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Delving Into Feminine Stereotypes: Female CEOs and the Corporate Social (Ir)Responsibility–Firm Performance Relationship

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In this study, we advance a more nuanced view of gender-based stereotypes about female chief executive officers (CEOs) to shed light on the divergent findings about outcomes associated with their firms' actions. We draw on gender stereotyping literature and its delineation between prescriptive and descriptive gender stereotypes— how women ought to be/act versus how they actually are/act— to theorize that not all female CEOs embody the same prescriptive feminine ideals and, thus, variance in how they are perceived may affect outcomes manifesting from certain firm actions. Specifically, we theorize that there also exists a "double-edged" sword among female CEOs such that the more a female CEO is seen as descriptively aligning with prescriptive ideals of feminine actions and perceptions, the stronger the associated outcomes for their firms will be, whether positive or negative. We test how perceptions of communality and attractiveness—the two most desirable prescriptive perceptions for how women ought to be—affect the corporate social responsibility (CSR) and irresponsibility (CSiR) to firm performance relationship, which align, or fail to align, respectively, with desirable prescriptive feminine actions of helping or hurting others and society. We find that the more a female CEO descriptively aligns with such communality and attractiveness prescriptions, the stronger the CSR and CSiR to firm performance relationship will be. The results of our study suggest that the gendered beliefs to which female CEOs are subjected are more nuanced and complex than the current literature explains, contributing to theory and practice alike.

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The number of female chief executive officers (CEOs)—although still small in absolute terms and far from being equally representative—has grown substantially in the past decade; as of 2023, women hold an all-time high of over 10% of Fortune 500 CEO positions whereas, not long ago, it was less than 2% (Catalyst, 2023; Elting, 2023). This five-fold growth in female CEOs is "an important step forward [that] brings us closer to parity" (Elting, 2023: last paragraph) and, as Gupta, Han, Mortal, Silveri and Turban (2018: 228) note, has "stimulated considerable interest in understanding their experiences in these roles." Indeed, female CEOs are central to a growing body of research, yet these inquiries offer conflictive insights and results (for reviews, see Anglin, Kincaid, Short, & Allen, 2022; Mah, Kolev, McNamara, Pan, & Devers, 2022).

On the one hand, role (in)congruency and the "double-edged" sword that female CEOs are subject to is perhaps the most oft-cited logic in extant work: This view argues, in short, that whether female CEOs act in ways which align with prescribed gender roles (which, conversely, often misalign with their CEO roles), or act in ways which align with their CEO roles (which, conversely, often misalign with prescribed gender roles), both ultimately "violate expectations of how one ought to behave, eliciting negative reactions" and related outcomes (Anglin et al., 2022: 1422). As such, role (in)congruity logic suggests that such biases result in female-led firms experiencing worse outcomes from the same actions as male-led firms (for a review, see Glass & Cook, 2016). On the other hand, research also posits both that the growing number of female CEOs may weaken role (in)congruity biases and that their actions *can* be viewed more positively than those of male CEOs; in short, the rarity and value of female CEOs as well as the desire for typically "feminine" leadership associated with better work cultures and decisions are argued to ultimately result in more positive outcomes from actions of female-led firms relative to male-led firms (e.g., for discussion and meta-analytic evidence, see Jeong & Harrison, 2017).

Mixed insights and results about outcomes from female CEOs' actions suggest current views of gender biases may be too coarsely applied and that, ultimately, new theory and evidence are needed to both enhance our knowledge of the underlying theoretical mechanisms and aid practice (Anglin et al., 2022; Mah et al., 2022). For instance, extant studies overwhelmingly treat female CEOs as a "coherent group" (Dixon-Fowler, Ellstrand, & Johnson, 2013: 1488), yet doing so assumes all female CEOs will be viewed homogenously and receive similar ensuing outcomes, thus overlooking nuanced but important differences that may exist within the group (e.g., Brands, Ertug, Fonti, & Tasselli, 2022; Phillips, Jun, & Shakeri, 2022). We believe that such oversimplified assumptions are detrimental to the progress in understanding the experiences of women in CEO roles, both by incompletely capturing how gender biases actually manifest against female CEOs and, perhaps more importantly, by masking when such bias can be beneficial or detrimental to certain female CEOs.

To begin to advance a more nuanced view of female CEOs, we first draw from the delineation in literature between *prescriptive* and *descriptive* gender stereotypes—how women ought to be/act versus how they actually are/act—to theorize that, while gender role

stereotypes inherently manifest to affect women in the CEO position, not all female CEOs embody the same prescriptive feminine ideals and, thus, gender role biases are unlikely to manifest in the same way for all female CEOs. In turn, the varying degrees to which female CEOs *act* a certain way, and are *perceived* to be a certain way, may affect how these actions or perceptions manifest in resulting outcomes. More specifically, we believe that the oft-cited "double-edged" sword may be felt differently within the female CEO group as well, such that the more a female CEO descriptively aligns with prescriptive ideals of feminine actions and perceptions, the stronger the outcomes for their firms will be, whether positive or negative.

To capture whether prescriptively ideal actions of female CEOs manifest in positive or negative outcomes, we built and tested a model focusing on corporate social (ir)responsibility (CSR and CSiR) and firm performance for three reasons. First, the nature of CSR, defined as "actions that positively affect an identifiable social stakeholder," and corporate social irresponsibility (CSiR), defined as "actions that negatively affect an identifiable social stakeholder" (Fu, Tang, & Chen, 2020; Strike, Gao, & Bansal, 2006: 852; Tang, Qian, Chen, & Shen, 2015), is congruent (incongruent) with desirable prescriptive feminine actions of helping (hurting) others and society, who have long been seen as benefitting (harming) firms in many ways which ultimately affect performance (Aguinis & Glavas, 2012; Bernardi, Bosco, & Columb, 2009; Mellahi, Frynas, Sun, & Siegel, 2016). Second, despite its congruency with feminine ideals, CSR (CSiR) is still largely accepted and treated as a discretionary action within CEOs' latitude and is thus likewise ideal for testing logic about CEOs (e.g., Fernandez, Burnett, & Gomez, 2019; Petrenko, Aime, Ridge, & Hill, 2016). Last, the findings in the CSR (CSiR) literature are mixed regarding the effect on firms' performance outcomes, which suggests that the presence of moderators—such as differences in CEOs and beliefs regarding their congruence with feminine ideals—may be important factors to consider (e.g., Aguinis & Glavas, 2012; Mellahi et al., 2016).

To examine how CSR (CSiR) actions materialize in purported positive (negative) firm performance outcomes for female CEOs based on their alignment with feminine ideals, we break down the feminine ideal into its two main prescriptive norms of perceived communality and attractiveness (Rule & Ambady, 2009). We posit the degree to which female CEOs are seen as (in)congruent with perceptions of what it means to conform to idealized views of communality (Prentice & Carranza, 2002) and attractiveness (Ramati-Ziber, Shnabel, & Glick, 2020) affect how their CSR and CSiR actions manifest in related positive or negative firm performance outcomes. We thus expect (in)congruence altering effects as gender prescriptive stereotypes of communality (e.g., Johnson, Stevenson, & Letwin, 2018; Schaumberg & Flynn, 2017) and attractiveness (e.g., Cook & Mobbs, 2017; Halford & Hsu, 2020; Rule & Ambady, 2008) give rise to associated positive (negative) performance outcomes from female CEOs' CSR (CSiR). Across multiple tests, we found results to be consistent with our theorizing that the expected CSR and CSiR to firm performance relationships are affected by views of female CEOs' communality and attractiveness: Firms with female CEOs who are seen as more communal or more attractive experience more strongly positive relationships with firm performance from their CSR; conversely, these firms also experience more strongly negative relationships with firm performance from their CSiR.

Our study makes important contributions on both theoretical and practical levels. The primary contribution of our work is portraying a more complex picture of stereotypes

related to female CEOs and the double-bind they face when fulfilling both their gender and CEO roles. We join a growing number of studies highlighting the oversimplification of treating women as a homogenous class and extend this line of research to female CEOs. In particular, we find evidence consistent with our theorizing that variation in the degree to which female CEOs are seen as embodying the prescriptive ideals affect the manifestation of related stereotypes, an important distinction that has largely been overlooked in the CEO gender literature. By addressing biases toward female CEOs (Jeong & Harrison, 2017), our study fosters awareness around the "grand challenge" of disparate treatment of women in firms and society, particularly those in CEO roles (Banks et al., 2016; Fernandez-Mateo & Kaplan, 2018; Niessen-Ruenzi & Ruenzi, 2019). Relatedly, our study also offers theoretical rationale and associated evidence that CSR and CSiR actions may be subject to gender-based biases, and thus looking at the gender of the CEO who engages in the actions extends insight on heretofore mixed findings. In total, our findings advance theory and pose avenues for acknowledging the realities for firms with female CEOs, which we hope can offer a step towards addressing these biases in practice.

Theoretical Development

Gender Role (In)Congruity Theory and Female CEO Inter variation

Gender role (in)congruity theory (Eagly & Karau, 2002) argues that at the intersection of gender and role congruency, stereotypical views of the female gender and the CEO role precipitate an overall bias against female CEOs. Specifically, masculine qualities (e.g., individualistic, competitive, and controlling) typically desired of men have, over time, increasingly grown to define and to be associated with certain highly ranked and visible leadership roles. For instance, when it comes to the CEO role, the historical occupation of this role by men has led to traditionally desirable masculine traits to be deemed desirable requisites for the role. However, these requisites are posited to not match the feminine qualities (e.g., collectivist, charitable, and socially oriented) typically desired of women. In turn, since the stereotypes about women and CEOs "clash with observers' preconceived notions about what qualities the occupants of such positions should have," female CEOs "receive particularly prejudicial evaluations" of their actions that materialize in ways that are detrimental to their firms' performance (Jeong & Harrison, 2017: 1226). According to this view, in addition to receiving more scrutiny, blame, and performance pressures (Dixon-Fowler et al., 2013; Glass & Cook, 2016), female CEOs are seen by investors as less capable (Bigelow, Lundmark, McLean, & Wuebker, 2014) and in need of more assistance (Oliver, Krause, Busenbark, & Kalm, 2018), even when their actions are the same as their male counterparts. These findings collectively offer important insights into how female CEOs and their attributed actions may affect their firms' performance.

Despite the intuitive nature of role (in)congruity theory suggesting that the actions of female CEOs will associate with worse outcomes than their male colleagues, evidence is not entirely supportive and instead highlights an unresolved tension at the intersection of both gender and role congruity (Anglin et al., 2022; Mah et al. 2022). Various studies have found that shifts in stereotypes of leaders (Eagly & Carli, 2003) lend both more credence to and acceptance for what was once considered to be more "feminine" leadership

characteristics and that, at times, the actions of female CEOs may in fact be associated with better firm outcomes (Dezso & Ross, 2012; Offermann & Foley, 2020). For instance, prior research finds that under certain firm conditions (i.e., "think crisis, think female"), female leaders may be strategically appointed because either certain stereotypically feminine qualities are seen as beneficial during times of uncertainty or, relatedly, the appointment of a female CEO signals visible change to stakeholders (Reinwald, Zaia, & Kunze, 2023). Similarly, recent polls indicate that both men and women are more comfortable with women holding CEO roles than in the past (Peck, 2019). Thus, resolving this tension of how stereotypes affect outcomes for women in the CEO role, and understanding when and how the feminine stereotype can be an advantage in the CEO role, is a theoretical necessity. Similarly, resolving this tension can offer important insights for practice.

Indeed, if the bias against female CEOs is conclusively detrimental, then the five-growth in the number of female CEOs can either be attributed to collective poor decisions implemented by some of the largest and most successful organizations today and/or symbolic acts carried out in support of a contemporary narrative, but both ultimately come at the expense of the organizations' well-being; both reasons seem flawed for obvious reasons. Instead, scholars posit that women's psychological and behavioral attitudes have shifted over time as women report higher aspirations goals (Eagly & Carli, 2003), higher self-report levels of dominance and assertiveness (Twenge, 2001), and desires for leadership, prestige, and power (Konrad, Ritchie, Lieb, & Corrigall, 2000). As such, the timing is ripe to move away from a homogenous, "coherent group" (Dixon-Fowler et al., 2013: 1488) assumption of female CEOs to one that better incorporates nuanced, inter-variation among women who decide to pursue CEO roles and how various stakeholders view these differences (Offermann & Foley, 2020). In addition, this also suggests a decoupling of the traditional view of the CEO role as being entirely masculine by nature as stereotypically feminine qualities (i.e., emotional sensitivity, interpersonal collaborativeness) are increasingly accepted as being advantageous for the CEO role and, under certain conditions, more desirable than traditional masculine qualities.

As such, in no small part fueled by a desire to "provide a better understanding of the underlying" relationship to offer sound practical insights, scholars have begun to call attention to factors that affect how female CEOs' actions manifest in resulting outcomes (Mah et al., 2022: 21). As Parker, Mui, and Titus (2020: 740) note, this growing line of inquiry is important in many ways; indeed, understanding factors that affect the degree of "manifestation of gender biases," and thus how certain female CEOs come to be more "positively (or negatively) judged," can enhance our theoretical knowledge on the topic, and poses practical insights and steps for female CEOs to effectively defend against negative views, or can incite positive views. Practically speaking, given the increasing prevalence of female CEOs, providing such insights is not only timely, but is also consistent with calls to address the "grand challenge" of disparate treatment of women in organizations and society (Banks et al., 2016).

The Feminine Prescriptive Ideal and Descriptive Alignment

If gender role (in)congruity stereotypes are not equally applied to all female leaders, as the literature has started to suggest, then this calls for more theory regarding the nuances of such stereotypes and the conditions under which bias from these stereotypes is either weakened or

aggravated (e.g., Brands et al., 2022; Phillips et al., 2022). In short, as not all female CEOs equally embody the feminine prescriptive, coarsely viewing all as the same overlooks such nuanced differences and thus builds on a faulty assumption (i.e., that all female CEOs are "the same" and defined by gender as a simple, binary concept only). Such views have been argued to hinder our theoretical knowledge of this topic and also to be a disservice to the practical realities facing women. As theorizing advances to deconstruct the feminine stereotype, it stands to reason that intra-female CEO comparisons may reveal that some women more closely align to the prescriptive ideal than others. Stereotype work, for instance, delineates between *prescriptive* and *descriptive* gender stereotypes—how a person ought to be (prescriptive), compared to how the individual actually is (descriptive)—and whether that individual descriptively embodies the prescriptive ideals of their gender (Prentice & Carranza, 2002). In turn, we expect that varying descriptive (in)congruities with prescriptive ideals is likely to affect how gender role (in)congruity stereotypes manifest to affect the resulting outcomes from the actions of female CEOs.

To address varying (in)congruities, we focus on two prevalent prescriptive feminine ideals in the stereotype literature related to prescriptive *actions*—how an ideal woman should act, and *perceptions*—how an ideal woman should be. We examine prescriptive actions in the form of CSR and CSiR, and perceptions in the form of communality and attractiveness, the two most commonly cited feminine ideals according to both research and widely held societal norms (e.g., Ramati-Ziber et al., 2020; Rudman & Glick, 2001). We argue that actions that align or misalign with expectations for how women ought or ought not to act are perceived through feminine ideals of how a woman ought or ought not to be, through views of communality and attractiveness. (Mis)alignment with such ideals, then, is likely to create dissonances that affect how such actions of a given woman are evaluated.

To do so, we draw on the long line of research on CSR and CSiR actions that affect firm performance (Aguinis & Glavas, 2012; McWilliams & Siegel, 2000; Mellahi et al., 2016), which is ripe for investigation through a stereotype lens of female CEOs for three key reasons. First, although corporate social actions were initially viewed as a single, "net" construct, overtime, research has increasingly supported the notion that such actions should be deconstructed into positive and negative aspects (Muller & Kräussl, 2011; Strike et al., 2006) since firms can do "good" and "bad" simultaneously, and a net approach washes out their conceptual distinctions. As such, CSR now more specifically refers to voluntary firm actions that positively affect stakeholders (e.g., support for clean air; charitable giving) while CSiR refers to voluntary firm actions that negatively affect stakeholders (e.g., harming the environment; harmful working conditions; Fu, Tang, & Chen, 2020; Strike et al., 2006; Tang et al., 2015). As a result, addressing both CSR and CSiR independently has accounted for distinct ways that doing good or bad manifests to firms' benefit or detriment, which ultimately impact their overall performance (although empirical tests of each remain mixed; e.g., Frynas & Yamahaki, 2016; McWilliams & Siegel, 2000). Second, the voluntary and discretionary nonmarket nature of CSR and CSiR suggests that stakeholders often attribute such actions directly to the CEO (Den Hond et al., 2014). In addition to this purported CEO effect (some studies report that up to 30% of CSR variance is attributed to the CEO, Wernicke, Sajko, & Boone, 2022), stakeholders today increasingly expect CEOs to initiate CSR and other similar non-market strategies and, depending on whether they do so, may choose to support or withhold support for the organization (Henderson, 2018).

Last, the prescriptive female stereotype further suggests that CSR (CSiR) is considered particularly (in)appropriate for women (Eagly & Carli, 2003) and, similarly, prior studies have associated CSR with gender-related constructs such as executive gender (Borghesi, Houston, & Naranjo, 2014), board gender (Boulouta, 2013), and even the gender of a CEO's children (Cronqvist & Yu, 2017). Taken together, female CEOs engaging in CSR activities are not only acting within the accepted scope of CEO appropriate activities but are also abiding by prescriptive expectations of appropriate gendered behavior, while the inverse applies to CSiR activities. Importantly, such reactions to CSR or CSiR may be conscious or unconscious, with responders reacting in myriad ways that ultimately affect performance (McWilliams & Siegel, 2000). That is, respondents may not intentionally perceive female CEOs a certain way but, nonetheless, the totality of their reactions to the CEOs actions is shown to manifest in their firm performance outcomes (e.g., Jeong & Harrison, 2017).

We posit that the resulting firm performance from female-led firms' CSR and CSiR are further affected by perceived (mis)alignment between their actions and perceptions of how they prescriptively ought to be. We focus on the two definitive prescriptive feminine ideals in the stereotype literature—communality and attractiveness (e.g., Ramati-Ziber et al., 2020; Rudman & Glick, 2001). In turn, we present arguments for why CSR and CSiR actions will be assessed through views of the female CEOs' communality and attractiveness and why a (mis)alignment between perceptions and actions is likely to affect how such actions of a given woman are evaluated in ways that ultimately affect firm performance.

The Prescriptive Ideal of Feminine Communality. Expectations for communality in women found in prior research permeates three distinct but related beliefs held about the roles and responsibilities of women in society (e.g., Glick & Fiske, 1997; Spence & Helmreich, 1979), how women (and men) view their ideal selves (Wood, Christensen, Hebl & Rothgerber, 1997), and how these beliefs reinforce the feminine ideal (e.g., Williams & Best, 1990). Each belief points to the female prescriptive ideal as that of the communal nurturer (Eagly, 1997). According to both male and female respondents across various studies, communal characteristics include being compassionate, forgiving, eager to soothe hurt feelings, sensitive to the needs of others, sympathetic, understanding, and warm (Prentice & Carranza, 2002); moreover, women are ideally expected to embody these characteristics (Diekman & Eagly, 2000). As noted above, CSR is defined by positively impacting stakeholders (Strike et al., 2006) and thus fits the feminine stereotype of being communal (Bernardi et al., 2009; Boulouta, 2013).

While gender role (in)congruity theory generally states that women in CEO positions do find themselves in a "double bind" whereby they violate role and gender stereotypes, prior studies suggest that, under certain conditions, perceptions of communality can positively correlate to firm rank and profits for female CEOs (Pillemer, Graham, Burke, 2014). This work suggests that the degree to which female CEOs are seen as communal affects how their actions are evaluated compared to other female CEOs (Rule & Ambady, 2009), which is salient since not all women equally embody the prescriptive communality ideal, and not all women may pursue CSR and CSiR to the same degree. Thus, it is plausible for varying degrees of communality to alter stakeholder response to CSR and CSiR actions. For instance, prior research has found that when a CEO is seen as self-serving or inauthentic, their CSR is less likely to elicit positive firm performance while, if seen as other-oriented or authentic,

CSR is more likely to elicit added firm benefits (e.g., Mui, Parker & Titus Jr., 2021; Petrenko et al., 2016). Prior research provides similar evidence, suggesting that CEO decisions to pursue CSR may be driven by various reasons, including altruism or being part of a strategy to create goodwill or maintain certain interpersonal relations, all of which may explain why CSR is seen as more authentic when pursued by female CEOs (Borghesi et al., 2014). Thus, the gendered nature of CSR is a confirmatory stereotype for communal female CEOs and, by being perceived as more communal *and* engaging in more CSR, these female CEOs stand a higher chance of netting a stronger positive link to firm performance compared to female CEOs perceived as less communal. Conversely, this suggests that compared to female CEOs who are perceived as more communal, female CEOs who are perceived as less communal are less likely to net the same benefits. Further, we note the distinction here that while gender alone (i.e., being female) may not be enough to net a CSR benefit based on mixed prior CSR findings, it is the embodiment of prescriptive feminine ideals that allow certain female CEOs to net benefits from CSR, but also exacerbates the detriments from CSiR. However, as more communal female CEOs engage in more CSiR, they will also likely violate these expectations more severely, and thus be punished more harshly than those perceived as less communal, resulting in a stronger negative link to firm performance. This conversely suggests that, compared to female CEOs who are perceived as more communal, female CEOs who are perceived as less communal are less likely to be seen as violating these expectations as severely. That is, when a female CEO is perceived to embody the prescriptive ideal of communality but fails to act in a prescriptively ideal manner by engaging in more CSiR, the incongruence will result in a more strongly negative outcome.

Hypothesis 1 – The CSR-performance relationship will be more strongly positive for more communal female CEOs relative to less communal female CEOs.

Hypothesis 2 – The CSiR-performance relationship will be more strongly negative for more communal female CEOs relative to less communal female CEOs.

The Prescriptive Ideal of Feminine Attractiveness. Attractiveness has long been studied across many fields, whereby physical features that are considered ideal or desirable by others can often net certain social advantages—from successfully mating (Thornhill & Gangestand, 1999) to a more general stereotypical view of "what is beautiful is good" (Dion, Berscheid, & Walster, 1972)—which extend across various social conditions, including the workplace. For CEOs specifically, evidence suggests that attractiveness can influence how stakeholders perceive firm actions since CEOs are seen as the "faces" of their firms (e.g., Colombo, Fisch, Momtaz, & Vismara, 2022; Halford & Hsu, 2020). Despite the general advantages of attractiveness, these findings also point to it as a prescriptive ideal that is more impactful for women than it is for men (i.e., attractiveness is not considered a prescriptive masculine ideal; Thornhill & Gangestad, 1999; Parker, Horowitz, & Stepler, 2017). Even today, surveys continue to report that both men and women value physical attractiveness the most in women, followed by communality indicators (Milligan, 2017). Relatedly, studies also continue to find differences in how attractiveness affects men and women across a host of outcomes, such as salaries, performance evaluations, and likelihood of electoral success (e.g., Pillemer et al., 2014). In addition, the concept of "what is beautiful is good" is core

to social psychology research and connotes the cognitive bias that physical attractiveness is indicative of other positive qualities—including, but not limited to, intelligence, competence, kindness, and trustworthiness—that are likewise associated with the pursuit of CSR and the avoidance of CSiR (Dion et al., 1972; Lorenzo et al., 2010).

Drawing on such theoretical logic that (1) CEO attractiveness can influence stakeholder perceptions of firm actions; (2) attractiveness is a more important prescriptive for women than it is for men; and (3) attractiveness is associated with positive traits that align with CSR and misalign with CSiR, we contend that attractiveness further exacerbates how the CSR and CSiR actions of female CEOs are evaluated.

The foregoing suggests that the lens through which female CEOs' actions are seen is likely affected by their attractiveness, both as the "faces" of their firms and as depicted by prescriptive feminine ideals. If normative beliefs indicate that individuals in high-power, visible positions should enhance their appearance and strive to be attractive, then women in these same positions should face stronger demands to be perceived as attractive (Ramati-Ziber et al., 2020) because they naturally face a heightened "beauty premium" driven by both role and gender. This indicates that, by conforming to the desired stereotype of being more attractive *and* engaging in more CSR, female CEOs are likely to be seen more favorably as they affirm stereotypical views of how women should ideally look and, thus, their "ought to" CSR actions are evaluated more favorably compared to less attractive female CEOs. For less attractive female CEOs, the lack of feminine ideal embodiment when it comes to beauty will result in less benefits from CSR. Conversely if more attractive female CEOs engage in more CSiR actions, not only do their actions violate expectations, but they also violate prescriptive feminine attractiveness stereotypes and thus will be punished more harshly (Dion et al., 1972). Similarly, for less attractive female CEOs, the lack of beauty as a feminine ideal will result in less penalization from CSiR. Taken together, the relationship both CSR and CSiR have with firm performance should be stronger for female CEOs who are perceived to be more attractive, than for female CEOs considered less attractive.

Hypothesis 3: The CSR-performance relationship will be more strongly positive for more attractive female CEOs relative to less attractive female CEOs.

Hypothesis 4: The CSiR-performance relationship will be more strongly negative for more attractive female CEOs relative to less attractive female CEOs.

Methods and Data

Sample

We tested our hypotheses using data on publicly traded firms in the United States from 2001 to 2018. Sample data came from multiple sources: CSR and CSiR from Morgan Stanley Capital International's (MSCI) Environmental, Social, and Governance (ESG) database (formerly known as KLD); firm and executive data from Compustat, Execucomp, Boardex, and firms' websites; media data from Ravenpack; and industry diversity data from the U.S. Bureau of Labor Statistics. We first used Execucomp's executive gender variable to determine firm–year observations where the CEO was a woman. We then sampled

firms for which there is no missing data, resulting in a timeframe from 2001 to 2018 (the earliest and latest years of data currently available across sources). To establish temporal precedence, all predictors were measured in the time period before the dependent variable. Accounting for temporal lagged variables and missing data, the final sample is 574 firm–year observations for 162 firms and 97 female CEOs.

Measures

We measured firms' CSR and CSiR from widely used ESG ratings (e.g., Kacperczyk, 2009; Petrenko et al., 2016; Waddock & Graves, 1997). ESG ratings are carried out by independent analysts who rate a variety of CSR activities across various factors (e.g., Community, Corporate Governance, Diversity, Employee Relations). For each factor, the ESG rating consists of a summary of strengths (i.e., responsible; positive ratings) and concerns (i.e., irresponsible; negative ratings), where each is categorized with a binary variable if a respective strength or concern is present. Firms without a strength or concern regarding a factor were given a score of 0. Consistent with our theorizing that firms can engage in both responsible and irresponsible CSR activities, the strengths and concerns dimensions are measured independently with strengths as *CSR* and concerns as *CSiR* (we use alternative measures in robustness tests reported later).

We followed the body of evidence built on the logic that doing good (i.e., CSR) or bad (i.e., CSiR) manifests in many ways that ultimately affect firm performance (e.g., Aguinis & Glavas, 2012; Frynas & Yamahaki, 2016; McWilliams & Siegel, 2000; Mellahi et al., 2016) and focused on market-based firm performance as our dependent variable (e.g., Luo & Bhattacharya, 2006) using the logged value of *Tobin's Q* (derived by dividing market valuation by the total asset value). Tobin's Q is a widely used market performance measure (e.g., Morck, Shleifer, & Vishny, 1988) often employed to understand the impact of corporate social strategies on market perceptions of firms (Nekhili, Nagati, Chtioui, & Rebolledo, 2017) and, as such, market-based firm performance is more likely to be affected by CSR and CSiR than accounting-based measures of financial performance (see Jeong & Harrison, 2017) and is more consistent with our theorizing about stereotyping views and its effect on firm performance. To account for any outliers, winsorizing our outcome variable at 5% continued to yield consistent results. Furthermore, we found results to be robust to market value and accounting-based performance (e.g., return on assets or equity) as well as to more proximal outcomes measured by analyst and media sentiment that, consistent with our logic, are likely to affect firm performance as well.

CEOs have long been seen as the "faces" of their firms who affect external audiences' perceptions in ways that impact performance both figuratively (e.g., Barnard, 1938; Hambrick, 1989; Love, Lim, & Bednar, 2017) and literally (e.g., Canace, Cianci, Liu, & Tsakumis, 2020; Gomulya, Wong, Ormiston, & Boeker, 2017; Momtaz, 2021; Pillemer et al., 2014; Rule & Ambady, 2008, 2009; Rule & Tskhay, 2014; Wong, Ormiston, & Haselhuhn, 2011). Moreover, not only do surveys suggest that the two most salient traits used in forming perceptions of women are their communality and physical attractiveness (Milligan, 2017), but prior research also supports the notion that such perceptions can be validly inferred from individuals' faces via headshots (e.g., Johnson, Podratz, Dipboye, & Gibbons, 2010; Rudman, Moss-Racusin, Phelan, & Nauts, 2012). Following both the logic that CEOs are figuratively

the faces of their firms and evidence that their faces literally matter for perceptions of their firms, we obtained official headshots of the female CEOs from their firms' websites to assess perceptions of communality and attractiveness (here, we followed precedence in the literature, e.g., Pillemer et al., 2014; Rule & Ambady, 2008). We focused on official headshots because we assumed that this image of the CEO was one that has been "approved" and accepted for widespread publication and used as the face of the firm. Hence, how female CEOs have chosen to present themselves is reflected in terms of whether they are wearing makeup, or certain colors, style of clothing, accessories, and so forth, that, in turn, affect perceptions of their femininity in the form of communality and attractiveness. In short, various studies across disciplines have examined how stakeholders draw cues and inferences from CEO headshots, including perceptions of communality and attractiveness, our two main moderators, on a host of firm-level outcomes (e.g., Agnihotri & Bhattacharya, 2021; Devine, Holmes, & Wang, 2021; Hopp, Wentzel, & Rose, 2020; Rule & Ambady, 2008). These studies collectively show that such traits "associated with the evaluation of leadership overlap with traits that can be judged reliably from the face" (Rule & Ambady, 2008: 109).

Each headshot was edited to show the focal CEO's face from the shoulder up. Participants (170 undergraduate students enrolled in upper-level business courses at a large university in the United States) rated each CEO. Since websites may contain alternate headshots, a different set of 98 raters assessed the same CEOs in alternate headshots (when present): No significant differences were found across official headshots. To capture perceived communality, we used Rudman, Moss-Racusin, Phelan, and Nauts's (2012) Proscriptive and Prescriptive Traits Scale (PPTS). On a scale of 1 (*strongly disagree*) to 7 (*strongly agree*), raters assessed the extent to which they agreed with the 16 communal traits ($\alpha = 0.95$) describing the pictured woman. We also used various alternate communality measures, which we further detail in the robustness section below, finding robust results across measures. To capture perceived attractiveness, raters used the same 7-point scale to assess the extent to which the pictured women is attractive (Johnson, Podratz, Dipboye, & Gibbons, 2010). Some argue that attractiveness is a subjective measure and, colloquially, we consider attractiveness as a mark or characteristic that is appealing or pleasing, yet the fields of psychology and sociology maintain that, as a construct, attractiveness is strongly driven by visible factors such as facial symmetry (Grammer & Thornhill, 1994). Studies have used computer generated facial symmetry scores to capture attractiveness; however, a more widespread approach is measuring attractiveness as a single cue (Stopfer, Egloff, Nestler, & Back, 2013; Pillemer et al., 2014), and studies have found that measures across the approaches are highly correlated (Agnihotri & Bhattacharya, 2021). Our approach inherently treats these constructs as stable during CEOs' tenures in the office. As Diekman and Goodfriend (2006: 370) note, studies offer "a clear pattern" pointing to the stability of views about communality aligned with this treatment (p. 370), with "evidence of women's stability in communal characteristics" (p. 381) while Kanazawa (2011: 8) suggests that the same applies to stability of attractiveness, as evidence has long found views of individuals' "attractiveness remains very stable across the life course." Although evidence supports our approach, we detail, in the discussion, a need to delve deeper into this point and how the increase in photo and videographic data of CEOs may aid such studies.

We control for a variety of individual-, firm-, and industry-level factors. Studies show CEOs' age and tenure affect the likelihood of prosocial decision-making (e.g., Serfling,

2014; Simsek, 2007). As such, we control for *CEO age* in years as well as the number of years in the CEO position (*CEO tenure*). Research has also shown that a CEO also serving as the Chair of the board of directors (known as duality) affects firm outcomes and CEO discretionary activities (Boyd, 1995). We thus measure *CEO duality* by coding whether a CEO also serves as a board chair ("1" if yes; "0" if no). There is also rich empirical evidence that CEO pay affects their decisions like CSR and other firm outcomes. As such, we control for CEO pay in terms of their *short-term pay* based on salary and bonuses, *long-term pay* based on the dollar value of restricted stock and stock options, as well as *percent of shares owned* (Carpenter, 2000).

We include a number of variables to account for firm-specific conditions. Reactions to CSR may be affected by the structure of the board and top management team (TMT; Mellahi et al., 2016), so we include *board independence* as the ratio of outside directors to the total board members in a given year; *board diversity*, measured as the ratio of female directors to the total board members in a given year (Bear, Rahman, & Post, 2010); *TMT diversity,* measured as the ratio of female TMT members in a given year; and *industry diversity,* using the percentage of employees in an industry that are female (see also Jeong & Harrison, 2017). To account for how *company size* affects firm outcomes, we control for the natural logged of the number of employees. As past performance may affect current performance and perceptions about a firm, we include a firm's prior year's *ROA* as a control. As the amount of media attention may affect how a firm performs, we control for *article count* as the total number of articles mentioning a firm in a given year. We also control for the availability of slack resources and financial leverage since reactions to a firm's CSR may be interpreted within the boundaries of resources available to allocate for this purpose. We measure *slack* as the ratio of current assets to current liabilities and *financial leverage* as debt divided by equity. Furthermore, we account for *industry* at the 2-digit SIC code and *year* effects, using dummy variables to control for industry and time effects.

Addressing Endogeneity

We see two sources of endogeneity that may affect our study. First, stereotypes of CEOs and firm actions are not randomly assigned (Shaver, 1998), posing "selection of treatment" concerns that are also called treatment effects or endogenous choice. Second, an omitted variable may be present. We took several steps to address the related concerns arising from these sources of endogeneity, finding results robust across approaches (Hill et al., 2021).

To address possible biases from the endogeneity of female stereotypes and actions, we first used an instrumental variable approach, a tool which addresses both selection of treatment and omitted variables (for a review, see Hill et al., 2021). We thus needed instrumental variables (instruments) that met two conditions: relevance (i.e., related to an endogenous predictor) and exogeneity (i.e., uncorrelated with the error of the dependent variable; Semadeni, Withers, & Certo, 2014). We could not find instruments used in prior studies that met both conditions. For stereotypes, we therefore used Lewbel's (2012) estimator, a tool designed for "models containing an endogenous regressor … when no external instruments are available," and used heteroscedasticity in the model to derive valid instruments and achieve sound identification (Baum & Lewbel, 2019: 1; Lewbel, 2019). For CSR and CSiR, we followed Gamache, Neville, Bundy, and Short (2020) and used a residual inclusion approach which

is suggested for predicting count variables such as those derived by counts of ESG ratings (Hausman, 1978; Wooldridge, 2002). Specifically, as CSR and CSiR occur concurrently and share predictors, we first ran a seemingly unrelated regression model to avoid biasing estimates (Greene, 2008). We then used the residuals from the model as a *treatment effect* to address potential bias from our treatment—here, CSR and CSiR—being endogenous (Rawley, Godart, & Shipilov, 2018).

While instrumental variable approaches can help address endogeneity, such approaches can also bias estimates (i.e., "the 'cure' is worse than the 'disease'" at times; Semadeni et al., 2014: 1071). We thus took two additional steps. First, we ran analyses using so-called "naïve" models that do not attempt to address (i.e., cure) endogeneity (i.e., the disease). Results of our analyses are robust across approaches, enhancing the veracity of our results (Hill et al., 2021). Second, we used impact threshold of a confounding variable (ITCV) and robustness of inference to replacement (RIR) to test the degree to which a confound "would be great enough to alter an inference" (Frank, 2000: 149). Results of ITCV and RIR suggest that to invalidate our findings: (1) a confound must correlate with the focal predictor of communality (attractiveness) at −0.243 (−0.269) and with the dependent variable at 0.243 (0.269); no variable in our study meets this threshold (see Table 1); and (2) about 72.12% (87.82%) of the sample must be replaced with observations that have an effect of 0. Taken together, ITCV and RIR results suggest our findings are unlikely biased by such a confound (Busenbark, Yoon, Gamache, & Withers, 2022). The findings imply omitted variables which may affect the outcome—such as a CEO's ability to direct the firm that is not captured in the present control variables[1]—are unlikely to alter our inferences.

All told, although we followed Hill and colleagues (2021), offering logic for possible endogeneity and addressing the possibilities in various ways, our results are consistent if we do not attempt to address possible endogeneity and, instead, use naïve models (Semadeni et al., 2014). In the robustness section, we discuss alternative methods as well. Cumulatively, these findings suggest that our results are likely robust to any possible endogeneity.

Analyses and Results

Our models have invariant values of communality and attractiveness (Diekman & Goodfriend, 2006; Kanazawa, 2011), so we used generalized estimating equations (GEE), a widely used estimator that accounts for the nonindependence in longitudinal panel data (e.g., Chatterjee & Hambrick, 2007; Petrenko et al., 2016). All models use a Gaussian distribution and an identity link function to account for the continuous dependent variable with an exchangeable correlation structure and robust standard errors to account for nonindependence and heteroscedasticity in the data. We standardize all moderating variables prior to creating interactions (Cohen, Cohen, West, & Aiken, 2013). Variance Inflation Factors (VIF) are less than 2.0, well below recommended thresholds of 10, suggesting that multicollinearity does not appear to be a concern.

Descriptive statistics and correlations for study variables appear in Table 1. Results of hypotheses tests appear in Table 2; Models 1 to 3 provide results addressing endogeneity as noted above, and Models 4 to 6 provide naïve models that omit attempts to address endogeneity.

Table 1
Descriptive Statistics and Correlation Coefficients

		M	*SD*	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
(1)	Attractiveness	4.49	0.79																			
(2)	Communality	4.03	1.12	.30																		
(3)	Tobin's Q	2.02	2.44	.08	.04																	
(4)	CSR	1.5	2.48	−.09	−.02	.01																
(5)	CSiR	1.6	1.96	.00	−.06	−.07	.41															
(6)	CEO Age	55.86	7.44	.02	.14	−.08	.00	.01														
(7)	CEO Tenure	6.79	7.59	.21	.21	.02	−.1	−.08	.4													
(8)	CEO Duality	0.58	0.49	.02	.05	−.02	.12	.14	.27	.26												
(9)	CEO Long-Term Pay	3855.82	8569.56	−.02	−.02	.07	.18	.13	.00	−.01	.04											
(10)	CEO Short-Term Pay	817.57	1478.78	−.03	.01	−.03	.18	.22	.09	.04	.13	.22										
(11)	CEO % Shares Owned	0.81	3.66	.08	.11	.00	−.09	−.04	.10	.24	.08	−.03	.01									
(12)	Board Independence	0.76	0.14	−.01	−.07	−.06	.09	.01	−.03	−.08	.03	.06	−.01	−.05								
(13)	Board Diversity	0.11	0.1	−.05	−.13	−.04	.18	−.08	.00	−.10	.04	.10	.05	−.04	.24							
(14)	TMT Diversity	0.27	0.55	−.09	−.09	.01	.08	−.04	−.02	−.02	−.04	.03	−.01	.04	.07	.25						
(15)	Industry Diversity	13.98	14.09	−.02	.07	.13	−.05	−.09	−.11	.01	−.02	.00	−.07	.03	−.08	−.01	.05					
(16)	Article Count	176.48	296.01	−.04	.05	.02	.30	.15	.03	−.01	.03	.22	.21	.01	.20	.21	.04	−.02				
(17)	Firm Size	1.72	1.28	−.01	−.03	−.09	.42	.35	.11	−.05	.18	.25	.33	−.03	.09	.27	.02	.05	.37			
(18)	ROA	0.02	0.68	.05	.02	−.20	.05	.00	.02	.01	.01	.01	.02	.01	.03	.05	.01	.00	.03	.06		
(19)	Slack	2.59	6.7	−.09	.06	.05	−.13	−.13	−.03	.04	−.07	−.04	−.05	.01	−.06	−.17	−.01	−.01	−.08	−.16	.05	
(20)	Financial Leverage	55.07	1340.29	.01	−.02	−.01	.08	.06	.00	−.01	.03	.05	.10	−.01	.00	.02	.00	−.01	.19	.07	.00	−.01

Note: $n = 574$ firm-year observations for 162 firms and 97 female CEOs. Variables are untransformed. Correlations greater than |.04| are significant at $p < .05$. Year and industry dummies omitted from table for parsimony.

Table 2
GEE Models on Female CEOs for Communality and Attractiveness

	Treatment Effect Model			Naïve Model		
Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
CEO Age	−0.01	−0.01	−0.01**	−0.01	−0.01	−0.01*
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
CEO Tenure	0.00	0.00	0.01	0.01	0.01	0.01
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
CEO Duality	−0.03	−0.03	−0.10	−0.09	−0.09	−0.07
	(0.09)	(0.09)	(0.09)	(0.06)	(0.06)	(0.07)
CEO Long-Term Pay	0.00	0.00*	0.00	0.00**	0.00**	0.00**
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
CEO Short-Term Pay	0.00**	0.00**	0.00*	0.00**	0.00*	0.00**
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
CEO Shares Owned	0.01	0.01	0.01**	0.01***	0.01***	0.01***
	(0.01)	(0.01)	(0.01)	(0.00)	(0.00)	(0.00)
Board Independence	0.73	0.78	−0.01	0.25	0.26	0.25
	(0.63)	(0.61)	(0.52)	(0.31)	(0.30)	(0.28)
Board Diversity	0.74	0.82	−0.84	−0.29	−0.29	−0.30
	(1.19)	(1.17)	(0.80)	(0.28)	(0.28)	(0.29)
TMT Diversity	0.12	0.11	−0.02	0.03	0.02	0.02
	(0.09)	(0.09)	(0.08)	(0.03)	(0.03)	(0.03)
Industry Diversity	−0.07*	−0.07*	−0.06*	−0.07*	−0.06*	−0.06*
	(0.04)	(0.04)	(0.03)	(0.04)	(0.04)	(0.03)
Article Count	0.00	0.00	0.00	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Firm Size	0.26	0.28	−0.19	−0.04	−0.05	−0.07*
	(0.35)	(0.35)	(0.20)	(0.06)	(0.06)	(0.04)
ROA	0.65*	0.66**	0.18	0.38**	0.38**	0.32**
	(0.35)	(0.34)	(0.24)	(0.16)	(0.16)	(0.13)
Slack	0.00	0.00	−0.03	−0.02	−0.02	−0.02
	(0.02)	(0.02)	(0.02)	(0.01)	(0.01)	(0.01)
Financial Leverage	−0.00	−0.00	−0.00	−0.00	−0.00	−0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
CSRs Treatment Effect	−0.38	−0.41	0.20			
	(0.42)	(0.41)	(0.30)			
Communality	0.05	0.04	0.09	0.05	0.04	0.09
	(0.05)	(0.05)	(0.06)	(0.05)	(0.05)	(0.06)
Attractiveness	−0.04	−0.04	−0.03	−0.04	−0.04	−0.02
	(0.04)	(0.04)	(0.05)	(0.04)	(0.04)	(0.05)
CSR	0.02*	0.02*	0.02**	0.02*	0.02*	0.02**
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
CSiR	−0.03*	−0.04**	−0.01	−0.03*	−0.04**	−0.01
	(0.01)	(0.02)	(0.02)	(0.01)	(0.02)	(0.01)
Communality × CSR		0.03***			0.03***	
		(0.01)			(0.01)	

(continued)

Table 2 (continued)

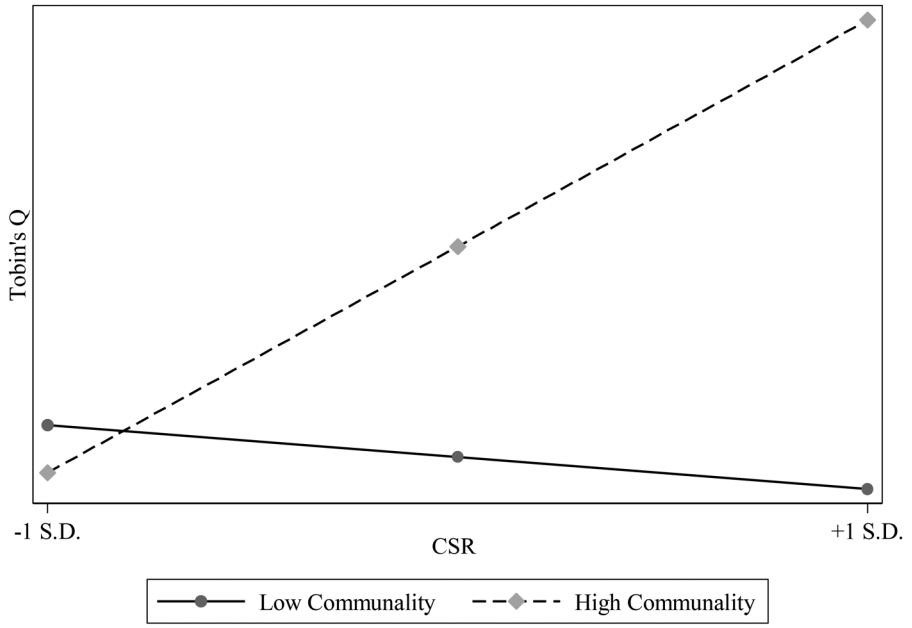
	Treatment Effect Model			Naïve Model		
Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Communality × CSiR		−0.04***			−0.04***	
		(0.01)			(0.01)	
Attractiveness × CSR			0.02**			0.02**
			(0.01)			(0.01)
Attractiveness × CSiR			−0.02**			−0.02**
			(0.01)			(0.01)
Constant	1.27*	1.27*	2.15***	1.67***	1.70***	2.06***
	(0.67)	(0.67)	(0.62)	(0.54)	(0.54)	(0.57)
Wald Chi^2	677.43***	643.49***	540.16***	694.97***	652.23***	544.31***
Δ Wald Chi^2	6.60	10.35***	4.27*	6.43	10.07***	4.19*

Note: $n = 574$ firm-year observations. Robust standard errors in parentheses. Control models omitted for parsimony, but Δ Wald Chi2 represents adding the focal interaction(s) to a model omitting these variables.
*$p < .05$.
**$p < .01$.
***$p < .001$.

Across both analyses, findings support Hypotheses 1 through 4. Consistent with our theorizing, we find a significant positive interaction for CSR and both communality and attractiveness, and a significant negative interaction for CSiR and both communality and attractiveness. These results suggest that the CSR–performance relationship is more strongly positive for more communal female CEOs ($p < .001$), but the CSiR–performance relationship is more strongly negative as well ($p < .001$). Likewise, the CSR–performance relationship is more strongly positive for more attractive female CEOs ($p < .01$), but the CSiR–performance relationship is similarly more strongly negative ($p < .01$). While we do not hypothesize the direct effects of CSR and CSiR because our theory suggests that views of CSR and CSiR are further impacted by how female CEOs are perceived, our initial findings do suggest some evidence of direct relationships (i.e., the CSR–performance relationship is generally positive, while the CSiR–performance is generally negative), an issue we discuss more in the robustness section below.

Figures 1 and 2 (3 and 4) plot the interactions of communality (attractiveness) with CSR and CSiR at one standard deviation (*SD*) below and above the sample mean. Figures 1 and 3 show more strongly positive relationships between CSR and firm performance as female CEOs are seen as more (i.e., high) communal or attractive. In practical terms, at similarly high levels of CSR (+1 *SD* from the mean), firms with more communal (attractive) female CEOs experience 17% (15%) higher performance. However, the negative interactions for CSiR are more nuanced. Despite the negative interaction, Figure 2 shows that at similarly high levels of CSiR (+1 *SD*), firms with communal female CEOs still perform better by approximately 6%, although the slope is clearly negative, compared to the relatively flat line for female CEOs low in communality. It is only at very high levels of CSiR (+2. *SD*) that more communal female CEOs perform worse (8% lower). In contrast, Figure 4 shows

Figure 1
Interaction Plot for CSR on Tobin's Q by Female CEO Communality



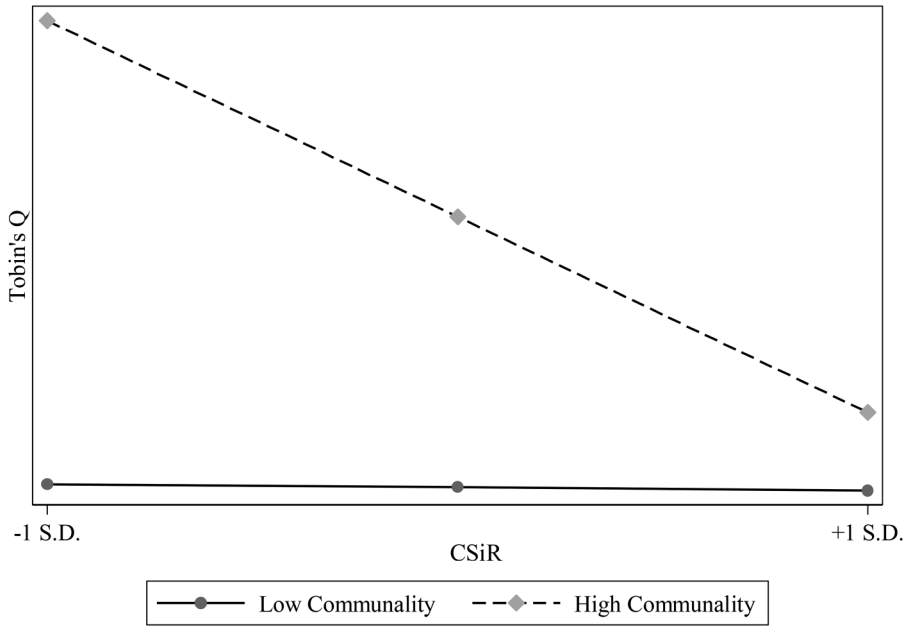
that while at similarly high levels of CSiR (+1 *SD*), firms with attractive female CEOs (+1 *SD*) experience 13% poorer performance.

Robustness Tests

We further addressed the robustness of our analyses by conducting a range of additional tests, each of which renders results that are consistent with those we discussed above.

Testing the "Baseline" Assumption of Gender and CSR/CSiR. Our findings rely on a baseline assumption that gender stereotyping of CEOs may affect how CSR and CSiR are viewed (i.e., as a function of CEO stereotypes). If our baseline logic holds, this not only lends credence to our context but also suggests that delving more deeply into the stereotypes can offer further direction for this line of study. As such, we set out to establish a baseline understanding of how the CSR (CSiR) relationship is impacted by CEO gender, but also that gender may serve as an important moderator to explain mixed findings about how such actions affect firm performance (Frynas & Yamahaki, 2016; Mellahi et al., 2016). To do so, we used our original data on U.S. publicly traded firms before selecting only those led by female CEOs and drew: (1) a full sample of firms with data available and (2) a sub-sample of those firms derived via propensity score matching (we used propensity score matching to create a synthetic control group and approximate a randomized, controlled experiment with a

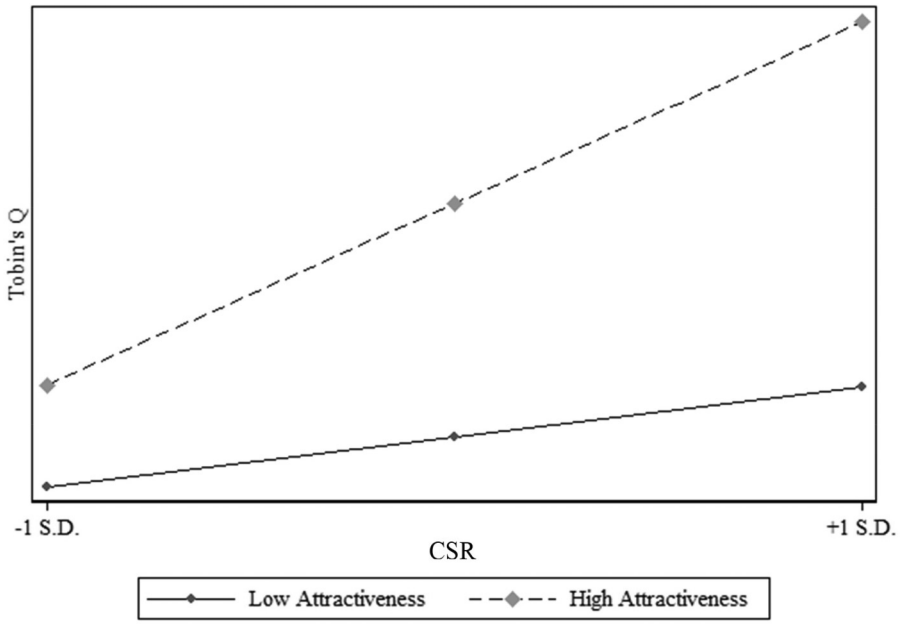
Figure 2
Interaction Plot for CSiR on Tobin's Q by Female CEO Communality



sample that is statistically homogenous across groups, except for the approximated experimental condition which, here, is CEO gender). Given group similarity, bias from endogeneity is unlikely to differ across the groups and, thus, unlikely to affect the estimated relationships (instrumental variables, then, are unneeded). The probability of having a female CEO is first modelled via logit regression on all other predictors in our main models. For each female CEO-year observation, observations of male CEO-years with closest propensity scores were identified (see Online Appendix Tables A and B for descriptive statistics). The same tests as for the sample of female CEOs were applied as well, where appropriate.

Across multiple tests, we found a negative and statistically significant ($p < .01$) interaction for female CEO and CSiR (see Online Appendix Tables and Figures C-H). Importantly, we also found no statistically significant interaction for female CEO and CSR across any of our models. Results from tests of baseline logic imply that female CEOs are indeed in a double bind: as a group, they are penalized for CSiR more heavily than male CEOs, yet there is no evidence that they benefit more from CSR than male CEOs. Further, CSiR is more likely to provoke reactions than CSR, as stakeholders are quicker to punish and slower to reward, especially for female CEOs (Eagly & Karau, 2002). Given that (1) attention to negative valence allocates more weight to negative versus positive information (i.e., stakeholders react more strongly to negative stimuli); (2) decision-makers are likewise more likely to be blamed for said negative stimuli; and (3) female CEOs already receive heightened scrutiny and blame, our empirical evidence supports the notion that CSiR gives rise to more penalties

Figure 3
Interaction Plot for CSR on Tobin's Q by Female CEO Attractiveness

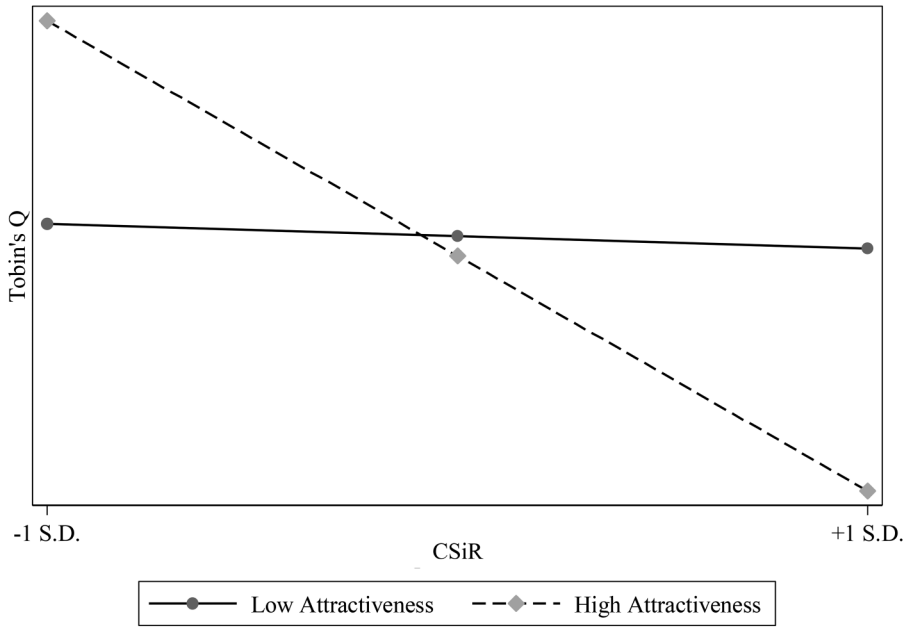


for female CEOs than male CEOs, and that, likewise, CSR is less likely to give rise to more rewards. The findings support our use of CSR and CSiR to test our hypotheses and suggest that CEO gender is a moderator that can explain how firm performance materializes from CSR and CSiR.

Alternative Measures of CSR and Firm Performance. We used alternate measures for CSR and CSiR by removing values for human rights (which may affect a limited number of industries) and corporate governance (which may be more reflective of agency issues than CSR; Capelle-Blancard & Petit, 2017). We continued to find support for all hypotheses. We also used alternative measures to capture firm performance, with results consistent using market value measured as market price at the year-end times, the shares outstanding, ROA, ROE, and the sentiments of both the media and analysts (see Tables 3 and 4).

Alternative Estimation Approach. We used GEE to analyze our data, given that this approach addresses nonindependence in longitudinal panel data that may arise when a variable (like our perceptions of communality and attractiveness) does not change over time (Chatterjee & Hambrick, 2007; Petrenko et al., 2016). We repeated our analyses with a full maximum-likelihood estimator (MLE), and results were robust across approaches (see Table 5).

Figure 4
Interaction Plot for CSiR on Tobin's Q by Female CEO Attractiveness



Testing Alternative Measures of Communality. This method of rating communality based on headshots alone has been used in prior studies and reveals both that shareholders do seem to judge firm-level outcomes based on a CEO's face and, generally, that humans are accurate in judging characteristics such as communality based on a facial depiction. Yet, communality as a construct is still an ongoing debate, both in terms of its dimensions and how it is measured: Prentice and Carranza's popular (2002) measure uses 15 dimensions (warm; kind; interest in children; sensitive; friendly; clean; attention to appearance; patient; polite; cheerful; cooperative; wholesome; emotional; spiritual; excitable)—which Rudman and colleagues (2012) revised to include 16 dimensions (emotional; warm; interested in children; sensitive to others; good listener; cheerful; enthusiastic; excitable; cooperative; friendly; supportive; polite; humble; attends to appearance; helpful; likeable)—while others use a single dimension (Stopfer et al., 2013). As there is no single accepted measure of communality, we address this in several different ways.

First, examining each dimension in our main analysis independently renders similar results for the following: good listener, cheerfulness, supportiveness, politeness, attends to appearance, helpfulness, and likeability. Second, we created an alternate measure using dimensions common across studies that also used raters' perceptions of communality in CEO headshot photos. Our alternative measure consists of three of the most used measures: warmth, likeability, and supportiveness. Our findings remain robust (see Table 6).

Table 3
Robustness Models for Alternate CSR(CSiR) Activities Measures

	Treatment Effect		Naïve Model	
Variables	Model 5	Model 7	Model 6	Model 8
CEO Age	−0.01	−0.01	−0.01	−0.01
	(0.01)	(0.01)	(0.01)	(0.01)
CEO Tenure	0.00	0.00	0.01	0.00
	(0.01)	(0.01)	(0.01)	(0.01)
CEO Duality	−0.02	−0.01	−0.08	−0.04
	(0.09)	(0.08)	(0.06)	(0.05)
CEO Long-Term Pay	0.00*	0.00	0.00**	0.00**
	(0.00)	(0.00)	(0.00)	(0.00)
CEO Short-Term Pay	0.00**	0.00*	0.00**	0.00
	(0.00)	(0.00)	(0.00)	(0.00)
CEO Shares Owned	0.01	0.01*	0.01***	0.01***
	(0.01)	(0.01)	(0.00)	(0.00)
Board Independence	0.75	0.32	0.24	0.04
	(0.61)	(0.68)	(0.31)	(0.33)
Board Diversity	0.79	0.34	−0.28	−0.25
	(1.16)	(1.17)	(0.28)	(0.28)
TMT Diversity	0.11	0.09	0.03	0.04
	(0.09)	(0.10)	(0.03)	(0.04)
Industry Diversity	−0.07*	−0.10***	−0.07*	−0.10***
	(0.04)	(0.03)	(0.04)	(0.03)
Article Count	0.00	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)
Firm Size	0.26	0.15	−0.05	−0.03
	(0.34)	(0.35)	(0.06)	(0.06)
ROA	0.65*	0.49	0.37**	0.34**
	(0.33)	(0.31)	(0.16)	(0.14)
Slack	0.00	0.02	−0.01	0.01
	(0.02)	(0.04)	(0.01)	(0.03)
Financial Leverage	−0.00	−0.00	−0.00	−0.00
	(0.00)	(0.00)	(0.00)	(0.00)
CSRs Treatment Effect	−0.39	−0.22		
	(0.41)	(0.42)		
Communality	0.04	0.04	0.04	0.04
	(0.05)	(0.04)	(0.05)	(0.04)
Attractiveness	−0.04	−0.05	−0.04	−0.05
	(0.04)	(0.05)	(0.04)	(0.05)
CSR	0.02*	0.01	0.02*	0.01
	(0.01)	(0.01)	(0.01)	(0.01)
CSiR	−0.04**	−0.03	−0.03**	−0.03
	(0.02)	(0.02)	(0.01)	(0.02)
Communality × CSR	0.02**		0.02**	
	(0.01)		(0.01)	

(continued)

Table 3 (continued)

	Treatment Effect		Naïve Model	
Variables	Model 5	Model 7	Model 6	Model 8
Communality × CSiR	−0.02**		−0.02**	
	(0.01)		(0.01)	
Attractiveness × CSR		0.02*		0.02*
		(0.01)		(0.01)
Attractiveness × CSiR		−0.02*		−0.02*
		(0.01)		(0.01)
Constant	1.32**	2.19***	1.73***	2.43***
	(0.67)	(0.70)	(0.54)	(0.59)
Wald Chi^2	771.96***	633.59***	782.09***	632.86***
Δ Wald Chi^2	6.92**	6.06**	6.75**	5.88*

Note: $n = 574$ firm-year observations. Robust standard errors in parentheses. Year and industry dummies included. Measures of CSR and CSiR derived by removing human rights and corporate governance.
*$p < .05$.
**$p < .01$.
***$p < .001$.

Third, the .30 correlation between communality and attractiveness is statistically significant but far from redundant by conventional standards. However, to address any redundancy issues, we also orthogonalized the two variables as a robustness test and found consistent results (see Table 7). In sum, although it is logical for attractiveness and communality to be somewhat positively correlated, given that both play a role in determining the feminine prescriptive, it is also possible for women to be perceived as attractive while lacking strong communal qualities, and vice versa.

Discussion

CEO gender and the experiences of women at the top of the corporate hierarchy continue to be the source of much attention from academics and the popular press; yet, current evidence about how associated stereotypes of female CEOs and their actions manifest to affect firms present mixed findings (Anglin et al., 2022; Mah et al., 2022). We delved more deeply into stereotypes about female CEOs and their actions by delineating between *prescriptive* and *descriptive* gender stereotypes (i.e., how women ought to be/act, versus how they actually are/act). Specifically, we argue that not all female CEOs embody the same stereotypical ideals, and the varying ways which they do may affect how their actions manifest in related outcomes. We focus specifically on two prescriptive norms of perceived communality and attractiveness (Rule & Ambady 2009) and two types of actions—CSR and CSiR—that align with prescriptive feminine actions of helping (hurting) others and society (Bernardi et al., 2009), positing that the degree to which such actions manifest in expected outcomes will be affected by perceptions of (in)congruence with stereotyped ideals. Drawing on longitudinal data of publicly traded firms in the United States, we found support for our theorizing across multiple tests; that is, we found evidence that

Table 4
Robustness Models for Alternate Performance Measures

	DV: Market Value		DV: Analyst Sentiment		DV: Media Sentiment	
Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
CEO Age	−0.01	−0.01	−0.01	−0.01	−0.01	−0.01
	(0.01)	(0.01)	(0.02)	(0.01)	(0.02)	(0.02)
CEO Tenure	−0.01	−0.01	−0.03*	−0.06***	−0.05	0.04
	(0.01)	(0.01)	(0.02)	(0.02)	(0.03)	(0.03)
CEO Duality	−0.08	−0.11	0.03	0.19	0.09	−0.66**
	(0.14)	(0.14)	(0.14)	(0.16)	(0.31)	(0.32)
CEO Long-Term Pay	0.00***	0.00***	0.00	0.00	0.00	−0.00**
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
CEO Short-Term Pay	0.00	0.00	0.00*	0.00***	0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
CEO Shares Owned	0.04***	0.03***	0.03**	0.01	0.03	0.09***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.02)	(0.03)
Board Independence	0.70	0.98*	0.30	−0.62	2.31	−6.31**
	(0.47)	(0.56)	(0.69)	(0.95)	(1.59)	(2.65)
Board Diversity	−0.65	−0.66	−1.06	−1.27*	−1.28	−14.69***
	(0.47)	(0.46)	(0.77)	(0.70)	(1.51)	(5.34)
TMT Diversity	−0.01	−0.01	−0.00	−0.04	−0.21	−1.02**
	(0.05)	(0.05)	(0.12)	(0.11)	(0.24)	(0.41)
Industry Diversity	−0.02	−0.03	−0.13**	−0.14**	−0.06	−0.10*
	(0.05)	(0.05)	(0.05)	(0.06)	(0.21)	(0.06)
Article Count	0.00***	0.00***	0.00	0.00	0.00**	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Firm Size	0.43***	0.46***	0.08	0.03	−0.30*	−3.88**
	(0.15)	(0.14)	(0.06)	(0.07)	(0.18)	(1.54)
ROA	0.67**	0.73**	1.74**	1.61**	1.20	−1.88
	(0.30)	(0.34)	(0.81)	(0.72)	(0.96)	(1.93)
Slack	−0.00	−0.01	−0.07***	−0.13***	−0.14***	−0.31***
	(0.01)	(0.01)	(0.02)	(0.03)	(0.05)	(0.10)
Financial Leverage	−0.00	−0.00	−0.00***	−0.00*	−0.00***	−0.00***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Communality	0.22	0.28**	0.11	0.20**	0.32	0.12
	(0.17)	(0.14)	(0.09)	(0.10)	(0.21)	(0.09)
Attractiveness	0.04	0.07	0.05	0.26*	−0.08	−0.05
	(0.10)	(0.09)	(0.08)	(0.14)	(0.21)	(0.10)
CSR	0.04*	0.05***	0.04	0.05	0.13	0.06*
	(0.02)	(0.02)	(0.04)	(0.04)	(0.09)	(0.03)
CSiR	−0.11***	−0.08**	−0.11**	−0.09	−0.27*	
	(0.03)	(0.04)	(0.05)	(0.06)	(0.14)	
Communality × CSR	0.08***		0.10***		0.29***	
	(0.02)		(0.03)		(0.08)	
Communality × CSiR	−0.07***		−0.13***		−0.22**	
	(0.02)		(0.05)		(0.11)	

(continued)

Table 4 (continued)

	DV: Market Value		DV: Analyst Sentiment		DV: Media Sentiment	
Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Attractiveness × CSR		0.03*		0.10**		0.06*
		(0.02)		(0.04)		(0.03)
Attractiveness × CSiR		−0.03*		−0.12**		−0.03
		(0.02)		(0.06)		(0.04)
Constant	7.87***	7.61***	50.32***	51.56***	53.87***	55.17***
	(1.14)	(1.37)	(1.41)	(1.47)	(2.42)	(2.44)
Wald Chi^2	1356.84***	711.09***	777.97***	418.29***	248.07***	217.53***
Δ Wald Chi^2	12.51***	20.69***	8.37**	3.31**	12.33***	2.51

Note: $n = 574$ firm-year observations. Robust standard errors in parentheses. Year and industry dummies included but omitted from table. Control models omitted for parsimony, but Δ Wald Chi2 represents adding the two focal interactions to a model omitting these variables. Models presented here represent naïve models for parsimony, but results are equally robust for inclusion of CSR treatment effects.
*$p < .05$.
**$p < .01$.
***$p < .001$.

perceptions of female CEOs' communality and attractiveness alter the CSR and CSiR to firm performance relationships. These findings pose multiple implications and related contributions.

Theoretical Implications

By theoretically delving more deeply into prescriptive stereotypes, we add nuance that future gender-based theorizing should consider regarding communality and attractiveness. In doing so, we extend understanding by developing theory and providing supportive evidence that stereotypes related to both communality, and attractiveness more specifically, are vital factors linking firm outcomes to female CEOs. Our study sheds light on this in two ways. One is that, by exploring gender stereotypes related to communality and attractiveness, we can better understand how these beliefs affect the lenses by which female CEOs and their actions are viewed; specifically, since female CEOs may vary in the degree to which they embody these prescriptively feminine ideals, these more nuanced stereotypes beyond broad gender seem to be at play. That we find firm-benefiting results for communality and attractiveness and CSR sheds light on the importance of approaching stereotypes from a more nuanced view. Our findings speak to the benefits and burdens of such prescriptive ideals that still seem widely held, although our theorizing suggests that they may be lessening. Another is that while not all strategic actions may be subjected to gendered expectations (i.e., considered more appropriate for male or female CEOs, or more aligned with masculine versus feminine prescriptive traits), studying actions seen as conforming to or deviating from stereotypical views based on both CEO gender and CEO actions offer a means to expand knowledge about how perceptions of CEOs affect certain firm actions more broadly, and to resolve any tension that may exist between gender and the CEO role. Studies have, for instance, examined how risk-taking—a traditionally agentic, masculine trait—is perceived when

Table 5
Alternate Full Maximum Likelihood Estimator (MLE) Models

	Treatment Effect		Naïve Model	
Variables	Model 1	Model 2	Model 3	Model 4
CEO Age	−0.01*	−0.01	−0.01	−0.01
	(0.00)	(0.01)	(0.00)	(0.01)
CEO Tenure	0.00	0.00	0.01*	0.01
	(0.01)	(0.01)	(0.00)	(0.01)
CEO Duality	0.01	−0.01	−0.07*	−0.07
	(0.07)	(0.10)	(0.04)	(0.07)
CEO Long-Term Pay	0.00**	0.00	0.00*	0.00*
	(0.00)	(0.00)	(0.00)	(0.00)
CEO Short-Term Pay	0.00**	0.00***	0.00**	0.00**
	(0.00)	(0.00)	(0.00)	(0.00)
CEO Shares Owned	0.01	0.01	0.01***	0.01***
	(0.01)	(0.01)	(0.00)	(0.00)
Board Independence	0.89*	0.78	0.26	0.24
	(0.49)	(0.64)	(0.20)	(0.31)
Board Diversity	1.01	0.85	−0.33*	−0.31
	(0.98)	(1.20)	(0.18)	(0.30)
TMT Diversity	0.13	0.13	0.02	0.04
	(0.08)	(0.09)	(0.03)	(0.04)
Industry Diversity	−0.06***	−0.06*	−0.06***	−0.06*
	(0.02)	(0.04)	(0.02)	(0.04)
Article Count	0.00	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)
Firm Size	0.33	0.29	−0.06	−0.04
	(0.28)	(0.35)	(0.04)	(0.06)
ROA	0.69***	0.66*	0.34***	0.36**
	(0.27)	(0.35)	(0.09)	(0.15)
Slack	0.01	0.01	−0.01*	−0.01
	(0.02)	(0.02)	(0.01)	(0.01)
Financial Leverage	−0.00	−0.00	−0.00	−0.00
	(0.00)	(0.00)	(0.00)	(0.00)
CSRs Treatment Effect	−0.49	−0.42		
	(0.35)	(0.42)		
Communality	0.06	0.05	0.06	0.06
	(0.05)	(0.06)	(0.05)	(0.06)
Attractiveness	−0.04	−0.04	−0.04	−0.04
	(0.04)	(0.04)	(0.04)	(0.05)
CSR	0.02	0.01	0.01	0.01
	(0.01)	(0.01)	(0.01)	(0.01)
CSiR	−0.04**	−0.02	−0.04**	−0.02
	(0.02)	(0.02)	(0.02)	(0.02)
Communality × CSR	0.03***		0.03***	
	(0.01)		(0.01)	

(continued)

Table 5 (continued)

	Treatment Effect		Naïve Model	
Variables	Model 1	Model 2	Model 3	Model 4
Communality × CSiR	−0.04**		−0.04**	
	(0.02)		(0.02)	
Attractiveness × CSR		0.02**		0.02**
		(0.01)		(0.01)
Attractiveness × CSiR		−0.02*		−0.02*
		(0.01)		(0.01)
Constant	1.19**	1.22*	1.71***	1.66***
	(0.50)	(0.67)	(0.34)	(0.56)
LR Chi^2	168.90***	167.95***	173.24***	166.28***
Δ Chi^2	7.89**	6.96**	7.83**	6.73**

Note: $n = 574$ firm-year observations. Robust standard errors in parentheses. Control models omitted for parsimony. Δ Chi^2 represents adding the two focal interactions to a model omitting these variables.
*$p < .05$.
**$p < .01$.
***$p < .001$.

undertaken by female CEOs (e.g., Faccio, Marchica, & Mura, 2016). Relatedly, this study joins the growing literature addressing the experiences of female CEOs (e.g., Corwin, Loncarich, & Ridge, 2022; Mui et al., 2021; Parker et al., 2020; Zhang & Qu, 2016) as well as recent work noting the implications of CEOs and their growing public visibility (e.g., Cowen & Montgomery, 2020) impacting their firms (e.g., Kulich, Ryan, & Haslam, 2007). Scholars are increasingly interested in female CEOs' strategies (Mui et al., 2021; Parker et al., 2020) and our study joins this line of research by continuing to shed light on their disparate performance and whether stereotypes are equally applied across all female CEOs.

We also provide further insight into the stereotyping literature, both for CSR and CSiR as well as for CEO gender. First, CSR and CSiR are often characterized by (mis)alignment with the feminine stereotype; hence, prior studies show that boards with more gender diversity engage in more CSR and less CSiR (e.g., Bear et al., 2010; Bernardi et al., 2009). Yet, we do not find that adherence to such expectations brings actual added benefits for female CEOs compared to male CEOs. However, we do find evidence that adherence to perceptions of communality and attractiveness brings added benefits (but detriment as well) for certain female CEOs. Second, gender is a characteristic subject to social norms and expectations and thus is one characteristic that stakeholders may hold specific beliefs about (Coffman, Exley & Niederle, 2021; Eagly & Karau, 2002). In examining the effects of CEO gender and its associated stereotypes on how CSR and CSiR affect firm performance, these findings add to our current knowledge of gender-related firm outcomes (Huang & Kisgen, 2013; Jeong & Harrison, 2017; Khan & Vieito, 2013).

Empirical Implications

The findings from this study join others in empirically addressing the experiences of female CEOs (e.g., Fernandez-Mateo & Kaplan, 2018; Hill, Upadhyay, & Beekun, 2015; Zhang &

Table 6
Robustness Models for Alternate Communal Measures

Variables	Treatment Effect Model 1	Naïve Model Model 2
CEO Age	−0.01	−0.01
	(0.00)	(0.00)
CEO Tenure	−0.00	0.01
	(0.01)	(0.01)
CEO Duality	−0.01	−0.10*
	(0.09)	(0.05)
CEO Long-Term Pay	0.00*	0.00
	(0.00)	(0.00)
CEO Short-Term Pay	0.00**	0.00*
	(0.00)	(0.00)
CEO Shares Owned	0.00	0.01***
	(0.01)	(0.00)
Board Independence	0.88	0.12
	(0.62)	(0.25)
Board Diversity	1.26	−0.34
	(1.27)	(0.26)
TMT Diversity	0.16	0.03
	(0.10)	(0.03)
Industry Diversity	−0.04	−0.04
	(0.03)	(0.03)
Firm Size	0.44	−0.03
	(0.37)	(0.03)
ROA	0.79**	0.37**
	(0.37)	(0.15)
Slack	0.02	−0.01
	(0.02)	(0.01)
Financial Leverage	−0.00	−0.00*
	(0.00)	(0.00)
CSRs Treatment Effect	−0.59	
	(0.45)	
Communality	0.17***	0.18***
	(0.06)	(0.06)
Attractiveness	−0.11**	−0.11**
	(0.05)	(0.05)
CSR	0.01*	0.01
	(0.01)	(0.01)
CSiR	−0.03**	−0.03**
	(0.01)	(0.01)
Communality × CSR	0.02**	0.02**
	(0.01)	(0.01)
Communality × CSiR	−0.03**	−0.03**
	(0.01)	(0.01)

(continued)

Table 6 (continued)

Variables	Treatment Effect Model 1	Naïve Model Model 2
Constant	0.78	1.39***
	(0.60)	(0.39)
Wald Chi^2	506.81***	519.80***
Δ Wald Chi^2	27.87***	26.75***

Note: $n = 574$ firm-year observations. Robust standard errors in parentheses. Year and industry dummies included but omitted from table. Control models omitted for parsimony, but Δ Wald Chi2 represents adding the two focal interactions to a model omitting these variables. Communal measure is based on the aggregate of the three most common communality dimensions used in headshot students – warmth, likeability, and supportiveness.
*$p < .05$.
**$p < .01$.
***$p < .001$.

Qu, 2016). Recent years have seen an increase in the number of women in executive and CEO roles, both due to changing norms and because stakeholders desire certain "feminine" perceptions such as communality and—inappropriate as it may seem—attractiveness (Morgenroth, Kirby, Ryan, & Sudkamper, 2020; Van Knippenberg, De Dreu, & Homan, 2004). Thus, if there are prescriptive feminine stereotypes that are desirable among leaders, it is vital to better understand how and when those stereotypes truly help (harm) firms. Further, as more women join the CEO ranks, it is important to understand whether the "glass ceiling" really has been removed or if, instead, women now face a "glass cliff" whereby their situation is more precarious (Glass & Cook, 2016). As more research highlights the disparate treatment of female CEOs, both intentional and unintentional biases associated with their appointments may come under question (Banks et al., 2016).

While results from the empirical examination of our female CEO sample revealed some direct relationships between CSR and CSiR and firm performance, extant findings from broader samples have historically been equivocal (e.g., Aguinis & Glavas, 2012; McWilliams & Siegel 2000; Mellahi et al., 2016; Zheng, Singh, & Mitchell, 2015). As a post hoc test, we extend understanding of how CSR and CSiR affects firms. Our baseline logic builds on the notion that CSR and CSiR actions are a context in which we will see stereotyping based on CEOs' actions. We tested this logic by interacting the effect of CEO gender and both CSR and CSiR on firm performance. Our findings for CSiR (and lack of results for CSR) regarding a moderating role of female CEO on ensuing performance outcomes has important implications for the discrepant evidence about how CEO gender affects such relationships. That is, while the market may be less likely to factor in CEO gender when considering CSR that is also consistent and desirable (i.e., role-congruent) for the female stereotype, we find a higher likelihood of factoring in CEO gender for CSiR (i.e., role-incongruent). Evidence that role-incongruency plays a stronger factor here continues to be consistent with the gender "double-bind" (Fernandez et al., 2018). This finding suggests that CSR and CSiR are ideal contexts to test the effects of stereotypes based on CEO gender and actions, going forward, in that they appear to confirm stereotyped views.

All told, while our findings advance theory, they also pose implications for practice, particularly in facilitating conversation aimed at understanding the biases female CEOs face. We

Table 7
Robustness Models for Orthogonalized Communality and Attractiveness Measures

	Treatment Effect		Naïve Model	
Variables	Model 1	Model 2	Model 3	Model 4
CEO Age	−0.01	−0.01	−0.01	−0.01
	(0.01)	(0.01)	(0.01)	(0.01)
CEO Tenure	0.00	0.00	0.01	0.01
	(0.01)	(0.01)	(0.01)	(0.01)
CEO Duality	−0.03	−0.02	−0.09	−0.08
	(0.09)	(0.09)	(0.06)	(0.07)
CEO Long-Term Pay	0.00	0.00	0.00**	0.00**
	(0.00)	(0.00)	(0.00)	(0.00)
CEO Short-Term Pay	0.00**	0.00**	0.00**	0.00**
	(0.00)	(0.00)	(0.00)	(0.00)
CEO Shares Owned	0.01	0.01	0.01***	0.01***
	(0.01)	(0.01)	(0.00)	(0.00)
Board Independence	0.77	0.72	0.26	0.23
	(0.62)	(0.63)	(0.31)	(0.31)
Board Diversity	0.80	0.74	−0.29	−0.29
	(1.18)	(1.19)	(0.28)	(0.27)
TMT Diversity	0.11	0.12	0.02	0.04
	(0.09)	(0.09)	(0.03)	(0.03)
Industry Diversity	−0.07*	−0.07*	−0.07*	−0.07*
	(0.04)	(0.03)	(0.04)	(0.03)
Article Count	0.00	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)
Firm Size	0.27	0.26	−0.05	−0.04
	(0.35)	(0.35)	(0.06)	(0.06)
ROA	0.66*	0.64*	0.38**	0.37**
	(0.34)	(0.35)	(0.16)	(0.16)
Slack	0.00	0.00	−0.02	−0.02
	(0.02)	(0.02)	(0.01)	(0.01)
Financial Leverage	−0.00	−0.00	−0.00	−0.00
	(0.00)	(0.00)	(0.00)	(0.00)
CSRs Treatment Effect	−0.40	−0.38		
	(0.41)	(0.42)		
Communality	0.04	0.05	0.04	0.05
	(0.05)	(0.05)	(0.05)	(0.05)
Attractiveness	−0.03	−0.03	−0.03	−0.03
	(0.04)	(0.04)	(0.04)	(0.04)
CSR	0.02*	0.02	0.02*	0.02
	(0.01)	(0.01)	(0.01)	(0.01)
CSiR	−0.04**	−0.02	−0.04**	−0.02
	(0.02)	(0.02)	(0.02)	(0.02)
Communality × CSR	0.02**		0.02**	
	(0.01)		(0.01)	

(continued)

Table 7 (continued)

	Treatment Effect		Naïve Model	
Variables	Model 1	Model 2	Model 3	Model 4
Communality × CSiR	−0.03**		−0.03**	
	(0.01)		(0.01)	
Attractiveness × CSR		0.02**		0.02**
		(0.01)		(0.01)
Attractiveness × CSiR		−0.02*		−0.02*
		(0.01)		(0.01)
Constant	1.28*	1.27*	1.70***	1.67***
	(0.67)	(0.66)	(0.54)	(0.54)
Wald Chi^2	725.12***	540.1***	734.21***	544.31***
Δ Wald Chi^2	12.51**	17.99***	12.18**	17.57***

Note: $n = 574$ firm-year observations. Robust standard errors in parentheses. Year and industry dummies included but omitted from table. Control models omitted for parsimony, but Δ Wald Chi2 represents adding the two focal interactions to a model omitting these variables.
*$p < .05$.
**$p < .01$.
***$p < .001$.

do not wish to imply that females ought to act, behave in, or look a certain way to try to counteract biase—indeed, we cannot emphasize this point emphatically enough. Instead, we hope continued efforts to alert stakeholders to biases that intentionally or unintentionally manifest to the detriment (or benefit) of female executives and, by extension, the firms they are charged with leading, can be helpful. Continuing to bring to light knowledge of how such stereotypes manifest can hopefully stimulate conversations and encourage positive changes.

Limitations and Future Research

Like all studies, our study has limitations that pose avenues for future research. First, we used ESG scores, which equally weight all CSR and CSiR factors. Recent work suggests that firms are especially exposed to CSiR criticism in a single dimension (Capelle-Blancard & Petit, 2017). Future studies can thus provide more nuanced examinations of specific facets. Relatedly, we also focus on a relatively distal outcome of firm performance rather than more proximal measures by which that performance may materialize, such as customer and/or supplier dissatisfaction that directly costs the firm. Although we conducted robustness tests looking specifically at analysts and media sentiment, future research can undoubtedly address other proximal outcomes. One avenue to address the measurement concerns from ESG and firm performance is to look at market reactions to notable events (e.g., Marcus & Nichols, 1999). Second, we studied CSR and CSiR, but future research could address many other firm variables that may be gender-typed. For example, Parker and colleagues (2020) studied the conventionality of movies, suggesting that by leading non-conventional projects, female movie directors can distance themselves from stereotypes in the eyes of movie-goers, critics, and industry experts. Extending this logic may be of interest: Can female CEOs, like movie directors, lessen bias by deviating from norms, or are there

contextual differences between consumers (i.e., movie-goers) and investors at work? These and other factors pose implications for how individuals react to female CEOs, and sociopolitical factors seem especially pertinent (e.g., Carnahan & Greenwood, 2018; McDonnell & Werner, 2016). At the same time, research suggests inter-industry variation in "female typing" that merits attention (Koenig et al., 2011; Mui et al., 2021).

Future research could also address different stakeholders' reactions and other firm outcomes tied to CSR and CSiR. For example, studying economic and socially motivated stakeholders (e.g., Moore, Payne, Filatotchev, & Zajac, 2019), policymakers (e.g., Werner, 2015), or employees may pose theoretical and practical implications. Although the reactions by such stakeholders to CSR and CSiR may be clear, the larger ideas of gendered reactions by different stakeholders may further shed light on the issues we address. Extending our study to look at female CEO's receptivity to negative reactions may also offer insights, as it may be that CEOs react differently to the evaluations they receive based on their gender, attractiveness, communality, or other characteristics. Such work may offer insight into the dynamic nature of the CSR and CSiR process as well (Mellahi et al., 2016), potentially shedding more light on how such actions affect stakeholder support and how CEOs affect firm outcomes. Studies that move beyond the moderators we address seem fruitful as well, with industry (particularly more female typed) and perhaps TMTs and boards seeming ripe for study.

Future research could extend insights into contexts which may be more or less gendered and delve more deeply into temporal dynamics. In practice, it may be that activism is one way to beget change (McDonnell, 2016), as the litany of research on biases directed to female executives has yet to be successful in removing such biases, it seems. Thus, new avenues are needed to continue to call attention to this topic and help address the "grand challenge" (Banks et al., 2016; George, Howard-Grenville, Joshi, & Tihanyi, 2016). Such efforts offer numerous avenues for future work. It seems likely that context plays an important role (Koenig et al., 2011) and future studies may shed light on when gender- or role-stereotypes in effect "win" in predicting reactions.

While our approach of capturing perceptions of attractiveness and communality based on official headshots follows precedence (e.g., Li, Triana, Byun, & Chapa, 2021; Pillemer et al., 2014), there is likely value in other approaches. Official headshots are more easily accessible and complete compared to official videos; however, future research can examine this from a videometric methodology (e.g., Petrenko et al., 2016). Broad-based assessments in the spirit of multi-trait, multi-method approaches offer value, too, perhaps even by surveying analysts and stockholders (Campbell & Fiske, 1959). Future scholars could consider an experimental setting where communality or attractiveness can be manipulated (e.g., varying the levels of attractiveness or communality in a headshot; Henss, 2000). Relatedly, while we build on evidence that perceptions of attractiveness and communality are relatively stable (e.g., Diekman & Goodfriend, 2006; Kanazawa, 2011), future research could delve deeper into this topic. The rise in photographic and videographic data available online may be helpful, enabling scholars to capture female CEOs across time to conduct such inquiries.

Our study did not strive to untangle the difference between attractiveness as a prescribed standard versus its pursuit (Ramati-Ziber et al., 2020) or how it may have differential effects from communality. For instance, others have viewed beauty as being biological (i.e., biologically more or less attractive) or malleable (i.e., beauty can be achieved via grooming) as well as showing the difference between attractiveness as a beauty ideal, and the pursuit of beauty

based on vanity or desire, both of which may elicit backlash instead. On that note, our goal was to delve into nuances related to the female prescriptive; thus, we only examined communality and attractiveness for our female sample. Future studies could also examine how these traits manifest differently in other contexts and extend inquiries to ideals for men.

Further, prior scholars have noted that while we often treat stereotypes as widely held beliefs, not all individuals may hold such beliefs and, among those that do not, these relationships may not pan out as expected according to role (in)congruency theory. Given that studies have suggested that time may play an important role in stereotypes (e.g., Gao, Lin, & Ma, 2016; Hill, Upadhyay, & Beekun, 2022; Lucas-Perez et al., 2015)—and there is evidence that the link between masculinity and leadership is shifting (Koenig, Eagly, Mitchell & Ristikari, 2011)—more research is needed as temporal dynamics may affect outcomes tied to biases as well. We believe this is a worthy area of study as more and more women join ranks once traditionally held by men, and the normalizing of these instances are likely to affect our overall beliefs surrounding gender role incongruity theories. We expect to see research on CEO gender, stereotypes, and actions to undergo important changes in the coming future. Koenig and colleagues (2011), for instance, found that stereotypes of leaders are becoming more androgynous, suggesting that more feminine, communality qualities are being seen as desirable for leadership positions and pointing to contexts where role- or gender-based stereotypes may "win out." We believe that these avenues of time and contexts point to interesting research avenues for scholars to delve into deeper—there may be other theoretical and practical implications that extend beyond the traditional view of the CEO role.

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Note

1. Although results of ITCV suggest an omitted variable is unlikely, as an additional robustness test of one potential omitted variable, we also followed Hambrick and Quigley (2014) and Quigley and colleagues (2020) to include a CEO performance, "CEO in Context" (CiC) score that essentially isolates a CEOs' impact on their firm. Including this control introduces some potential issues in that the measure is *ex post* (i.e., after the CEOs' terms are up) but is an attempt to capture differences in CEOs' actual performances given the contexts of their firms; notably, adding this measure as a control did not alter our main findings. Results are available in the Online Appendix Tables I and J.

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