared the charismatic signaling effect size estimates between Experiments 1 and 3 where the leader had formal authority and Experiments 2 and 4 where the leader was described as a frequent volunteer. For the most part, estimates did not differ substantially based on leader authority, with most differences between the effect size estimates ranging between .002 (trust) and .08 (prototypicality) and confidence intervals overlapping, indicating no differences of practical significance. The one exception to this was perceptions of the leader's influence (see Figure 7). For influence, leaders with formal authority were seen as significantly more influential when using charismatic signaling compared to leaders without formal authority ($Q_M = 4.76$, $df = 1$, $p = .03$). Especially interesting about this result is that when you examine the effect size estimates for the individual experiments, in Experiment 2 where the

leader had no authority and did not engage in the costly behavior of volunteering, charismatic signaling did not lead to ratings of greater influence, as the meta-analytic effect size estimate is close to zero at .04 and the 95% confidence interval includes zero. For the impact of formal authority on the efficacy of CLTs in increasing participant donations, I compared the meta-analytic effect size estimates (see Figure 8) and found no significant difference in the impact of charismatic signaling on participant donation behavior based on whether the leader had formal authority (Q_M = .47, *df* = 1, *p* = .49). As the confidence intervals substantially overlap, I found no meaningful difference between the formal authority and informal authority conditions.

Figure 7.

Meta-Analytic Estimates of the Impact of Charismatic Signaling on Perceived Leader Influence

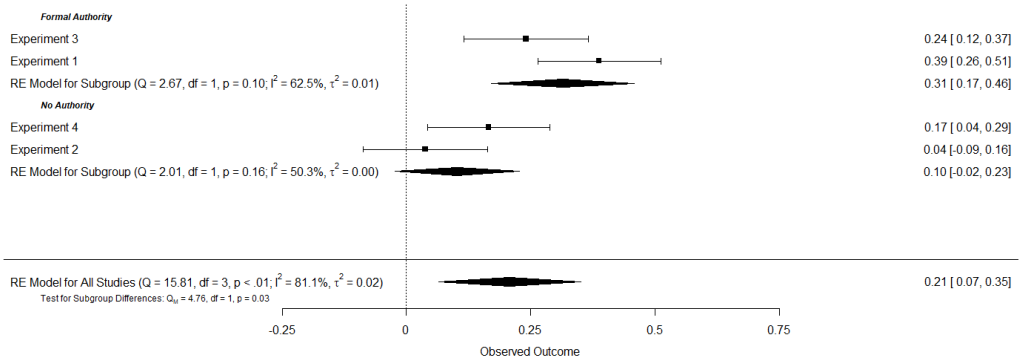
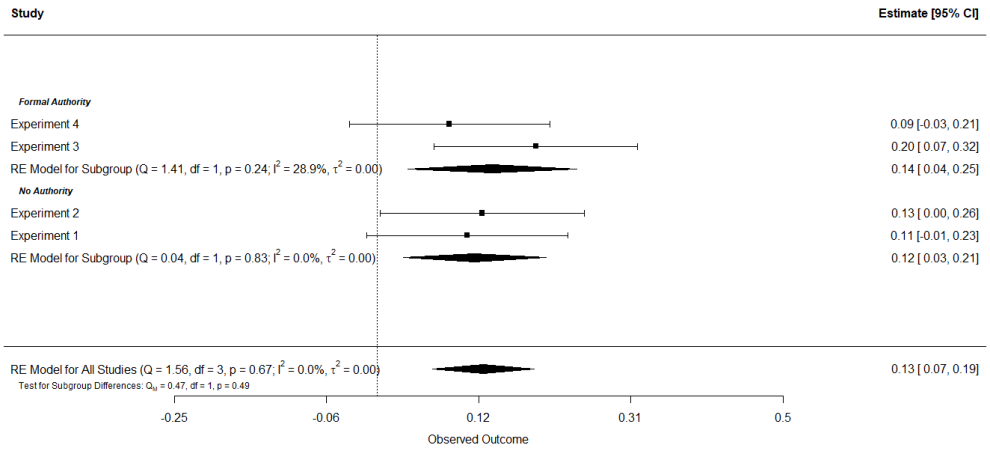


Figure 8.

Meta-Analytic Estimates of the Impact of Charismatic Signaling on Participant Donations



Exploratory Results

Meta-Analytic Estimate of Main Effect of Gender

To further investigate Research Question 2 and identify whether the woman leader was evaluated significantly differently than the man leader, I created a meta-analytic dataset with the mean difference between men and women for each outcome within each experiment as γ_i. This was an exploratory investigation, as it was not part of the pre-registration, but instead arose as an attempt to better understand the subgroup differences in efficacy of CLT use revealed by the meta-analysis. Full meta-analytic results for the main effect of leader gender on evaluations and donation behavior can be found in Table 9. Note that positive effect sizes indicate an advantage for women, while negative effect sizes indicate an advantage for men.

Overall, there was a significant main effect of leader gender favoring women on evaluations of influence. Regardless of charismatic condition, on average the woman leader was rated as more influential than the leader who was a man (d = .16, SE = .0483, p = .001). The other significant gender difference was in participant donation behavior, such that collapsing across charismatic condition, participants on average donated more when the leader was a woman compared to when the leader was a man (d = .14, SE = .0318, p < .001). This effect size has practical significance, as regardless of use of charismatic signaling, participants donated more for the woman leader compared to the man leader.

Table 9

Meta-Analytic Results - Gender Difference Effect Size

Overall

Outcome	*k*	*n*	*d*	*SE*	95% CI	I^2
Attributed Charisma	4	1002	0.1078	0.0819	[-.0527 - .2682]	84.96%
Prototypicality	4	1002	0.1886	0.1016	[-.0105 - .3876]	90.22%
Like	4	1002	0.1054	0.0723	[-.0362 - .2470]	80.69%
Trust	4	1002	0.0863	0.0548	[-.211 - .1936]	66.38%
Influence	4	1002	0.158	0.0483	[.0633 - .2527]	56.81%
Competence	4	1002	0.1414	0.0946	[-.0441 - .3269]	88.74%
Promote	4	1002	0.1818	0.1001	[-.0143 - .3779]	89.93%
Donate	4	1002	0.1142	0.0318	[.0520 - .1765]	0.00%

High Cost

Outcome	*k*	*n*	*d*	*SE*	95% CI	I^2
Attributed Charisma	2	502	-0.0262	0.0448	[-.1140 - .0616]	0.00%
Prototypicality	2	502	0.022	0.0782	[-.1313 - .1752]	67.16%
Like	2	502	0.0274	0.1378	[-.2427 - .2976]	89.43%
Trust	2	502	0.0099	0.0788	[-.1446 - .1645]	67.69%
Influence	2	502	0.0897	0.0638	[-.0353 - .2147]	50.59%
Competence	2	502	-0.0008	0.115	[-.2262 - .2247]	84.82%
Promote	2	502	0.0293	0.0744	[-.1166 - .1752]	63.76%
Donate	2	502	0.1311	0.0448	[.0432 - .2189]	0.00%

No Cost

Outcome	*k*	*n*	*d*	*SE*	95% CI	I^2
Attributed Charisma	2	500	0.2419	0.0512	[.1416 - .3422]	22.62%
Prototypicality	2	500	0.353	0.045	[.2671 - .4435]	0.00%
Like	2	500	0.1837	0.045	[.0955 - .2719]	0.00%
Trust	2	500	0.1627	0.045	[.0746 - .2509]	0.00%
Influence	2	500	0.2267	0.045	[.1385 - .3149]	0.00%
Competence	2	500	0.2835	0.045	[.1953 - .3717]	0.00%
Promote	2	500	0.3343	0.0901	[.1577 - .5108]	75.05%
Donate	2	500	0.0973	0.045	[.0091 - .1854]	0.00%

Formal Authority

Outcome	*k*	*n*	*d*	*SE*	95% CI	I^2
Attributed Charisma	2	502	0.0635	0.128	[-.1874 - .3145]	87.70%
Prototypicality	2	502	0.2372	0.1364	[-.0302 - .5046]	89.17%
Like	2	502	0.1746	0.0449	[.0866 - .2626]	0.00%
Trust	2	502	0.1245	0.0449	[.0365 - .2125]	0.00%
Influence	2	502	0.2019	0.0474	[.1090 - .2948]	10.23%
Competence	2	502	0.1968	0.082	[.0362 - .3574]	69.98%
Promote	2	502	0.2643	0.1599	[-.0491 - .5776]	92.11%
Donate	2	502	0.1022	0.049	[.0141 - .1902]	0.00%

Informal Authority

Outcome	*k*	*n*	*d*	*SE*	95% CI	I^2
Attributed Charisma	2	500	0.1521	0.1413	[-.1249 - .4291]	89.90%
Prototypicality	2	500	0.1401	0.1962	[-.2444 - .5247]	94.76%
Like	2	500	0.0365	0.147	[-.2515 - .3246]	90.66%
Trust	2	500	0.0488	0.1176	[-.1817 - .2792]	85.41%
Influence	2	500	0.1147	0.0887	[-.0592 - .2886]	74.37%
Competence	2	500	0.0864	0.2021	[-.3097 - .4826]	95.06%
Promote	2	500	0.0993	0.1443	[-.1834 - .3820]	90.31%
Donate	2	500	0.1261	0.0488	[.0304 - .2219]	15.48%

Meta-Analytic Estimate of Gender Differences Based on Signal Cost

When I investigated the gender differences further, I discovered that many of these gender differences were contingent upon the contextual moderators. For example, while there was no statistically significant main effect of gender in attributed charisma, when I examined the range of meta-analytic effect size estimates across experiments, I identified that an advantage for women emerged only in experiments where there was no cost associated with leader signaling (see Figure 9), as the confidence intervals for the gender difference in high cost and no cost experiments do not overlap. This pattern is consistent with the observation that for Experiments 1 and 2 where there was no cost associated with leader signaling, the confidence intervals for the effect size of women's CLT use on attributed charisma did not include zero, while the confidence intervals for the effect size of men's CLT use on attributed charisma centered around zero (see Figure 10). This pattern of results suggests that costly behavior used to "back up" charismatic signaling could be beneficial for both men and women, but when there is no costly behavior associated with charismatic signaling, women may receive the "benefit of the doubt" and are rewarded for their charismatic signaling with outsize benefits. Furthermore, the variance between the experiments associated with the contextual moderators may have created noise and obscured gender main effects and interactions between gender and charismatic signaling.

Figure 9.

Meta-Analytic Estimate of the Impact of Leader Gender on Attributed Charisma

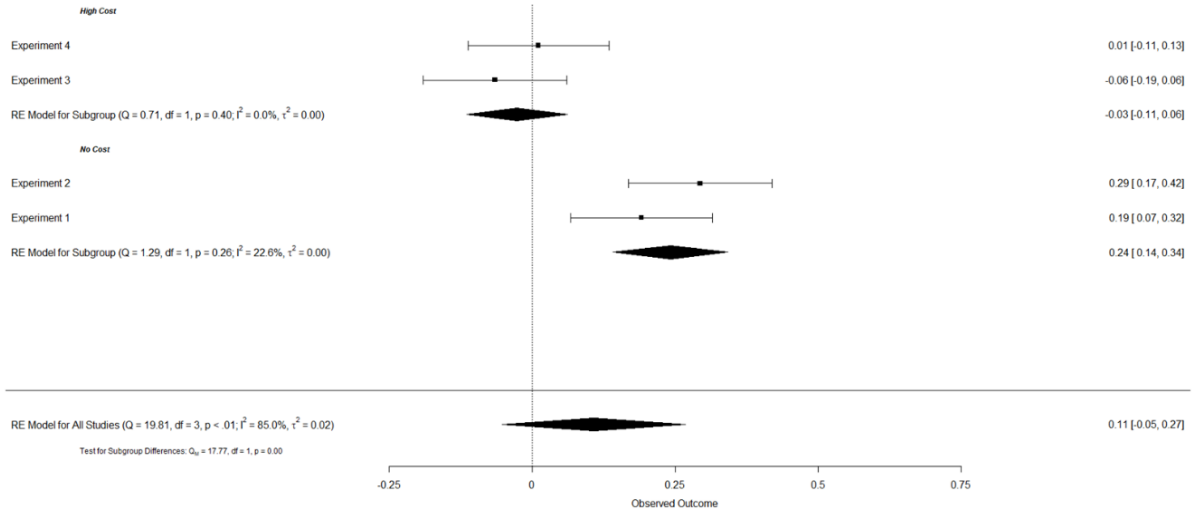
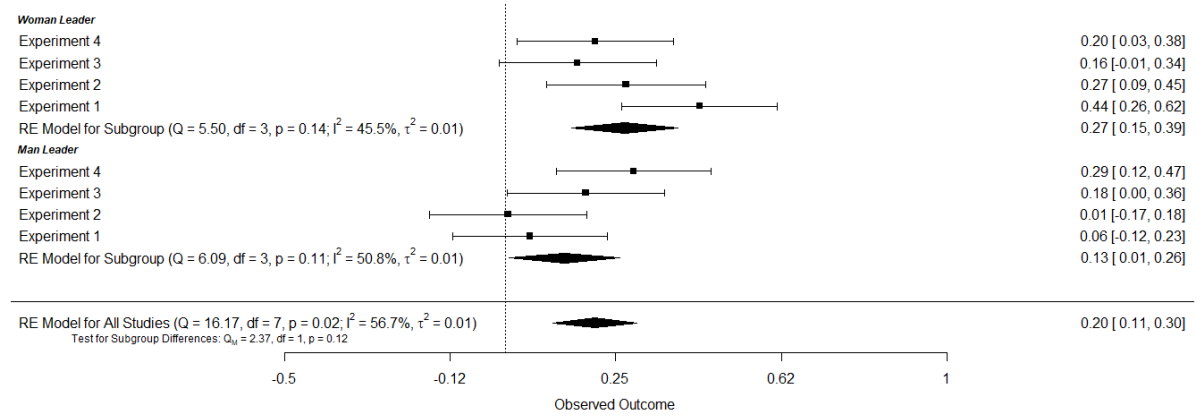


Figure 10.

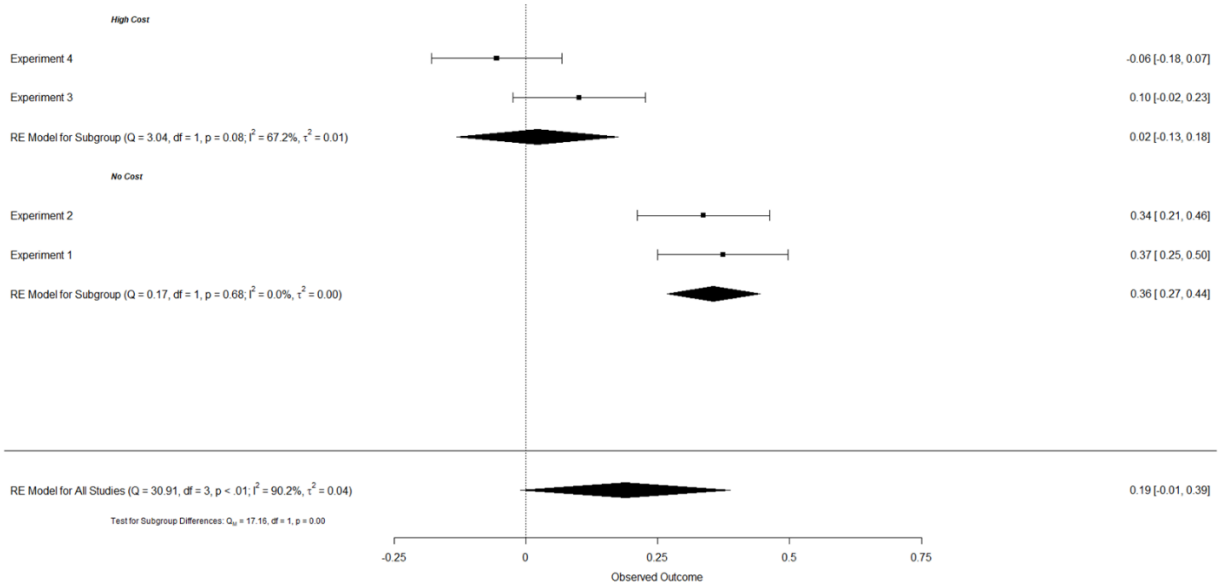
Meta-Analytic Estimate of the Impact of Charismatic Signaling on Attributed Charisma



Signal cost seems to play a powerful role in determining whether women are conferred an advantage in ratings, as this pattern is repeated in the exploration of gender differences on evaluations of leader prototypicality (see Figure 11), trust, and promotability, such that women receive an advantage in conditions of no cost. This difference then disappears for Experiments 3 and 4, which feature high cost.

Figure 11.

Meta-Analytic Estimate of the Impact of Leader Gender on Perceived Prototypicality

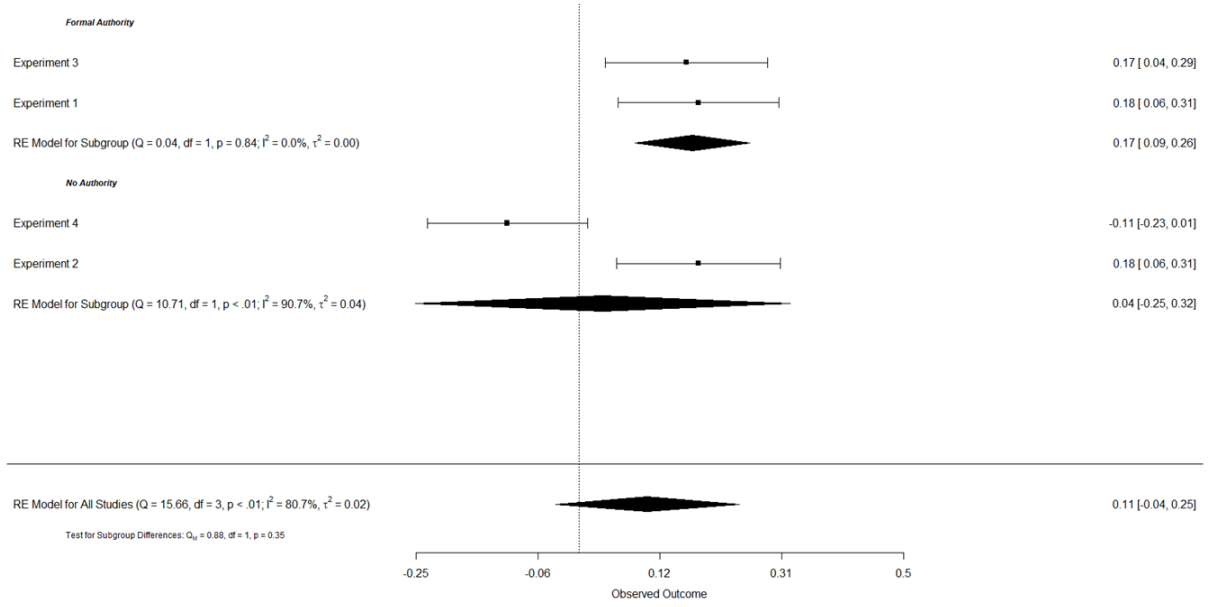


Meta-Analytic Estimate of Gender Differences Based on Authority

I also investigated whether formal authority compared to informal authority resulted in a main effect for gender such that women were evaluated more positively than men. Statistically significant differences in the main effect of gender did not emerge when comparing the experiments where the leader had formal authority and the experiments where they did not. In looking at the pattern of gender differences in a more granular fashion, I hoped to identify under which circumstances men and women leaders were advantaged. While these gender differences primarily favored women, there is a circumstance where the gender difference appears to favor men. As you can see in Figure 12, for Experiment 4 where leaders have no formal authority but engage in costly behavior, the gender difference appears to reverse, such that man leaders are rated as more likeable regardless of charismatic signaling. That advantage is replaced by a benefit to women, however, in every other experiment.

Figure 12.

Meta-Analytic Estimate of the Impact of Leader Gender on Likeability



Meta-Analytic Estimates of Gender and Charisma Interaction Based on Contextual Moderators

In examining the magnitude of effect sizes for the impact of charismatic signaling for men and women, a pattern emerged. While charismatic signaling proved effective at improving a variety of evaluations as well as increasing follower donation behavior on the whole, it seems that the magnitude of these effects may have depended both on leader gender and the contextual moderators. For example, meta-analytic effect size estimates for the impact of charismatic signaling on attributed charisma are greatest for women in Experiment 1 and Experiment 2 (where there is no cost), whereas the effect size estimates are greatest for men in Experiment 3 and Experiment 4 (where the leader engages in costly behavior). This general pattern of results repeats for likeability and competence.

There are other outcome variables where formal authority seems to play a larger role than cost. For example, for leader prototypicality women leader's largest effect size is in Experiment

1 where the leader has formal authority, whereas the largest effect size for men leaders is Experiment 4, where the leader is described as a frequent volunteer. The starkest example of this pattern of results is for participant donation behavior, where the effect size of charismatic signaling on participant donation is highest for women in Experiments 1 and 3, whereas the estimates for the magnitude of the effect size for women straddle zero for Experiments 2 and 4. Conversely, for Experiments 1 and 3 the effect size for men straddle zero, while the effect size for Experiments 2 and 4 is much larger and distinctly different from zero (see Figure 5). These results taken together suggest that the contextual factors of authority and signal cost may operate differently for men and women leaders, resulting in a greater or weaker charismatic effect depending on the gender and context combination.

Robustness Checks

I conducted several robustness checks to ensure these results were stable and replicable under slightly different conditions. One robustness check of particular importance to note is that I conducted all analyses with the original behavioral outcome variable as well as a transformed version, as the distribution was non-normal. Furthermore, I conducted analyses again operationalizing donation behavior as binary (0 – did not donate, 1 – donated any amount) and tested the impact of charismatic signaling through a binary logistic regression, which provided an effect size to then be meta-analyzed. Meta-analytic effect size estimates and the overall pattern of results remained consistent with the transformed variable as well as the binary operationalization of donation behavior. For a comparison of meta-analytic results for the three different “donate” variables, see Appendix D.

CHAPTER FOUR: DISCUSSION

Charismatic leadership and charismatic signaling in particular are having a moment in management and leadership scholarship. CLTs have been demonstrated to positively influence evaluations and behaviors (Antonakis et al., 2011; Ernst et al., 2022; Jensen et al., 2021; Nieken, 2022; Tur et al., 2021), and our knowledge of the extent of the charismatic effect continues to grow. Overall, the present dissertation supports and reinforces lessons learned from previous research in a variety of ways. I also, however, extend the theory of charismatic signaling and present evidence that challenges current assumptions and poses critical questions about the future direction of research on charismatic leadership.

Extending and Supporting the Charismatic Leadership Literature

First, the support and extension of recent work on charismatic signaling. The evidence presented here reinforces the presence of the charismatic effect. Charismatic leader signaling operationalized through CLTs has a positive influence on both evaluations and behaviors, with participants rating leaders using these techniques as more charismatic, prototypical, likeable, trustworthy, competent, influential, and promotable. Furthermore, the use of these tactics resulted in participants engaging in prosocial behavior and donating more to a charitable organization. These findings are in line with previous experimental work demonstrating the influence of charismatic signaling on evaluations of the leader and follower behavior. To put these findings into context of the broader experimental work on charismatic leader signaling, I present a comparison of effect sizes for evaluations (Table 10) and behavior (Table 11). The effect sizes in the present study tend to be smaller in magnitude, which is understandable given the variability between experiments (i.e., changing contextual factors) as well as the fact that the non-charismatic speech was still persuasive in nature. Wilms and Seif el Dahan (2022), for

example, feature a very strong contrast between the charismatic and non-charismatic speeches to maximize the effect size.

Another way this work extends the present literature is through demonstrating that women leaders' charismatic signaling can be effective even when delivered in a virtual context, which Ernst et al. (2022) raised as a potential concern. Given the evidence of the efficacy of CLTs for women, future investigations of charismatic signaling should include women leaders in experimental manipulations of charismatic leadership to ensure inclusive portrayals of leadership as well as ecological validity. As women lead in the 'real world' so should they be portrayed as leaders in research. Finally, the present work responds directly to calls by Antonakis et al. (2016) to include manipulation of contextual variables relevant to charismatic signaling such as signal cost and leader gender. By answering these calls to action, I present initial evidence supporting the theoretical model represented by Figure 1, which suggests that leader and interaction characteristics can impact the efficacy of charismatic signaling.

Table 10

Comparison of Experimental Effect Sizes of Charismatic Signaling on Follower Evaluations

Authors	Year	Sample size	In-Person Speech	Leader Gender	Attributed Charisma	Perceived Prototypicality	Like	Trust	Influence	Competence
Hausfeld Experiment 1	2022	254	No	Man and Woman	0.188	0.250	0.185	0.111	0.387	0.299
Hausfeld Experiment 2	2022	246	No	Man and Woman	0.132	0.031	0.120	0.118	0.038	0.161
Hausfeld Experiment 3	2022	248	No	Man and Woman	0.172	0.187	0.248	0.121	0.241	0.089
Hausfeld Experiment 4	2022	256	No	Man and Woman	0.248	0.237	0.222	0.109	0.166	0.161
Hausfeld Meta-Analytic Summary Effect Size: Women	2022	498	No	Woman	0.271	0.211	0.284	0.180	0.251	0.232
Hausfeld Meta-Analytic Summary Effect Size: Men	2022	504	No	Man	0.134	0.144	0.105	0.087	0.216	0.122
Hausfeld Meta-Analytic Summary Effect Size: Total	2022	1002	No	Man and Woman	0.185	0.177	0.194	0.115	0.208	0.178
Wilms and Seif el Dahan	2022	489	No	Man	1.388	1.424	-	-	-	-
Ernst et al. Study 4	2021	129	No	Woman	-	0.360	0.130	0.230	0.450	0.420
Nieken Study 2 (Written)	2022	99	No	Man	0.566	-	-	-	-	-
Nieken Study 2 (Video)	2022	99	No	Man	0.770	-	-	-	-	-
Nieken Study 2 (Audio)	2022	99	No	Man	0.469	-	-	-	-	-

Table 11

Comparison of Experimental Effect Sizes of Charismatic Signaling on Follower Behavior

Authors	Year	Sample size	In-Person Speech	Leader Gender	Follower Behavior
Hausfeld Experiment 1	2022	254	No	Man and Woman	0.111
Hausfeld Experiment 2	2022	246	No	Man and Woman	0.130
Hausfeld Experiment 3	2022	248	No	Man and Woman	0.195
Hausfeld Experiment 4	2022	256	No	Man and Woman	0.089
Hausfeld Meta-Analytic Summary Effect Size: Women	2022	498	No	Woman	0.155
Hausfeld Meta-Analytic Summary Effect Size: Men	2022	504	No	Man	0.134
Hausfeld Meta-Analytic Summary Effect Size: Total	2022	1002	No	Man and Woman	0.131
Antonakis et al. Field Experiment	2022	76	Yes	Man	0.481
Ernst et al. Study 1	2021	121	Yes	Woman	0.520
Ernst et al. Study 2	2021	128	No	Woman	-0.090
Ernst et al. Study 3 (Austria)	2021	134	No	Woman	0.020
Ernst et al. Study 3 (France)	2021	137	No	Woman	0.130
Ernst et al. Study 3 (India)	2021	128	No	Woman	0.010
Ernst et al. Study 3 (Mexico)	2021	124	No	Woman	-0.250
Fest et al.	2021	888	No	NA	0.170
Meslec et al. Study 1	2020	118	No	Man	0.140
Meslec et al. Study 2	2020	274	No	Man	0.930
Jacquart and Antonakis Study 2	2015	717	No	Man*	0.678

Note: * While the leader was identified as a man through context, the charismatic signaling was in text form and read aloud by a third party, making leader gender perhaps not as salient.

Challenging Current Assumptions and Posing Critical Questions

While there is much that supports and extends extant work on charismatic signaling, this dissertation also challenges current assumptions in the literature and poses critical questions. I demonstrate through a series of nearly identical experiments, which are then meta-analyzed, several novel findings that drive the literature on charismatic leader signaling forward. First, I provide initial meta-analytic evidence of a slight main effect for leader gender on follower evaluations and behaviors such that, within the context of increasing awareness of and supporting a US-based charitable organization, women are evaluated as more influential and are rewarded with more donations compared to their peers who are men. While it is possible that this effect is due to the gender congruence of the message with the leader gender, and the leader is thus fulfilling positive, communal stereotypes about women through her actions (Biernat & Manis, 1994; Eagly, Nater, Miller, Kaufmann, & Sczesny, 2020; Heilman, 2001), this is a novel finding in experimental charismatic leadership research. This finding is in line with previous work arguing that women exhibit leadership more consistent with charismatic signaling (Eagly, 2007) and are evaluated as more charismatic (Banks et al., 2017). That being said, the majority of the confidence intervals for gender differences in evaluations included zero, indicating that should the gender difference exist for other evaluations such as prototypicality and attributions of charisma, it is small in magnitude. I can say with confidence that women are not disadvantaged in the context of these experiments, but there is insufficient evidence to claim that they are consistently advantaged. This dissertation is the first, however, to demonstrate differential evaluations of men and women leaders in the context of experimental manipulations of charismatic leadership.

Second, I find that formal authority of a leader may amplify the charismatic effect at the in terms of evaluations of the leader's influence. Contrary to theorizing that charismatic signaling may be especially useful and relevant in situations of informal leadership (Tur et al., 2021), the present results suggest that the power of charismatic signaling may be amplified for those who already possess power and influence via their formal authority in organizations. Furthermore, it is unclear whether different levels of formal authority have the same effect – as a lower level of leadership such as in this dissertation may be seen as more palatable for women than that of an executive. Authority should be incorporated into future research either in design or as a control variable, as it is unclear whether the formal authority of the leaders in previous experimental examinations of charismatic signaling has augmented or even overstated the magnitude of the charismatic effect.

Third, through subgroup analyses and the investigation of meta-analytic effect size estimates, I establish an interactive relationship between charismatic signaling and gender such that, in this context at the very least, women receive a greater benefit for charismatic signaling compared to men. While charismatic signaling proved effective at improving evaluations and donation rates for men and women alike, the magnitude of the charismatic effect was significantly larger for women leaders for multiple outcomes. This finding presents a host of questions regarding the future of charismatic signaling research as well as the underlying mechanisms of the charismatic effect. What drives differential evaluations of the same leader behaviors exhibited by men and women? Under what circumstances does this advantage for women persist? Can future research on charismatic signaling using only men as leaders truly capture and understand the nature of the charismatic effect?

Finally, I present evidence that the contextual variables of authority and signal cost differentially impact the efficacy of charismatic signaling enacted by men and by women. When there were no costs associated with signaling, there was a main effect for gender such that women were evaluated more positively than men. This advantage, however, disappeared in the experiments where the leader engaged in costly behavior to reinforce their commitment to the message. Questions remain, however regarding the extent to which the costly behavior of volunteering used in these experiments was gendered and whether that influenced the results. Furthermore, the interaction between charismatic signaling and leader gender seems contingent upon formal authority, such that the impact of charisma is greatest for women when they already have formal authority, while the impact of charismatic signaling for men is greatest in circumstances where they are not formal leaders. This poses a potential problem, as women are underrepresented in positions of formal authority, but they appear to benefit most from charismatic signaling when they are legitimized by holding a formal position of organizational leadership.

There were certain gender and contextual conditions where the charismatic effect was rendered indistinguishable from zero (e.g., leader is a man, no cost, attributed charisma as outcome). What is especially compelling about these findings is that the only difference between Experiments 1 – 4 for the man leader is the content of the written vignette preceding the speech. In some cases, the difference consisted of a single sentence. To see such substantial differences between experiments suggests that contextual factors such as the leader's authority and costly behaviors wield a great deal of influence over the magnitude of the charismatic effect.

Theoretical Implications and Opportunities

While this paper has taken a critical step forward in integrating theories from the gender literature into the broader framework of signaling theory (see Figure 1), much work remains to develop and refine the theory of charismatic signaling (Antonakis et al., 2022; Jensen et al., 2021; Nieken, 2022; Tur et al., 2021). The above results and discussion indicate that previously individualistic theorizing on charismatic signaling and the charismatic effect may be insufficient to describe, explain, and predict the nuanced relationships between external situational factors, leader characteristics, charismatic signaling, follower cognitions, and follower behaviors. Thus, I present a grand challenge (à la Banks et al., 2016) to drive the theory of charismatic signaling forward:

> *We must develop more substantive and nuanced theory that accounts for and explains the role of 1) external situational factors, 2) individual leader characteristics such as gender, and 3) follower individual differences and cognitions in shaping and influencing the charismatic effect.*

In order to progress, there are several areas where the theory of charismatic signaling needs further development and the research on charismatic signaling can improve. First, there is a need to better understand under what conditions and for whom charismatic signaling is effective. The results of this dissertation suggest that leader gender may play a role in the strength of the charismatic effect, and that this relationship is dependent on situational and contextual factors. More nuanced investigations of these issues are thus warranted. Second, there is a need to further explore the cognitive and affective processes through which followers interpret charismatic signals and how these processes may be impacted by leader characteristics and situational characteristics. Again, the results presented here suggest that followers attend to and incorporate factors such as leader gender and situational characteristics into their processing of the charismatic effect, resulting in disparate evaluations and behaviors under different circumstances. The underlying mechanisms of the charismatic effect have too long been

overlooked, and the findings of this dissertation suggest they are worthy of further investigation. Third, future research and future theorizing should continue to challenge the "white male default" (Criado-Perez, 2019) and explicitly include women, people of different racial backgrounds, and people of varying demographic characteristics into investigations of and theorizing about charismatic leadership. Not only is this incredibly important to identify the boundary conditions of the charismatic effect, but it also paints a picture of leadership more consistent with the present day workforce and promotes development of theories of leadership that are effective for leaders of different backgrounds.

Future Research

In addition to broader, more inclusive, and more comprehensive theorizing regarding charismatic leader signaling, there are many opportunities to build upon this work. First, the patterns that emerged from this dissertation point to the active role of the follower in perceiving, interpreting, and evaluating leader signaling. This process, the theoretical underlying mechanism of charismatic leadership, is tragically understudied. The cognitive and affective processes that result from exposure to charismatic signaling – and how these processes differ based on leader gender and situational characteristics – need to be better understood in order to promote sophisticated and nuanced theory of charismatic signaling. The emotional component of charismatic signaling especially warrants investigation. For example, what do followers *feel* when they receive charismatic signals, and do these feelings differ based on the context (e.g., moral or immoral, gender congruent or incongruent) and the leader gender? For example, are men's and women's charismatic signaling evaluated differently because of stereotypes about women and emotionality (Dennhag, Steinvall, Hakelind, & Deutschmann, 2019)? Prior research suggests that women leaders are afforded a narrower range of acceptable behaviors, especially

concerning emotional display (Brescoll, 2016). The results presented here suggest that stereotypes about women and emotionality may have benefitted women when engaging in charismatic signaling. Further research is needed to investigate the extent to which charismatic signaling evokes emotion and how this emotion impacts eventual evaluations and behaviors.

Furthermore, as the conditions of this series of experiments are arguably more gender congruent for women than for men, would women receive an outsize benefit from charismatic signaling in more neutral or even male-typed contexts? Future investigations should test for both a main effect of leader gender and gender X charismatic signaling interactions in different contexts to evaluate whether the advantage for women persists. As the advantage for women appears to be contingent upon formal authority, this too should be investigated in greater detail. Does organizational legitimacy provide a boost to women that men do not receive? How much authority or legitimacy is necessary in order to induce this advantage for women? What are ways that the gender gap in evaluations of charisma can be reduced or even eliminated so that we bestow equivalent benefits to leaders for enacting the same charismatic behaviors?

Limitations

Despite the advantages of the design of the present study, limitations persist. While every care was taken to ensure consistency between the two actors in their delivery of the speeches, only two actors delivered the speeches, and the possibility remains that they differed in ways other than intended. Such differences could be confounding variables that could perhaps present alternate explanations for the gender effect. I intentionally matched several aspects of the speakers in order to reduce the possibility of this confound, but the possibility remains. Any differences in performance would not explain, however, the changes in the magnitude of the gender difference based on contextual factors such as authority and cost. I believe this provides

support that the differences observed in this series of experiments is due to perceiver effects rather than differences in the actors' performances. Future research could make use of avatars (e.g., Bekbergenova 2022) and other techniques to reduce extraneous differences between men and women actors using charismatic signaling and to isolate the individual effects of variables such as vocal pitch, appearance, gender, etc. Furthermore, future investigations could make use of randomization and include multiple men and women in stimuli in order to reduce concerns related to individual differences between the leaders but retain ecological validity.

Another potential limitation of the design is that the context of a charitable organization may be seen as more gender congruent for women than a typical for-profit business environment. First, there is a gender proportionality concern: women are generally believed to be better represented in leadership in the non-profit sector; that being said, they still are underrepresented in leadership especially at the highest levels of the organization (Lee, 2019). Furthermore, urging participants to contribute their time and money to help others may be seen as more congruent with prescriptive stereotypes for women about engaging in communal behaviors (Heilman, 2001). If this more gender-congruent context influenced the evaluations of participants, one would expect to see a consistent main effect of gender in favor of women. Future investigations should intentionally vary the context and topics of speeches to determine whether gender congruence or incongruence influences the efficacy of charismatic signaling or causes disparities between the efficacy of signaling for men and women.

Additionally, while this research took an important step forward in addressing the gender data gap in leadership and testing whether these charismatic leader behaviors work as well for women as men, this set of experiments only tested the efficacy for white women compared to white men. Thus, these findings should be generalized with care, as prescriptive stereotypes for

how women "should" behave differ by race (Rosette et al., 2016). Future research should explore other leader characteristics that may influence the evaluation of charismatic signaling such as leader race, age, and other factors. We may celebrate the first direct comparison of efficacy of CLTs for women and men, but more work remains to develop a behavioral and theoretical framework of charismatic leadership that is both inclusive and intersectional.

Conclusion

This work represents a critical step forward in the leadership literature by testing the efficacy of charismatic signaling for women compared to men, working to dismantle the male default and diminish the gender data gap. I found nuanced and complex results that speak to the influence of contextual and demographic factors in the perception and evaluation of charismatic leadership. I presented a grand challenge to scholars interested in the theory of charismatic signaling, and I intend this work to be a step in the right direction to develop a more inclusive, nuanced, predictive, and comprehensive theory of charismatic signaling. If nothing else, this paper drives the literature forward by challenging the "male default" and ensuring women leaders are explicitly included in investigations of leadership. For "when we exclude half of humanity from the production of knowledge, we lose out on potentially transformative insights" – Carolina Criado-Perez, *Invisible Women.*

APPENDIX A: STUDY MATERIALS

Vignettes

Experiment 1

This video features a key contributor on the leadership team of Feeding America. The speaker is the Chief Volunteer Coordinator for Feeding America and has held this position for two years. Please watch the brief video and respond to the questionnaire.

Experiment 2

This video features a frequent volunteer for Feeding America who agreed to record this video. Please watch the brief video and respond to the questionnaire.

Experiment 3

This video features a key contributor on the leadership team of Feeding America. The speaker is the Chief Volunteer Coordinator for Feeding America and has held this position for two years. In addition to their day job, the speaker volunteers one Saturday each month at a Feeding America food pantry and contributes food items regularly. Please watch the brief video and respond to the questionnaire.

Experiment 4

This video features a frequent volunteer for Feeding America who agreed to be featured in this video. In addition to their day job, the speaker volunteers one Saturday each month at a Feeding America food pantry and contributes food items regularly. Please watch the brief video and respond to the questionnaire.

Speech Transcripts

Low Charisma Speech

Hello, my name is _____ with Feeding America, and I'm here to talk to you today about food insecurity and hunger in America.

Food insecurity involves being in a situation where you don't have reliable access to nutritious and affordable food.

This issue is widespread, with more than 38 million people in the United States qualifying as food insecure.

In fact, food insecurity impacts every community in America.

Hunger impacts people of all circumstances, and Feeding America is the premier organization working to reduce hunger in the United States.

Feeding America was founded in 1960 by John van Hengel, a businessman with an interest in philanthropy and serving his community.

He knew that grocery stores and restaurants threw away food they weren't able to sell and felt it was very wasteful.

He was sure there was a way to salvage and then store extra food from these businesses for people who need it, similar to how a bank stores money.

van Hengel was moved by the struggle of the hungry and excited by this new idea.

As a result, he started St Mary's Food Bank in Phoenix, Arizona: the nation's first ever food bank.

More than sixty years later, van Hengel's vision has expanded, as Feeding America now runs an efficient and powerful network of 200 food banks across the country.

This network also includes over 60,000 food pantries and serves millions of Americans.

Feeding America operates many food banks and pantries reducing hunger, tackling the issue of what causes and perpetuates food insecurity in America.

Feeding America's slogan is "Together, we can solve hunger."

To this end, Feeding America also engages in education and advocacy efforts to change perceptions and ideas about nutrition in our nation.

This advocacy and education are important because there are many misconceptions about hunger and food insecurity.

It's a common misconception that hunger only impacts people from certain walks of life, but Feeding America serves people in every community in the United States.

For example, Feeding America serves children of different ages including children in elementary school.

Despite two parents working full time, many families with school-age children struggle to consistently provide healthy food for their family.

With help from Feeding America, families with children can reliably access nutritious food, which is essential for children's growth and development.

Feeding America serves other types of individuals as well.

One particularly vulnerable group Feeding America helps are retired veterans.

Since retired veterans often live on a fixed income, the rising cost of utilities and healthcare make it difficult to pay for food.

Inflation makes this even more challenging.

With so many bills to pay and rising food costs, veterans can struggle to survive in the country whose prosperity and freedom they so bravely served to protect.

It is difficult to imagine having to choose between paying your bills and paying for food, but that is a situation many seniors and veterans face.

Feeding America serves people all over the country in addition to veterans and children in an effort to reduce hunger.

Consistent access to nutritious food can make a huge difference for people trying to feed their families, and Feeding America serves over 46 million people every year.

We need your help, however, because hunger is a large-scale problem.

There are several ways you can contribute and help reduce hunger across the US.

One way you can contribute is by making a monetary donation.

If you have anything to spare, even a small donation can help sustain Feeding America's efforts to reduce food insecurity within your community and across the country.

The average cost of a meal is $3, so even a few dollars can make a difference.

You can also contribute food items or other supplies to your local Feeding America food pantry.
Canned goods and non-perishables are great examples of items to donate to your local food pantry.
Another way you can support Feeding America is through donating your time.
There are volunteer opportunities at our 60,000 food pantries across the US, and every volunteer can make a difference in reducing hunger.
The pantry needs volunteers like you!
Overall, I hope you'll consider supporting Feeding America and our food pantries across the country.
Feeding America has helped so many already and continues to help people like children and veterans.
Together, we can make a difference.
Thank you so much for your time, and I hope you'll help us in reducing hunger in the United States.

High Charisma

Hello, my name is _____ with Feeding America, and I'm talking to you today about food insecurity and hunger in America.
Food insecurity involves being in a situation where you don't have reliable access to nutritious and affordable food.
You may be thinking that hunger isn't a pressing issue in one of the most wealthy countries in the world, but the reality is more than 38 million people in the United States are food insecure.
Or maybe you're wondering, "do I even know anyone who has faced hunger?"
"Is this an issue that's even relevant in my community?"
Hunger impacts every community in the United States, and Feeding America is the organization fighting on the front lines of the war on hunger.
Feeding America began in 1960 when John van Hengel encountered a desperate mother rummaging through grocery store garbage bins to find food for her children.
The woman asked, "What if there was a place where food was stored for people to pick up, sort of like a bank?"
van Hengel, moved by her struggle and inspired by her idea, started St Mary's Food Bank in Phoenix, Arizona: the nation's first ever food bank.
Over sixty years later, that vision has taken off like a rocket, as Feeding America now runs an efficient and powerful network of 200 food banks across the country.
Feeding America operates the food banks and pantries fighting on the front lines of hunger, working to preserve the dignity, safety, and health of all Americans struggling with food insecurity.
To this end, Feeding America also engages in education and advocacy efforts to shine a spotlight on this issue impacting communities across the country with the goal of freeing Americans from food insecurity.
"Together, we can solve hunger."

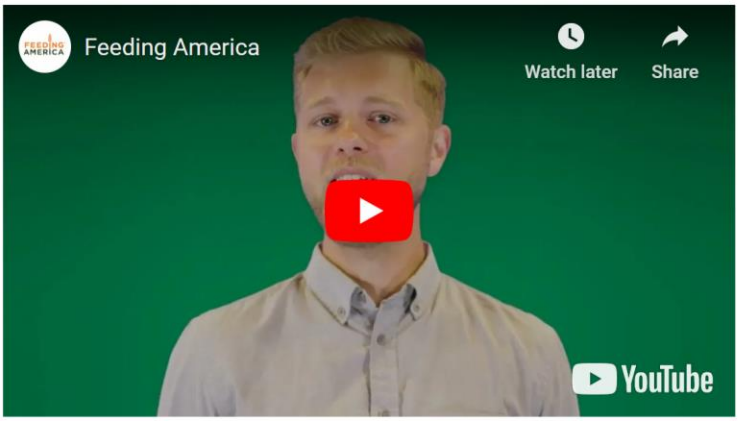
Few people realize the scale of the issue in our country, but the reality is that Feeding America serves people in every community in America.
Let me tell you about some of the people Feeding America has supported.
For example, Jessica is an elementary schooler whose parents work very hard to put food on the table.
Despite both working full-time, Jessica's parents struggled to pay for rising housing costs as well as nutritious food.
They were fighting against the current of bills and expenses to save enough money to feed their family, but they needed a lifeline.
Feeding America helped Jessica's family obtain reliable access to nutritious food, which is essential for Jessica's growth and development.
Feeding America doesn't just help children though, as senior citizens and veterans are among the many groups of vulnerable Americans we help.
For example, Harold is a grandfather and retired veteran who needed help to make ends meet.
Since he lives on a fixed income, rising cost of utilities and healthcare threaten Harold's ability to pay for food.
Struggling to stay afloat between staggering food costs and a mountain of bills, Harold can barely afford to survive in the country whose prosperity and freedom he so bravely served to protect.
Can you imagine having to choose between paying your bills and buying food?
Feeding America serves people all over the country, from children like Jessica to veterans like Harold, fighting on the front lines to solve hunger.
With over 46 million people every year benefitting from Feeding America's services, we're doing all we can to reach our goal of ending food insecurity in the US.
But we need your help, because only together can we solve hunger.
There are three ways you can contribute in our efforts to solve hunger: by donating money, food items, and your time.
First, you can contribute by making a monetary donation.
If you have anything to spare, even a small donation can help, because every $3 donated represents another meal for someone like Harold or Jessica.
Second, you can contribute food items like canned goods, produce, or pantry items to your local Feeding America food pantry.
Third, you can support Feeding America through donating your time.
There are volunteer opportunities at our 60,000 food pantries across the US, and every volunteer can make a difference toward our goal to solve hunger.
The pantry needs volunteers like you!
Overall, I hope you'll consider supporting Feeding America by donating, money, food, or your time.
Feeding America has helped so many and continues to help people like Jessica, Harold, and others in need.
Together, we can solve hunger.
Thank you so much for your time, and I hope you'll join us in freeing millions of Americans from hunger.

Screenshots from Qualtrics Survey

UNIVERSITY OF NORTH CAROLINA CHARLOTTE

Thank you for agreeing to participate in our study. We now ask you to watch a brief, 4-minute video.

This video features a key contributor on the leadership team of Feeding America. The speaker is the **Chief Volunteer Coordinator** for Feeding America and has held this position for two years. In addition to their day job, the speaker **volunteers one Saturday each month** at a Feeding America food pantry and contributes food items regularly. Please watch the full video then click the arrow to advance to the questionnaire.



This video features a **frequent volunteer** for Feeding America who agreed to record this video. Please watch the full video then click the arrow to advance to the questionnaire.

APPENDIX B: CONSENT FORM

Please review the following to determine if you would like to participate in this research study.

Consent to Participate in a Research Study

Title of the Project: Leadership and Charitable Organizations

Principal Investigator: Mary Hausfeld, MA

Co-investigator: Dr. George C. Banks, Chair of the Department of Management

You are invited to participate in a research study. Participation in this research study is voluntary. The information provided is to help you decide whether or not to participate. If you have any questions, please email Mary Hausfeld at mmonro11@uncc.edu or Dr. George Banks at gbanks3@uncc.edu.

Important Information You Need to Know

The purpose of this study is to explore different leadership tactics and their effectiveness. We are asking participants who are age 18 and older to watch a brief video and then complete several questionnaires about their response to the video as well as provide demographic information. Participants will be compensated $2.50 for their time (a rate of $10/hr). Additionally, there will be an opportunity for bonus compensation up to $2. Your privacy will be protected, and we will not collect any identifying information. We might share the non-identifiable data collected here with other researchers for future research without additional consent from you. Please read this form and ask any questions you may have before you decide whether to participate in this research study.

Why are we doing this study?

The purpose of this study is to explore leadership effectiveness. You may be unaware of the exact purpose of the research in order to maintain the integrity of the project. You are being asked to be in this study because you are age 18 or older and live in the United States.

What will happen if I take part in this study?

If you choose to participate you will watch a brief video of a speaker relaying the history and

mission of the charity Feeding America and complete a few questionnaires. These questionnaires will ask you about your reaction to the video as well as some demographic information. We estimate full participation will take no more than 15 minutes of your time. At the end of the questionnaire, you will be provided with a completion code to enter into Prolific to receive your compensation. You may be unaware of the exact purpose of the research in order to maintain the integrity of the project.

What benefits might I experience?

You will likely not directly benefit from being in this study other than receiving compensation for your time. You will learn about a charitable organization by watching the brief video and made aware of ways to contribute to the charity. Should you choose to act on this information and volunteer your time, donate items, or donate money, others will benefit from your participation in this study, especially those with food insecurity. Furthermore, others may benefit from your participation in this study as our research on leadership tactics and their effectiveness may improve subsequent leadership trainings.

What risks might I experience?

You will likely not experience risk by participating in this study. We do not ask personal or invasive questions, and we will make every effort to protect your privacy and confidentiality.

How will my information be used after the study is over?

After this study is complete, study data may be shared with other researchers for use in other studies or as may be needed as part of publishing our results. The data we share will NOT include information that could identify you.

Will I be paid for taking part in this study?

You will receive $2.50 as compensation for participating in the study. In addition, you may have the opportunity to receive bonus compensation of up to $2. Partial or incomplete responses (e.g. starting but not finishing the survey) will not result in compensation.

What are my rights if I take part in this study?

It is up to you to decide to be in this research study. Participating in this study is voluntary. Even if you decide to be part of the study now, you may change your mind and stop at any time.

Who can answer my questions about this study and my rights as a participant?

For questions about this research, you may contact the Principal Investigator Mary Hausfeld at

mmonro11@uncc.edu or the Faculty Advisor Dr. George Banks at gbanks3@uncc.edu. If you have questions about your rights as a research participant, or wish to obtain information, ask questions, or discuss any concerns about this study with someone other than the researcher(s), please contact the Office of Research Protections and Integrity at 704-687-1871 or uncc-irb@uncc.edu.

Consent to Participate

By choosing “I consent” below, you are agreeing to participate in this study. Make sure you understand what the study is about before continuing. If you have any questions about the study after you begin, you can contact the study team using the information provided above.
Do you consent to participate in this research study?

APPENDIX C: SURVEY ITEMS

Please answer the following questions referring to the leader in the video you just watched. To what extent do you agree that the leader:

Has a clear understanding of where we are going
Paints an interesting picture of the future
Is always seeking new opportunities for the organization
Inspires others with his/her plans for the future
Is able to get others committed to his/her dream
Leads by "doing" rather than simply by "telling"
Provides a good model for me to follow
Leads by example
Fosters collaboration among groups
Encourages employees to be "team players"
Gets the group to work together for the same goal
Develops a team attitude and spirit
Shows that he/she expects a lot from us
Insists on only the best performance
Will not settle for second best
Asks questions that prompt me to think
Has stimulated me to rethink the way I do things
Has ideas that have challenged me to reexamine some of my basic assumptions

Rate the extent you agree with the items:

The person I am rating frequently demonstrates leader behavior
The person I am rating acts like a typical leader
The person I am rating fits my image of a leader

Rate the extent you agree with the items:

I like this person as a leader
The person I am rating is easily trusted
The person I am rating is competent as a leader
The person I am rating is able to easily influence others
The person I am rating should be promoted to the next level of management

In a few words, how would you describe the leader and their speech?

How did the speech make you feel?

What was the leader’s name?

- George
- Jane
- Jill

- Jack

Was the leader a man or a woman?
- Man
- Woman

Was the leader a paid employee of Feeding America or a volunteer?
- Paid employee
- Volunteer
- I don't remember

The video you watched earlier described the great work done by the charitable organization Feeding America. You are guaranteed $2.50 in compensation for completing this study, but we have some additional funds in our budget. You have the option to receive an additional $2 in compensation for your time. Another option is to donate part of the additional $2, or all $2 to Feeding America.

Would you like to accept this additional $2 for yourself? Or would you like to donate some of this money to Feeding America?
- I want to keep the additional $2
- I want to donate some of the additional $2 to Feeding America

How much of the $2 bonus would you like to donate to Feeding America?

- I would like to donate $.50 to Feeding America, keep $1.50
- I would like to donate $1to Feeding America, keep $1
- I would like to donate $1.50 to Feeding America, keep $.50
- I would like to donate $2 to Feeding America and not receive bonus compensation
- I have changed my mind and would not like to donate to Feeding America. Instead, I want to receive all $2 of the bonus compensation

We'd now like to know a little about your background. Please answer the following demographic questions.

What is your age (in years)?

What is your gender identity?
- Man
- Woman
- Non-binary/gender fluid
- Prefer not to say

What is your ethnicity?
- Hispanic/LatinX

- Non-Hispanic/LatinX

What is your race?

- White
- Black or African American
- American Indian or Alaska Native
- Asian
- Native Hawaiian or pacific Islander
- Multiracial
- Other

APPENDIX D: ROBUSTNESS CHECKS AND SUPPLEMENTARY TABLES

Robustness Checks

Figure 1

Meta-Analytic Estimate of Impact of Charismatic Signaling on Donation Behavior

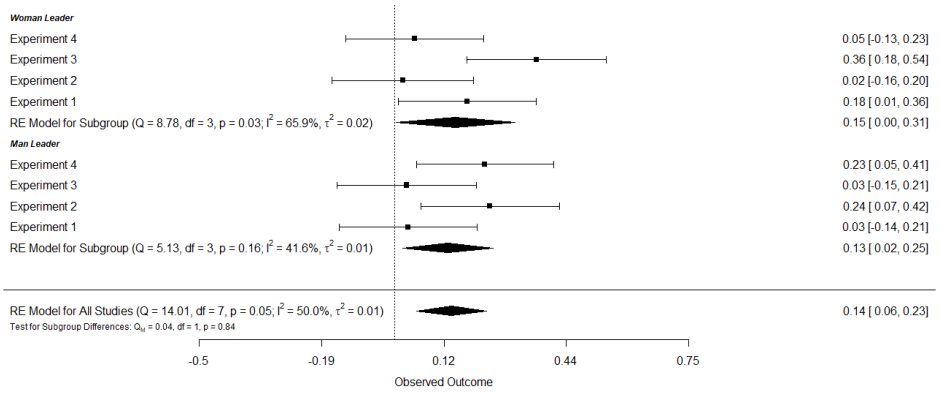


Figure 2

Replication of Figure 1 Using an Inverse Transformed Outcome Variable

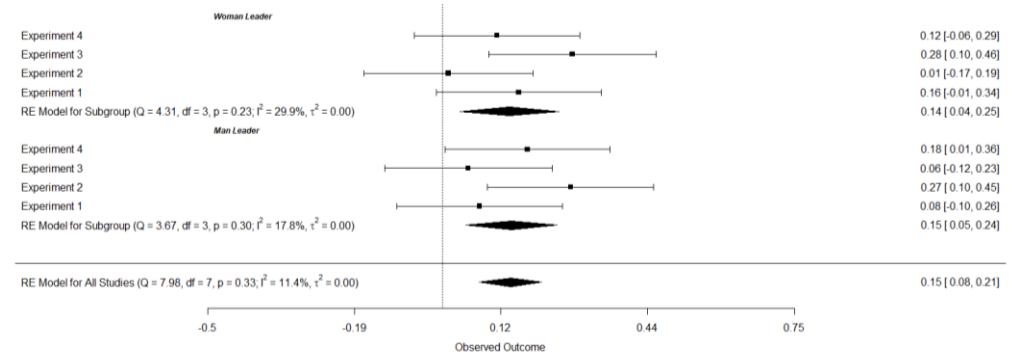


Figure 3

Replication of Figure 1 Using a Binary Outcome Variable

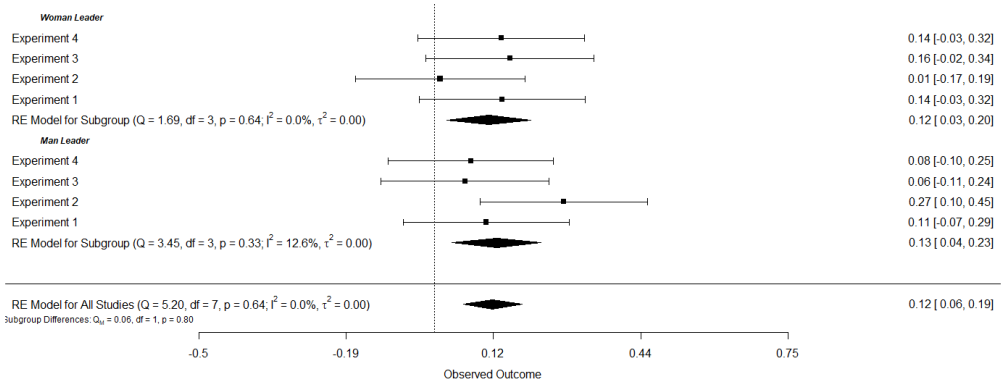


Table 1

Two-Way Analysis of Variance of Donating Behavior (Binary) by Charismatic Condition and Leader Gender

Experiment 1: Formal Authority No Cost					
	df	*SS*	*MS*	*F*	*p*
Charismatic	1	0.076	0.07583	0.936	0.334
Woman	1	0.068	0.06835	0.844	0.359
Charisma*Woman	1	0.009	0.00925	0.114	0.736
Residuals	250	20.251	0.081		
Experiment 2: No Authority No Cost					
	df	*SS*	*MS*	*F*	*p*
Charismatic	1	0.101	0.10077	1.228	0.269
Woman	1	0.006	0.0056	0.068	0.794
Charisma*Woman	1	0.08	0.07993	0.97	0.325
Residuals	242	19.855	0.08205		
Experiment 3: Formal Authority High Cost					
	df	*SS*	*MS*	*F*	*p*
Charismatic	1	0.141	0.14092	1.693	0.194
Woman	1	0.059	0.05925	0.712	0.4
Charisma*Woman	1	0.062	0.06127	0.742	0.39
Residuals	244	20.309	0.08323		
Experiment 4: No Authority High Cost					
	df	*SS*	*MS*	*F*	*p*
Charismatic	1	0.006	0.00608	0.07	0.791
Woman	1	0.205	0.20519	2.371	0.125
Charisma*Woman	1	0.123	0.12253	1.416	0.235
Residuals	252	21.81	0.08653		
Full Sample					
	df	*SS*	*MS*	*F*	*p*
Charismatic	1	0.04	0.04381	0.528	0.4677
Woman	1	0.27	0.27058	3.259	0.0713
Charisma*Woman	1	0.02	0.02007	0.242	0.6231
Residuals	1000	83.02	0.08302		

Table 12

Meta-Analytic Effect Size Estimate of Charismatic Signaling on Donation Behavior

Charismatic Signaling and Donation Behavior (Inverse)						
Outcome	*k*	*n*	*d*	*SE*	95% CI	I^2
Overall	4	1002	0.1453	0.034	[.0787 - .2119]	11.44%
Woman Leader	4	498	0.1429	0.0542	[.0367 - .2491]	29.91%
Man Leader	4	504	0.1474	0.0497	[.0500 - .2449]	17.82%
Formal Authority	2	502	0.1435	0.0497	[.0461 - .2409]	17.41%
Informal Authority	2	500	0.1468	0.0542	[.0407 - .2530]	30.16%
High Cost	2	502	0.1576	0.047	[.0655 - .2496]	7.47%
No Cost	2	500	0.1327	0.0557	[.0235 - .2419]	33.96%
Charismatic Signaling and Donation Behavior (Binary)						
Outcome	*k*	*n*	*d*	*SE*	95% CI	I^2
Overall	4	1002	0.1233	0.032	[.0606 - .1860]	0.00%
Woman Leader	4	498	0.1153	0.0454	[.0264 - .2042]	0.00%
Man Leader	4	504	0.1312	0.0482	[.0367 - .2257]	12.62%
Formal Authority	2	502	0.1197	0.0452	[.0311 - .2082]	0.00%
Informal Authority	2	500	0.1267	0.0556	[.0178 - .2356]	33.67%
High Cost	2	502	0.1107	0.0452	[.0222 - .1993]	0.00%
No Cost	2	500	0.1356	0.0536	[.0306 - .2407]	28.66%

Table 13

Meta-Analytic Effect Size Estimate of Gender Differences in Donation Behavior

Gender Differences in Donation Behavior (Inverse)						
Outcome	*k*	*n*	*d*	*SE*	95% CI	I^2
Overall	4	1002	-0.0408	0.0318	[-.1030 - .0214]	0.00%
Formal Authority	2	502	-0.0422	0.0449	[-.1302 - .0458]	0.00%
Informal Authority	2	500	-0.0394	0.0449	[-.1274 - .0486]	0.00%
High Cost	2	502	-0.0484	0.0448	[-.1362 - .0395]	0.00%
No Cost	2	500	-0.0332	0.045	[-.1213 - .0550]	0.00%
Gender Differences in Donation Behavior (Binary)						
Outcome	*k*	*n*	*d*	*SE*	95% CI	I^2
Overall	4	1002	0.103	0.0435	[.0176 - .1883]	46.83%
Formal Authority	2	502	0.1197	0.0449	[.0317 - .2077]	0.00%
Informal Authority	2	500	0.0854	0.1037	[-.1179 - .2888]	81.26%
High Cost	2	502	0.1595	0.0448	[.0717 - .2474]	0.00%
No Cost	2	500	0.0464	0.0645	[-.0802 - .1729]	51.40%

Table 1

Means, Standard Deviations, and Correlations with Confidence Intervals for Experiment 1

Variable	*M*	*SD*	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. Participant gender	0.5	0.5																	
2. Age	45.39	16.29	.13* [.01, .25]																
3. Leader woman	0.5	0.5	0 [-.12, .12]	0.05 [-.07, .17]															
4. CLT	0.5	0.5	0.11 [-.01, .23]	-0.03 [-.15, .09]	0 [-.12, .12]														
7. Attributed charisma	3.93	0.78	-0.03 [-.15, .09]	-0.02 [-.14, .11]	0.1 [-.03, .22]	0.09 [-.03, .21]													
8. AC vision	4.22	0.75	-0.02 [-.15, .10]	-0.01 [-.14, .11]	0.12 [-.00, .24]	0.09 [-.03, .21]	.89** [.86, .91]												
9. AC model	4.01	0.91	-0.01 [-.14, .11]	0.05 [-.07, .17]	0.11 [-.02, .23]	0.07 [-.05, .19]	.88** [.84, .90]	.74** [.68, .79]											
10. AC group	4.18	0.87	0.02 [-.10, .15]	-0.01 [-.14, .11]	0.07 [-.05, .19]	0.08 [-.04, .21]	.88** [.85, .90]	.77** [.71, .82]	.78** [.73, .83]										
11. AC performance	3.36	0.99	-0.08 [-.20, .05]	-0.12 [-.24, .01]	0.04 [-.08, .16]	0.08 [-.04, .20]	.72** [.66, .78]	.52** [.43, .61]	.53** [.44, .61]	.52** [.42, .60]									
12. AC intellectual	3.66	1.1	-0.04 [-.17, .08]	0.02 [-.11, .14]	0.07 [-.06, .19]	0.07 [-.05, .19]	.88** [.85, .91]	.72** [.65, .77]	.72** [.65, .77]	.67** [.60, .74]	.57** [.49, .65]								
13. Prototypicality	3.87	1.03	0 [-.13, .12]	0.05 [-.07, .17]	.18** [.06, .30]	.12* [.00, .24]	.77** [.71, .81]	.70** [.64, .76]	.69** [.61, .75]	.70** [.63, .76]	.49** [.40, .58]	.67** [.59, .73]							
14. Like	4.1	1.03	-0.03 [-.15, .09]	0.06 [-.06, .19]	0.09 [-.03, .21]	0.09 [-.03, .21]	.78** [.73, .82]	.74** [.68, .79]	.76** [.71, .81]	.72** [.65, .77]	.40** [.30, .50]	.68** [.61, .74]	.80** [.75, .84]						
15. Trust	4.13	0.94	0.09 [-.03, .22]	0.11 [-.02, .23]	0.08 [-.04, .20]	0.06 [-.07, .18]	.66** [.58, .72]	.60** [.52, .67]	.67** [.59, .73]	.63** [.55, .70]	.31** [.20, .42]	.58** [.49, .66]	.63** [.55, .70]	.74** [.68, .79]					
16. Competent	4.17	0.94	-0.01 [-.14, .11]	-0.05 [-.17, .08]	.14* [.02, .26]	.15* [.03, .27]	.74** [.68, .79]	.70** [.64, .76]	.71** [.64, .76]	.74** [.68, .79]	.40** [.29, .50]	.60** [.52, .67]	.78** [.72, .82]	.83** [.79, .87]	.71** [.64, .77]				
17. Influence	3.92	1.05	0.04 [-.08, .17]	0.05 [-.07, .17]	.12* [.00, .24]	.19** [.07, .31]	.76** [.70, .80]	.70** [.63, .75]	.67** [.59, .73]	.71** [.65, .77]	.47** [.36, .56]	.66** [.59, .72]	.75** [.70, .80]	.78** [.72, .82]	.64** [.56, .71]	.78** [.73, .83]			
18. Promote	3.72	1.08	-0.01 [-.13, .11]	-0.06 [-.18, .06]	.21** [.09, .32]	.15* [.03, .27]	.77** [.71, .81]	.67** [.60, .74]	.69** [.62, .75]	.67** [.59, .73]	.54** [.45, .62]	.69** [.62, .75]	.76** [.70, .81]	.76** [.70, .81]	.62** [.54, .69]	.76** [.71, .81]	.76** [.70, .80]		
20. Donate (amount)	0.68	0.77	.24** [.12, .36]	.27** [.15, .38]	0.06 [-.06, .18]	0.06 [-.07, .18]	.16** [.04, .28]	.19** [.06, .30]	.25** [.13, .36]	.13* [.01, .25]	0 [-.12, .13]	.13* [.01, .25]	.23** [.11, .34]	.22** [.10, .33]	.25** [.13, .36]	0.12 [-.00, .24]	.18** [.06, .30]	.16* [.04, .28]	
19. Donate (binary)	0.51	0.5	.18** [.05, .29]	.24** [.12, .36]	0.06 [-.07, .18]	0.06 [-.06, .18]	.16** [.04, .28]	.20** [.08, .31]	.23** [.11, .35]	.13* [.00, .24]	-0.02 [-.14, .10]	.15* [.02, .27]	.23** [.12, .35]	.25** [.13, .36]	.25** [.13, .36]	.17** [.05, .29]	.19** [.06, .30]	.17** [.05, .29]	.86** [.83, .89]

Note: n = 254; * indicates p < .05; ** indicates p < .01; Participant gender 0 = man, 1 = woman; Leader woman 0 = no, 1 = yes; CLT 0 = low charisma, 1 = high charisma; AC vision = articulating a vision; AC model = provide appropriate model; AC group = fostering acceptance of group goals; AC performance = high performance expectations; AC intellectual = intellectual stimulation; Donate (binary) 0 = no, 1 = yes; Donate (amount) in USD.

Table 2

Means, Standard Deviations, and Correlations with Confidence Intervals for Experiment 2

Variable	*M*	*SD*	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. Participant gender	0.49	0.5																	
2. Age	44.13	15.26	.14* [.02, .26]																
3. Leader woman	0.49	0.5	-0.08 [-.20, .05]	-0.04 [-.17, .08]															
4. CLT	0.5	0.5	-0.08 [-.20, .05]	-.23** [-.34, -.10]	-0.02 [-.14, .11]														
7. Attributed charisma	4.05	0.63	0.03 [-.10, .15]	-0.02 [-.15, .10]	.15* [.02, .27]	-0.07 [-.19, .06]													
8. AC vision	4.32	0.62	0 [-.13, .13]	-0.01 [-.14, .12]	0.08 [-.04, .21]	-0.06 [-.19, .06]	.87** [.84, .90]												
9. AC model	4.26	0.78	0.08 [-.05, .20]	0.06 [-.06, .18]	.14* [.02, .26]	-0.06 [-.18, .07]	.78** [.72, .82]	.67** [.60, .74]											
10. AC group	4.34	0.68	0.07 [-.06, .19]	-0.03 [-.15, .10]	0.07 [-.05, .19]	-0.1 [-.22, .03]	.84** [.80, .87]	.78** [.72, .82]	.67** [.59, .73]										
11. AC performance	3.43	0.96	-0.04 [-.16, .09]	-0.04 [-.16, .08]	.14* [.02, .26]	-0.06 [-.18, .07]	.72** [.65, .78]	.49** [.39, .58]	.42** [.31, .52]	.47** [.36, .56]									
12. AC intellectual	3.72	0.98	0.03 [-.10, .15]	-0.04 [-.16, .08]	.14* [.02, .26]	-0.01 [-.13, .12]	.81** [.76, .85]	.58** [.49, .66]	.49** [.39, .58]	.53** [.44, .62]	.51** [.41, .60]								
13. Prototypicality	3.94	1	0.12 [-.00, .25]	0.01 [-.11, .14]	.17** [.04, .29]	-0.02 [-.14, .11]	.76** [.70, .81]	.70** [.63, .76]	.61** [.53, .69]	.61** [.53, .69]	.55** [.46, .64]	.59** [.50, .67]							
14. Like	4.19	0.92	0.07 [-.06, .19]	0.07 [-.06, .19]	0.09 [-.03, .21]	-0.06 [-.18, .07]	.72** [.66, .78]	.68** [.61, .75]	.69** [.62, .75]	.61** [.52, .68]	.38** [.27, .48]	.57** [.48, .65]	.69** [.62, .75]						
15. Trust	4.2	0.87	0.01 [-.11, .14]	0.04 [-.09, .16]	0.08 [-.04, .21]	-0.06 [-.18, .07]	.64** [.57, .71]	.57** [.48, .65]	.56** [.47, .64]	.55** [.45, .63]	.34** [.23, .45]	.57** [.47, .65]	.59** [.51, .67]	.74** [.68, .80]					
16. Competent	4.28	0.88	0.01 [-.11, .14]	0.01 [-.12, .13]	.14* [.02, .26]	-0.08 [-.20, .05]	.72** [.66, .78]	.70** [.63, .76]	.62** [.53, .69]	.63** [.55, .70]	.45** [.35, .55]	.53** [.43, .61]	.73** [.66, .78]	.78** [.73, .82]	.68** [.61, .74]				
17. Influence	4.11	0.9	0.07 [-.06, .20]	0.02 [-.11, .14]	0.1 [-.02, .22]	0.02 [-.11, .14]	.70** [.63, .76]	.69** [.61, .75]	.53** [.43, .61]	.58** [.49, .66]	.46** [.36, .55]	.55** [.46, .63]	.70** [.63, .76]	.66** [.59, .73]	.60** [.51, .67]	.72** [.65, .78]			
18. Promote	3.91	0.99	0.06 [-.07, .19]	-0.02 [-.14, .11]	0.12 [-.00, .24]	0.04 [-.09, .16]	.69** [.61, .75]	.61** [.53, .68]	.54** [.44, .62]	.54** [.44, .62]	.46** [.35, .55]	.60** [.51, .67]	.66** [.59, .73]	.71** [.64, .77]	.61** [.52, .68]	.67** [.59, .73]	.70** [.63, .76]		
20. Donate (amount)	0.63	0.8	-0.02 [-.14, .11]	.15* [.02, .27]	0.04 [-.09, .16]	-0.06 [-.19, .06]	0.11 [-.01, .24]	.19** [.07, .31]	0.11 [-.02, .23]	0.09 [-.03, .21]	-0.06 [-.19, .06]	0.12 [-.01, .24]	0.05 [-.08, .17]	.19** [.07, .31]	.17** [.04, .29]	0.12 [-.01, .24]	.13* [.01, .26]	0.08 [-.04, .21]	
19. Donate (binary)	0.46	0.5	-0.01 [-.14, .12]	.14* [.01, .26]	-0.01 [-.13, .12]	-0.07 [-.19, .06]	.19** [.06, .30]	.21** [.09, .33]	.14* [.01, .26]	.15* [.02, .27]	0.04 [-.09, .16]	.20** [.07, .31]	0.08 [-.05, .20]	.24** [.12, .35]	.21** [.09, .33]	.16** [.04, .28]	.18** [.06, .30]	0.12 [-.00, .25]	.86** [.82, .89]

Note: n = 246; * indicates p < .05; ** indicates p < .01; Participant gender 0 = man, 1 = woman; Leader woman 0 = no, 1 = yes; CLT 0 = low charisma, 1 = high charisma; AC vision = articulating a vision; AC model = provide appropriate model; AC group = fostering acceptance of group goals; AC performance = high performance expectations; AC intellectual = intellectual stimulation; Donate (binary) 0 = no, 1 = yes; Donate (amount) in USD.

Table 3

Means, Standard Deviations, and Correlations with Confidence Intervals for Experiment 3

Variable	*M*	*SD*	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. Participant gender	0.55	0.5																	
2. Age	45.61	16.02	0.03 [-.09, .16]																
3. Leader woman	0.5	0.5	-0.02 [-.15, .10]	0.04 [-.09, .16]															
4. CLT	0.5	0.5	0.02 [-.11, .14]	0.04 [-.09, .16]	0.01 [-.12, .13]														
7. Attributed charisma	4.02	0.6	0.05 [-.07, .18]	0.03 [-.09, .16]	-0.03 [-.16, .09]	0.09 [-.04, .21]													
8. AC vision	4.26	0.64	0.1 [-.03, .22]	0.01 [-.11, .13]	0.04 [-.09, .16]	0.06 [-.07, .18]	.84** [.80, .88]												
9. AC model	4.3	0.77	0.06 [-.07, .18]	.20** [.08, .32]	-0.09 [-.21, .03]	0.04 [-.08, .17]	.72** [.66, .78]	.60** [.51, .67]											
10. AC group	4.34	0.64	0.05 [-.07, .18]	-0.04 [-.16, .09]	-0.04 [-.17, .08]	0.05 [-.07, .18]	.81** [.76, .85]	.66** [.58, .72]	.57** [.48, .65]										
11. AC performance	3.34	0.95	-0.02 [-.15, .10]	0.01 [-.11, .14]	0.01 [-.12, .13]	0.11 [-.02, .23]	.67** [.60, .74]	.40** [.29, .50]	.32** [.21, .43]	.41** [.30, .51]									
12. AC intellectual	3.72	0.93	0.03 [-.10, .15]	-0.01 [-.14, .11]	-0.05 [-.17, .07]	0.07 [-.06, .19]	.83** [.78, .86]	.60** [.52, .68]	.44** [.34, .54]	.56** [.47, .64]	.48** [.37, .57]								
13. Prototypicality	4.04	0.93	0.08 [-.04, .21]	0.08 [-.05, .20]	0.05 [-.07, .17]	0.09 [-.03, .22]	.68** [.60, .74]	.61** [.53, .68]	.64** [.57, .71]	.58** [.49, .66]	.39** [.28, .49]	.45** [.34, .54]							
14. Like	4.3	0.93	0.07 [-.06, .19]	-0.03 [-.15, .10]	0.08 [-.04, .21]	0.12 [-.00, .24]	.70** [.63, .76]	.66** [.58, .72]	.66** [.58, .72]	.66** [.59, .73]	.32** [.20, .43]	.47** [.37, .56]	.74** [.68, .79]						
15. Trust	4.24	0.9	0.12 [-.00, .24]	-0.01 [-.14, .11]	0.04 [-.08, .17]	0.06 [-.06, .18]	.57** [.48, .65]	.50** [.40, .59]	.58** [.49, .65]	.53** [.43, .61]	.25** [.13, .36]	.41** [.30, .51]	.53** [.43, .61]	.68** [.60, .74]					
16. Competent	4.35	0.84	.14* [.01, .26]	-0.01 [-.13, .12]	0.06 [-.07, .18]	0.04 [-.08, .17]	.69** [.62, .75]	.66** [.58, .72]	.64** [.56, .71]	.64** [.56, .71]	.31** [.20, .42]	.47** [.37, .56]	.72** [.66, .78]	.80** [.75, .84]	.62** [.54, .69]				
17. Influence	3.99	0.94	0.04 [-.08, .17]	0 [-.12, .13]	0.08 [-.05, .20]	0.12 [-.00, .24]	.70** [.63, .76]	.63** [.54, .70]	.58** [.49, .66]	.61** [.52, .68]	.41** [.30, .51]	.52** [.43, .61]	.72** [.65, .77]	.72** [.65, .77]	.59** [.50, .66]	.71** [.65, .77]			
18. Promote	3.88	1.01	0.07 [-.05, .20]	-0.07 [-.19, .06]	0.05 [-.07, .18]	0.08 [-.05, .20]	.68** [.60, .74]	.59** [.51, .67]	.58** [.49, .66]	.57** [.48, .65]	.39** [.28, .49]	.52** [.42, .60]	.65** [.58, .72]	.73** [.67, .79]	.53** [.43, .61]	.67** [.59, .73]	.71** [.64, .77]		
20. Donate (amount)	0.69	0.79	0.04 [-.09, .16]	.17** [.05, .29]	0.04 [-.08, .17]	0.1 [-.03, .22]	0.09 [-.03, .22]	.14* [.01, .26]	.13* [.00, .25]	0.1 [-.03, .22]	-0.11 [-.23, .02]	0.11 [-.01, .23]	0.1 [-.03, .22]	.12* [.00, .25]	0.03 [-.09, .16]	0.1 [-.03, .22]	0.04 [-.08, .16]	0.08 [-.04, .21]	
19. Donate (binary)	0.5	0.5	0.03 [-.09, .16]	0.12 [-.00, .24]	0.06 [-.06, .19]	0.06 [-.07, .18]	0.11 [-.01, .23]	.13* [.00, .25]	0.12 [-.01, .24]	0.1 [-.02, .22]	-0.07 [-.19, .06]	.15* [.02, .27]	0.08 [-.05, .20]	.14* [.02, .26]	0.07 [-.05, .19]	0.11 [-.02, .23]	0.05 [-.07, .17]	0.12 [-.01, .24]	.88** [.84, .90]

Note: n = 248; * indicates p < .05; ** indicates p < .01; Participant gender 0 = man, 1 = woman; Leader woman 0 = no, 1 = yes; CLT 0 = low charisma, 1 = high charisma; AC vision = articulating a vision; AC model = provide appropriate model; AC group = fostering acceptance of group goals; AC performance = high performance expectations; AC intellectual = intellectual stimulation; Donate (binary) 0 = no, 1 = yes; Donate (amount) in USD.

Table 4

Means, Standard Deviations, and Correlations with Confidence Intervals for Experiment 4

Variable	*M*	*SD*	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. Participant gender	0.52	0.5																	
2. Age	43.46	16.43	0 [-.12, .13]																
3. Leader woman	0.5	0.5	0.02 [-.11, .14]	-0.02 [-.14, .11]															
4. CLT	0.5	0.5	-0.07 [-.19, .05]	0.01 [-.11, .14]	0 [-.12, .12]														
7. Attributed charisma	4.02	0.62	0.09 [-.03, .21]	.15* [.03, .27]	0.01 [-.12, .13]	.12* [.00, .24]													
8. AC vision	4.24	0.64	0.09 [-.03, .21]	.14* [.02, .26]	0.02 [-.10, .14]	.14* [.02, .26]	.89** [.86, .91]												
9. AC model	4.35	0.71	0.09 [-.03, .21]	.24** [.12, .35]	-0.1 [-.22, .02]	0.06 [-.06, .18]	.73** [.66, .78]	.66** [.58, .72]											
10. AC group	4.29	0.66	0.08 [-.04, .20]	0.05 [-.07, .18]	0.01 [-.12, .13]	0.1 [-.02, .22]	.81** [.77, .85]	.75** [.69, .80]	.56** [.47, .64]										
11. AC performance	3.4	0.91	0.03 [-.09, .16]	0.11 [-.02, .23]	0.08 [-.04, .20]	0.1 [-.02, .22]	.69** [.62, .75]	.48** [.38, .57]	.27** [.15, .38]	.48** [.38, .57]									
12. AC intellectual	3.67	0.98	0.07 [-.05, .19]	0.1 [-.03, .22]	-0.01 [-.13, .12]	0.08 [-.04, .20]	.83** [.79, .87]	.63** [.55, .70]	.52** [.42, .60]	.51** [.41, .59]	.50** [.41, .59]								
13. Prototypicality	3.95	0.95	0.04 [-.08, .16]	.14* [.02, .26]	-0.03 [-.15, .09]	0.12 [-.00, .24]	.70** [.63, .76]	.67** [.59, .73]	.65** [.58, .72]	.55** [.46, .63]	.38** [.28, .48]	.55** [.46, .63]							
14. Like	4.18	0.9	0.09 [-.04, .21]	.17** [.05, .29]	-0.06 [-.18, .07]	0.11 [-.01, .23]	.68** [.61, .74]	.66** [.59, .73]	.66** [.59, .73]	.51** [.42, .60]	.34** [.22, .44]	.55** [.46, .63]	.80** [.75, .84]						
15. Trust	4.15	0.88	0.03 [-.10, .15]	.21** [.09, .32]	-0.03 [-.16, .09]	0.05 [-.07, .18]	.53** [.44, .62]	.52** [.42, .60]	.49** [.40, .58]	.40** [.29, .50]	.24** [.12, .35]	.46** [.36, .55]	.56** [.47, .64]	.66** [.58, .72]					
16. Competent	4.23	0.85	0.07 [-.05, .19]	0.11 [-.01, .23]	-0.06 [-.18, .07]	0.08 [-.04, .20]	.69** [.62, .75]	.67** [.60, .73]	.67** [.59, .73]	.55** [.46, .63]	.29** [.17, .40]	.59** [.50, .66]	.76** [.71, .81]	.81** [.76, .85]	.71** [.64, .76]				
17. Influence	4.03	0.9	0.05 [-.07, .17]	0.09 [-.03, .21]	0.01 [-.11, .14]	0.08 [-.04, .20]	.68** [.61, .74]	.70** [.64, .76]	.50** [.40, .58]	.57** [.48, .64]	.40** [.29, .50]	.52** [.43, .61]	.65** [.57, .71]	.64** [.57, .71]	.49** [.39, .57]	.64** [.57, .71]			
18. Promote	3.86	0.92	0.11 [-.01, .23]	0.1 [-.02, .22]	-0.02 [-.14, .10]	0.12 [-.00, .24]	.68** [.61, .74]	.66** [.58, .72]	.56** [.47, .64]	.45** [.34, .54]	.40** [.29, .49]	.60** [.52, .68]	.67** [.60, .74]	.70** [.64, .76]	.57** [.49, .65]	.70** [.64, .76]	.61** [.53, .69]		
20. Donate (amount)	0.74	0.83	.13* [.01, .25]	.16** [.04, .28]	0.09 [-.04, .21]	0.04 [-.08, .17]	0.11 [-.01, .23]	.15* [.03, .27]	.14* [.01, .25]	0.08 [-.04, .20]	0 [-.12, .13]	0.08 [-.04, .20]	0.12 [-.01, .24]	.14* [.02, .26]	0.08 [-.05, .20]	0.05 [-.07, .18]	0.12 [-.01, .24]	0.06 [-.06, .18]	
19. Donate (binary)	0.51	0.5	.16* [.03, .28]	.22** [.10, .33]	0.09 [-.03, .21]	-0.02 [-.14, .11]	0.11 [-.01, .23]	.13* [.01, .25]	.14* [.01, .25]	0.06 [-.06, .18]	0.02 [-.11, .14]	0.08 [-.04, .20]	0.11 [-.01, .23]	.17** [.04, .28]	0.11 [-.01, .23]	0.1 [-.02, .22]	0.11 [-.01, .23]	0.12 [-.00, .24]	.87** [.84, .90]

Note: n = 256; * indicates p < .05; ** indicates p < .01; Participant gender 0 = man, 1 = woman; Leader woman 0 = no, 1 = yes; CLT 0 = low charisma, 1 = high charisma; AC vision = articulating a vision; AC model = provide appropriate model; AC group = fostering acceptance of group goals; AC performance = high performance expectations; AC intellectual = intellectual stimulation; Donate (binary) 0 = no, 1 = yes; Donate (amount) in USD.

APPENDIX E: TRANSPARENCY CHECKLST

The Effectiveness of Charismatic Signaling by Gender: A Prospective Meta-Analytic Review

Transparency Report 1.0 (short, 12 items)

Mary Hausfeld; George Banks; Jill Yavorsky

19/10/2022

Corresponding author's email address: mary.hausfeld@business.uzh.ch

Link to Project Repository:
https://osf.io/vbqkx/?view_only=5a61c51230ea4f6f9e4dba45cf300452

PREREGISTRATION SECTION

Prior to analyzing the complete data set, a time-stamped preregistration was posted in an independent, third-party registry for the data analysis plan. **Yes**

The study was preregistered… **before any data were collected**

The preregistration fully describes…

the intended statistical analysis for each research question (this may require, for example, information about the sidedness of the tests, inference criteria, corrections for multiple testing, model selection criteria, prior distributions etc.). **Yes**

Comments about your Preregistration

No comments.

METHODS SECTION

The manuscript fully describes…

the rationale for the sample size used (e.g., an a priori power analysis). **Yes**

the study design, procedures, and materials to allow independent replication. **Yes**

the measures of interest (e.g., friendliness) and their operationalizations (e.g., a questionnaire measuring friendliness). **Yes**

any changes to the preregistration (such as changes in eligibility criteria, group membership cutoffs, or experimental procedures). **Yes**

Comments about your Methods section

No comments.

RESULTS AND DISCUSSION SECTION

The manuscript…

distinguishes explicitly between “confirmatory” (i.e., prespecified) and “exploratory” (i.e., not prespecified) analyses. **Yes**

Comments about your Results and Discussion

No comments.

DATA, CODE, AND MATERIALS AVAILABILITY SECTION

The following have been made publicly available…

the (processed) data, on which the analyses of the manuscript were based. **Yes**

all code and software (that is not copyright protected). **Yes**

all instructions, stimuli, and test materials (that are not copyright protected). **Yes**

The manuscript includes a statement concerning the availability and location of all research items, including data, materials, and code relevant to the study. **Yes**

Comments about your Data, Code, and Materials

No comments.

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