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RESEARCH ARTICLE

BS in the boardroom: Benevolent sexism and board chair orientations

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Research Summary: Though research has focused on the ascent and acceptance of female CEOs, the post-promotion circumstances female CEOs face remain unclear. In this study, we focus on a critical post-promotion circumstance: the board chair–CEO relationship. Drawing on the gender stereotype literature, agency theory, and stewardship theory, we posit that firms appointing a female CEO are more likely to adopt a collaboration board chair orientation and less likely to adopt a control orientation. We further predict this effect is attenuated by female board representation. Using a sample of new S&P 1500 CEOs, we find support for our predictions regarding the collaboration orientation but not the control orientation. This research provides some evidence of benevolent sexism in the boardroom, with female directors acting as a countervailing influence.

Managerial Summary: Whereas the notion that females encounter a glass ceiling on their path toward CEO is well documented, the conditions female CEOs encounter after promotion are less understood. The relationship between the board chair and the CEO is one important post-promotion condition. Board chairs can focus on monitoring and/or working together with the CEO. We suggest board chairs are more likely to work in close collaboration with female CEOs than with male CEOs. We attribute this to benevolent sexism, which explains that board chairs are more likely to collaborate with female CEOs because they view females as more conducive to, and in need of, this type of relationship. We also suggest this benevolent sexism is less prevalent when there are more females on the board.

KEYWORDS

agency theory, board chair orientation, CEO gender, corporate governance, stewardship theory

1 | INTRODUCTION

When General Motors Co. appointed Mary Barra as chief executive officer (CEO)—becoming the first major U.S. automaker with a female CEO—the *Wall Street Journal* published an article about the firm's incoming independent board chair, Tim Solso, and his orientation toward the job. According to the article, "Mr. Solso insists his job is to ensure Ms. Barra succeeds as the company's CEO":

> Mr. Solso makes clear he intends to be a hands-on player as well as a coach, advocate and resource for Mary Barra, the company's new chief executive…"I can take some of the load off management's back," he said. (Bennett & Lublin, 2014, p. B1)

The article notes that Solso's statement seems to conflict with his reputation as a strict board monitor who "can be a tough boss and knows how to get his way," having previously engineered the ouster of a CEO while on the board of another firm (Bennett & Lublin, 2014, p. B1). Indeed, the board chair role described above is a clear example of what Krause (2017) identified as the "collaboration" board chair orientation, which consists of advising and guiding the CEO and reducing the CEO's job demands. Based on his history, though, the GM board chair also seems amenable to the "control" board chair orientation, which consists of monitoring and overseeing the CEO. What was it about General Motors' circumstances, then, that led Solso to adopt the former orientation?

Boards—and board chairs, in particular—approach their corporate governance responsibilities differently depending on the model of man[1] they deem most salient; that is, depending on how they think the CEO is likely to behave. Drawing on gender role theory and the concept of benevolent sexism—the often stereotypically favorable (but potentially patronizing) attitudes people have toward women (Glick & Fiske, 1996, 2001)—we argue that board chairs consider the gender of the CEO when determining board chair orientation. Specifically, we suggest board chairs are more likely to exhibit a collaboration board chair orientation and less likely to exhibit a control board chair orientation when the CEO is female than when the CEO is male. The reason for this is that the female gender stereotype is more consistent with the model of man assumed by stewardship theory—cooperative, collectivistic, and trustworthy (Donaldson, 1990; Sundaramurthy & Lewis, 2003). Conversely, the male gender stereotype is more consistent with the model of man assumed by agency theory—self-interested, opportunistic, and untrustworthy (Eisenhardt, 1989; Fama & Jensen, 1983). We further predict that female representation on the board will weaken the effect of CEO gender on board chair orientation. Using data from new CEO appointments at S&P 1500 firms between 2010 and 2015, we find partial support for our theory as well as some interesting and unexpected deviations.

Our research aims to make a number of contributions. First, by isolating the role of gender stereotyping in the boardroom, we advance knowledge regarding the conditions female leaders face once they ascend to the highest rung of the corporate ladder. While much is known about the barriers preventing female executives from becoming CEO and the negative market reactions to their appointments, less is known about the circumstances female CEOs face once they land the coveted CEO position (Hillman, Shropshire, & Cannella, 2007; Joshi, Neely, Emrich, Griffiths, & George, 2015). In addition, much of the scholarly focus on female leaders centers on the ramifications of hostile sexism or "antipathy toward women who are viewed as usurping men's power," while

[1]"Model of man" is a widely used gender-neutral term in the stewardship literature that means "a view about the nature of human beings" (see Davis, Schoorman, & Donaldson, 1997).

ignoring the influences of benevolent sexism and how it shapes a female CEO's experience and working relationships (Glick & Fiske, 2001, p. 109). Our research explores the latter.

Second, we contribute to theory and research in the nascent board chair literature by identifying a CEO-level predictor of board chair orientations (Krause, 2017). Historically, the CEO and board chair positions were combined, especially in U.S. firms. That has changed over the last 20 years, though, as approximately 50% of S&P 500 firms and the majority of firms in other industrialized nations now separate the CEO and board chair positions (Spencer Stuart, 2016). Corporate governance scholarship has taken note, with recent research exploring the unique role of board chairs within the firm and their impact on firm performance (e.g., Krause & Bruton, 2014; Krause, Semadeni, & Withers, 2016; Withers & Fitza, 2017). It is vital that scholars continue to improve their understanding of the board chair's role and how it is determined. This study is a step in that direction.

Third, while scholars have extensively researched situational factors that make agency theory or stewardship theory more predictive of corporate governance *consequences* (e.g., Boyd, 1995; Finkelstein & D'Aveni, 1994; Krause, 2017; Krause & Semadeni, 2013; Shen, 2003), explanations for which model of man informs a board chair's orientation in the first place remain sparse. By identifying the potential for CEO gender to influence how board chairs view their relationships with CEOs, we help to contextualize theory on corporate governance.

2 | THEORY AND HYPOTHESES

Gender role theory holds that people form stereotype-driven judgments about others based on the socially constructed roles associated with the others' gender. As Eagly and Karau (2002, p. 574) indicate, "people believe that each sex has typical—and divergent—traits and behaviors…A key proposition of social role theory is that the majority of these beliefs about the sexes pertain to *communal* and *agentic* attributes." The female stereotype is that of the communal nurturer, typically based on the traditional role of homemaker (Eagly, 1987; Eagly & Karau, 1991, 2002). Research suggests that women tend to be viewed as naturally more friendly, unselfish, and supportive (Eagly, Wood, & Diekman, 2000). In contrast, the male stereotype is that of the agentic atomist—powerful, commanding, assertive, and self-interested (Eagly & Karau, 2002; Eagly & Makhijani, 1992).

These stereotypes reflect what observers *believe* about the genders. More specifically to the CEO context, female leaders are often viewed as more compassionate, attentive, and sensitive to stakeholder needs than their male counterparts (Dennis & Kunkel, 2004; Ibrahim, Angelidis, & Tomic, 2009). Media coverage of female CEOs further reinforces the female stereotype. For example, Britain's *Sunday Telegraph* ran the headline "Mother of three poised to lead the BBC" when announcing the pending appointment of Cambridge- and Harvard-educated Rona Fairhead (Petri, 2014). Lee and James' (2007) text analysis of media coverage of CEO succession announcements showed that gender-specific terms such as *woman* and *family* were more prominent for female CEOs than their male counterparts. Even GM CEO Mary Barra, mentioned above, was asked on *The Today Show* "if it was possible for her to run a major automaker and be a good mom at the same time" (Alter, 2014).

For female leaders in particular, these stereotypes are often troubling since they perpetuate a "think leader--think male" mindset (Schein, 1973), in which female leaders are viewed as less commanding, and therefore less effective. This mindset has been widely validated and shown to affect a number of important managerial outcomes for females, including perceptions of job fit, perceptions of leadership ability, and the likelihood of promotion (Eagly & Karau, 2002). Female tech CEO

Madeline Parra recently stated, "I would say probably 90–95% of [venture capitalists] assume that I don't do anything technical with the company" (Edwards, 2015), suggesting these venture capitalists instead assume she is the head of marketing rather than the CEO.

2.1 | Hostile and benevolent sexism

At the extreme end of gender bias are individuals who engage in hostile sexism—openly striving to disadvantage females in order to punish females for challenging male dominance. Scholars contend that hostile sexism is not a strong predictor of outcomes for female CEOs—particularly outcomes related to their treatment inside the boardroom—as boards' decisions and behaviors are subject to considerable public scrutiny (Ryan & Haslam, 2007). Directors are, however, potentially susceptible to a subtler form of sexism: benevolent sexism. Benevolent sexism is defined as "a more positive attitude…toward women that appears favorable [for the perceiver]…because it portrays women as warm but incompetent or weak individuals in need of men's protection and support" (Dardenne, Dumont, & Bollier, 2007, p. 764). Rather than insulting, benevolent sexism frequently compliments women and often places females on a pedestal where they must be protected and supported by men. Scholars contend both men and women engage in benevolent sexism, although it is often inadvertent (Glick & Fiske, 2001).

We suggest that like most people, boards and board chairs will form impressions about CEOs based in part on the gender of the CEO and the idealized stereotypes rooted in benevolent sexism, and that these stereotype-driven impressions will inform their board chair orientations. Board chair orientations are typically adopted at the beginning of a CEO's tenure (Krause, 2017). They are thus likely informed by the chair's—and to some extent, the whole board's—initial impressions of the CEO. For this reason, we focus our theoretical investigation on board chair orientation adoption with the appointment of new CEOs, and we examine gender because it is one of the most salient and commonly used attributes in initial impression formation (Bunderson, 2003).

2.2 | Board chair orientations

Agency theory is the dominant paradigm in corporate governance scholarship, and it paints a gloomy picture of human nature. The agency framework views humans as amoral, self-serving, and opportunistic (Dalton, Hitt, Certo, & Dalton, 2007). Agency theorists therefore suggest boards of directors exist to mitigate the conflicts of interest between executives and shareholders (Eisenhardt, 1989; Fama & Jensen, 1983). Agency theory has informed nearly the entirety of the literature on board chairs (Krause, Semadeni, & Cannella, 2014), with its proponents arguing that the board chair must be separate from the CEO so as to monitor and control the CEO's behavior and keep it in line with shareholders' interests (e.g., Jensen, 1993).

Recently, however, Krause (2017) argued that while board chairs can adopt an agency approach to the board chair role (what he termed the *control* board chair orientation), they can also adopt an approach that is more closely tied to the model of man assumed in stewardship theory; he termed this approach the *collaboration* board chair orientation. Stewardship theory is based on a model of man that is altruistic and intrinsically motivated (Davis et al., 1997). As opposed to the opportunistic shirker described in agency theory, managers in a stewardship framework are driven by duty and put the interests of the organization and others ahead of their own (Donaldson, 1990).

Viewing CEOs through this lens, stewardship theorists have argued that boards should create an environment of trust and cooperation rather than of control and monitoring (e.g., Shen, 2003). As part of the collaboration board chair orientation, the chair provides advice and guidance to bolster

rather than control the CEO, which empowers the CEO to make more effective decisions (Davis et al., 1997; Sundaramurthy & Lewis, 2003). In addition, the board chair supports the CEO by relieving the CEO of the burdens of board leadership (Krause, 2017; Krause & Bruton, 2014). By encouraging specialization in the CEO role (Lorsch & Zelleke, 2005), board chairs reduce the job demands on CEOs, freeing them to focus on the day-to-day responsibilities of managing the firm (see Hambrick, Finkelstein, & Mooney, 2005).

Krause (2017) argued that board chairs may adopt a control orientation and/or collaboration orientation, and that the two have divergent effects on firm performance depending on the firm's prior performance trajectory. What remains unknown, however, is what factors determine the orientation(s) a board chair exhibits. Krause (2017, p. 711) takes board chair orientations as a given and provides little indication as to the predictors of board chair orientation, but suggests that examining such predictors will likely "constitute a productive avenue of future research" given their implications for performance. We assume that board chairs are apt to adopt the orientation based on the model of man they think is most appropriate for the situation (Shen, 2003; Sundaramurthy & Lewis, 2003). Thus, board chairs who view their CEO more in accordance with the agency model of man are likely to adopt the control orientation, and board chairs who view their CEO more in accordance with the stewardship model of man are likely to adopt the collaboration orientation. Shen (2003, p. 467) explicitly identifies the choice as a tradeoff between "control of managerial opportunism" (governing agents) and "development of CEO leadership" (governing stewards).

2.3 | Gender roles in the boardroom

Drawing on gender role theory and the concept of benevolent sexism, we argue that CEO gender will influence the choice of board chair orientation because the implicit gender stereotypes of female communion and male agency map almost perfectly onto the models of man assumed in stewardship theory and agency theory, respectively. The female stereotype is the quintessential steward—less inclined toward self-interested opportunism and more inclined toward pro-social, pro-organizational collaboration. Due to this female-steward stereotype, board chairs are likely to view female CEOs as less prone to opportunism. They will not only view a control orientation as less appropriate but will view a collaboration orientation as more effective for two additional interrelated reasons, both stemming from the biases underscored by benevolent sexism.

First, board chairs are likely to evaluate their own resource provision differently with a female CEO. Instead of expending resources monitoring opportunism, board chairs may instead invest their time advising and counseling female CEOs. From a benevolent sexism perspective, females should be supported and given the resources necessary to maintain their communal nature. Whereas board chairs may expect agent-like CEOs to use this advice and counsel for their own benefit, they will expect steward-like CEOs to use these resources for the benefit of the firm (Hillman & Dalziel, 2003; Krause, 2017). A large body of work supports the idea that female managers are more collaborative, and they are more willing to share power, information, and solicit input than their male counterparts (Dixon-Fowler, Ellstrand, & Johnson, 2013). Indeed, as KPMG CEO Lynn Doughtie observed: "I have found that women are really in their element in a very collaborative approach" (M. King, 2017). Put differently, board chairs see advising and guiding the CEO as both more necessary and less risky with a female CEO.

Second, in addition to advice and guidance, the collaboration board chair orientation reflects a reduction in the CEO's job demands (Hambrick et al., 2005). Board chairs may adopt a collaboration orientation based on the idea that boards should leave steward CEOs free to focus on developing their ability to lead the firm without the added burden of managing the board (Krause & Bruton,

2014; Shen, 2003). Based on the benevolent sexism literature and research showing that most female CEOs who enter the executive suite encounter significant challenges not faced by their male counterparts (Cook & Glass, 2014), we expect board chairs will seek to alleviate female CEOs' job demands, irrespective of the CEOs' actual aptitude. Indeed, research on gender in management has shown that, across organizations, there is a prevalent attitude that female employees need protection. For example, managers are more likely to offer female employees help (Shnabel, Bar-Anan, Kende, Bareket, & Lazar, 2016) and assign female employees less challenging work (E. B. King et al., 2012). A collaboration board chair orientation reflects such an attitude toward reduction in job demands (Krause, 2017; Lorsch & Zelleke, 2005).

In sum, the female stereotype associated with benevolent sexism is analogous to the stewardship model of man inherent in the collaboration orientation and conflicts with the traditional agency model of man associated with the control orientation. Accordingly, we expect board chairs are more likely to adopt a collaboration orientation in an effort to provide support (i.e., resource provision) and protection (i.e., lower job demands) for female CEOs. Similarly, board chairs are less likely to adopt a control orientation as the perceived risk of CEO opportunism is lower for female CEOs.

Hypothesis 1 (H1) *Appointment of a female CEO is positively related to the adoption of a collaboration board chair orientation.*

Hypothesis 2 (H2) *Appointment of a female CEO is negatively related to the adoption of a control board chair orientation.*

2.4 | The moderating role of female board representation

Though the number of female CEOs remains low, female representation on boards has been steadily increasing for decades. Women now constitute 32% of new independent directors and 21% of all independent directors at S&P 500 firms (Spencer Stuart, 2016). Based on the broad consensus in social psychology research on group interaction and stereotyping, the presence of more female directors on a board should attenuate the effect of stereotyping and benevolent sexism in board chair orientation. We expect this attenuation for three reasons.

First, since nearly every non-CEO board chair at large U.S. firms is male (Spencer Stuart, 2016), research suggests female board members can decrease the likelihood of gender stereotyping on behalf of the board chair simply with their presence. Pettigrew and Tropp's (2006) meta-analysis of 515 studies provides strong evidence that increased exposure to out-group members reduces biases among in-group members. Specific to our governance context, Zhu and Westphal (2014) demonstrate how social contact with different demographic groups reduces board bias towards new CEOs from those demographic groups.

Second, female directors can reduce the likelihood of benevolent sexism in boardrooms by actively influencing the board chair and other board members. Due to their ability to influence the social psychological processes in the boardroom, female directors have been linked to a variety of firm-level outcomes such as acquisition activity, strategic-risk taking, and long-term performance (Chen, Crossland, & Huang, 2016; Jeong & Harrison, 2017). Finally, greater female board representation reflects a larger organizational gender permeability, such that the CEO role, rather than the CEO's gender, will be the more salient characteristic driving impressions about the CEO (Zhang & Qu, 2016).

Hypothesis 3 (H3) *The positive relationship between female CEO appointment and the adoption of a collaboration board chair orientation weakens as female representation on the board increases.*

Hypothesis 4 (H4) *The negative relationship between female CEO appointment and the adoption of a control board chair orientation weakens as female representation on the board increases.*

3 | METHODOLOGY

3.1 | Sample

All of the data in our sample correspond to firms in the S&P 1500 in the years 2010–2015. These years represent the time during which boards were first required to expound on their decision to separate or combine the roles of CEO and board chair in their proxy statements (Securities and Exchange Commission, 2010). Put differently, prior to 2010 boards were not required by the SEC to justify the decision to separate or combine the board chair and CEO positions in the proxy statement. We collected proxy statements corresponding to CEO successions for all the firms in this sample. CEO succession is an ideal context for testing our hypotheses because gender is most salient in early impression formation and board chair orientations are typically static, changing most frequently with CEO turnover (Krause, 2017). We find almost no variance in board chair orientations after the year in which a new CEO was appointed.

Since our constructs of interest only occur when the roles of board chair and CEO are separate, we excluded observations in which the incoming CEO also held the board chair title (Krause, 2017). We also removed observations where the CEO assumed an interim role, as there are complexities associated with interim CEOs that may contaminate our empirical analyses and theoretical positions (Mooney, Semadeni, & Kesner, 2017). We address the potential bias due to removing these observations in our discussion of supplementary analyses. After combining the datasets from which our variables are derived (Compustat, CRSP, I/B/E/S, MSCI, and Risk Metrics), our final sample consisted of 523 CEO appointment observations across 494 firms.

3.2 | Variables

Our dependent variables are *collaboration orientation* and *control orientation.* Each variable is dichotomous and takes a value of 1 if the firm's proxy statement exhibited the relevant board chair orientation and 0 otherwise. The dependent variables are independent of each other and are not mutually exclusive. We identified board chair orientations from proxy statements using a procedure and coding instructions adopted from Krause (2017). First, we extracted the portion of firm proxy statements devoted to explaining the board's choice of leadership structure (i.e., combined or separate CEO and board chair positions). These explanations are easy to identify in proxy statements as they are provided in specific, labeled sections. Once these passages had been extracted from the proxy statements, we proceeded to manually content-analyze them to identify the two board chair orientations.

Four expert human coders first independently read 70 proxy statements, which consisted of all female CEO observations and a matched sample of male CEO observations. The coders were provided instructions with full construct definitions and sample passages. For example, coders were informed that boards exhibiting the control orientation "will often use the words 'oversight' and

'independence' or explain that a separate board chair facilitates holding the CEO and management accountable, evaluating the management, or introducing greater objectivity and integrity in board decision-making." Further, they were instructed that boards exhibiting the collaboration orientation "will often note that a separate board chair enables the CEO to devote all his/her attention to managing the firm, improves communication between the board and management, or helps the board to provide advice and guidance to the CEO" (Krause, 2017).[2]

The coders used the instructions to identify the board chair orientations from boards' justifications of the separation of the board chair and CEO positions. The inter-rater reliability was sufficient to proceed for both collaboration ($\kappa = 0.906$) and control ($\kappa = 0.892$) orientations. Once a reliable coding scheme had been established, one of the coders who was blind to the hypotheses coded the remaining 453 proxy statement passages. In the final sample, 52% of firms exhibited a collaboration orientation and 35% exhibited a control orientation. These incidence rates are similar to those found by Krause (2017)—57% and 42%, respectively—further supporting the validity of the coding process. The absence of either orientation is possible and represents a more agnostic board.[3]

Our independent variable, *Female CEO*, takes a value of 1 if the CEO is female and 0 if the CEO is male. Our moderator variable, *Female directors*, is the percentage of non-CEO directors on the board who are female (Zhu, Shen, & Hillman, 2014). As a robustness check, we also employed this variable as a count of female directors and controlled for the total number of directors. Our results were substantively similar to those presented in this study.

We controlled for several variables relating to the CEO, board of directors, firm, and proxy statement. We controlled for *CEO age*, as this has been shown to affect board leadership choice. *CEO total compensation* was measured as the natural log of the CEO's total compensation to account for the board's valuation of the CEO. *Nature of succession* takes the value of 1 if the previous CEO was dismissed and 0 if it was a routine succession (Wiersema & Zhang, 2011). We identified the nature of succession by reading each proxy statement in the succession year and the year prior to determine why the outgoing CEO departed the firm. If this information was not apparent in the proxy statements, we examined other statements filed with the SEC (e.g., 10-k, 8-k) as well as business press articles until we located a discussion detailing the nature of CEO succession.

Independent directors percent represents the percentage of the board of directors classified as independent, which has also been shown to influence board leadership choices (Finkelstein & D'Aveni, 1994). *Minority directors percent* reflects the percentage of directors who are not Caucasian; these directors may experience differing in-group or out-group pressures. *Average number of interlocks* measures the average number of other boards on which each director sits; interlocks have been used as a proxy for social contact (Zhu & Westphal, 2014). *Female chair* takes the value of 1 if the board chair is female and 0 otherwise.

ROA represents the return on assets lagged one fiscal year. *Total assets* reflects the logged total assets of the firm lagged one fiscal year, and we use this in lieu of total directors because total assets induces less multicollinearity. *Stock returns* are measured as the annualized stock market returns in the year leading up to the proxy statement since performance has implications for selecting a female CEO (Cook & Glass, 2014). *Analyst recommendations* represents the mean sell-side security analyst recommendation (with lower values reflecting stronger recommendations). *Analyst recommendation dispersion* measures the standard deviation of analysts' recommendations. Recommendations and dispersion influence how investors perceive the firm, how directors behave, and what managers expect (Zhang & Wiersema, 2009). *Dedicated and transient institutional investor %* represents the

[2]We describe these instructions and examples of each different orientation in an Appendix S1.
[3]An example of such agnosticism is provided in our Appendix S1.

proportion of the firm's investors who are classified as dedicated or transient, respectively, as this may influence who the board chooses as CEO and what types of strategies it employs (Connelly, Tihanyi, Certo, & Hitt, 2010).

Finally, we employed content analysis techniques with validated dictionaries to control for board sentiments.[4] *Optimism* reflects how optimistically the proxy statement is written and *Certainty* represents how much certain language is used (Hart, Carroll, & Spiars, 2014). *Future* and *past temporal focus* represent the temporal orientation in the proxy statement (Nadkarni & Chen, 2014). *Negative language* measures the negativity with which the board discusses the new CEO. All content analysis controls where calculated as the percentage of words from the corresponding dictionary out of the total number of words in the proxy statement. Lastly, *Information clarity* measures the words per sentence, which represents how easily boards want outsiders to understand the proxy statement (Lehavy, Li, & Merkley, 2011).

3.3 | Empirical estimation

For our primary analysis, we used seemingly unrelated bivariate probit (SUBP) models to predict firms' board chair orientations. SUBP is an empirical technique that uses the same independent variables in a simultaneous model that estimates more than one dichotomous dependent variable (Zellner, 1962). We predicted that CEO gender influences the respective probabilities of a firm exhibiting a collaboration and/or control board chair orientation. We could test these predictions in two separate probit models, but it is likely that the two dependent variables share contemporaneous error terms given that they both derive from the same firm and proxy statement. Accordingly, SUBP accounts for the contemporaneous error across equations to produce more accurate parameter estimates (Baum, 2006). Wald tests from the log-likelihoods in the model predicting H1 and H2 suggest this is the case ($\chi 2 = 6.782$; $p = .009$). SUBP also allows us to compare parameter estimates across models. Our SUBP models include robust standard errors clustered by the 3-digit industry in which the firm competes.

3.4 | Supplementary analyses addressing endogeneity

We conducted additional analyses to address potential endogeneity concerns. First, we specified an alternative model consisting of a series of two-stage treatment effects probit models. We selected a two-stage model because we recognize the decision to hire a female or male CEO may represent an endogenous choice by the board of directors, and thus may introduce bias (Semadeni, Withers, & Certo, 2014). In other words, an unobserved factor may exist that influences the decision to hire a female CEO and to adopt a collaboration orientation. Two-stage treatment effects is similar to two-stage least square regression (2SLS), except the treatment effects model predicts a binary variable in the first stage and inserts a hazard lambda in the second stage to correct for the endogenous nature of the independent variable in the second stage (Baum, 2006). Despite having strong and exogenous instruments—lagged market-to-book ratio ($p = .003$) and lagged financial leverage ($p = .001$)—the hazard in the second stage estimation was not significant and the Smith and Blundell (1986) test for exogeneity suggests our estimation is not biased by endogeneity ($\chi = 1.997$; $p = .158$). Lack of endogeneity notwithstanding, the results from the two-stage treatment effects probit were substantively similar to the SUBP.

[4]Content analysis controls were calculated utilizing the metrics provided by the content analysis software. The temporal focus variables and negative language are all expressed as percentages (count of validated dictionary terms/ total word count) based on LIWC output. Optimism, certainty, and information clarity are all expressed as insistence scores based on Diction output.

We also recognize our model may have been biased from sample-induced endogeneity (i.e., sample selection bias from excluding dual and interim CEOs in our final sample). Accordingly, we ran two-stage Heckman probit models to account for this bias. Although we had strong exclusion restrictions ($\rho = 0.11$), and the gender of the CEO was a significant predictor in the first stage, lambda was not significant in any of the second-stage models, suggesting that our results do not suffer from sample-induced endogeneity (Certo, Busenbark, Woo, & Semadeni, 2016). Nevertheless, the Heckman models produced parameter estimates substantively similar to the SUBP models.

4 | RESULTS

Table 1 displays the correlations for all of the variables in our primary analyses. Of particular interest are the sufficiently low correlations between the covariates to suggest multicollinearity likely does not bias our estimates. Although our SUBP models do not allow for variance inflation factors (VIF), the mean VIF for a linear model using MLE is 1.08 with a maximum of 1.28; these numbers are well below the suggested thresholds where multicollinearity may introduce problems. The correlations in this table also illuminate the improbability that endogeneity from an omitted variable is biasing our parameter estimates. The impact threshold of a confounding variable (ITCV) for our model is 0.24, or 39% of the positive cases (i.e., females with a collaboration orientation) being overturned (Frank, Maroulis, Duong, & Kelcey, 2013). Given the maximum correlation between our control variables and our dependent and/or independent variables is 0.09, it is hard to imagine an omitted variable with a correlation greater than the necessary 0.25.

Table 2 displays the results of our SUBP models corresponding to Hypotheses 1–4. Columns I–II depict the parameter estimates from the controls-only model. The estimate for Rho suggests the model is more appropriate as one SUBP model rather than as separate probit models ($\rho = 8.069$, $p = .005$). Hypothesis 1 predicts a positive relationship between the appointment of a female CEO and the probability of a collaboration board chair orientation. Column III provides support for this hypothesis ($\beta = 0.662$, $p = .001$), but the coefficient alone is insufficient (Hoetker, 2007; Wiersema & Bowen, 2009). We must also examine the marginal effect of having a female CEO on the probability of adopting a collaboration orientation across all values of the variables in our model (Wiersema & Zhang, 2011). This examination also provides support for Hypothesis 1, as the marginal effect of having a female CEO—relative to a male CEO—is approximately 0.243 ($p = .000$). Viewed from a different angle, the predicted probability of adopting a collaboration orientation with a female CEO (0.751) is approximately 50% greater than with a male CEO (0.508). Column IV does not provide support for Hypothesis 2, which predicts a negative relationship between the appointment of a female CEO and the probability of a control board chair orientation ($\beta = 0.063$, $p = .798$); the marginal effect is 0.024 ($p = .799$).

Hypothesis 3 states that female representation on the board attenuates the positive relationship between the appointment of a female CEO and the probability of a collaboration board chair orientation. We find support for this hypothesis with the negative interaction term in Column V ($\beta = -3.974$; $p = .017$). As scholars have highlighted, however, the coefficient from the model alone is insufficient to provide support for a hypothesis (Bowen, 2012; Wiersema & Zhang, 2011). Table 3 displays the marginal effect of having a female CEO on the probability of adopting a collaboration orientation across several levels of the moderating variable (percentage of females on the board) when all other covariates are at their mean values (e.g., Wiersema & Zhang, 2011). As displayed in Table 3, the marginal effect of having a female CEO decreases as female board representation

TABLE 1 Correlations and descriptive statistics

	Variable	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	Collaboration orientation	0.52	0.50																							
2	Control orientation	0.35	0.48	0.14																						
3	Female CEO	0.07	0.26	0.12	0.01																					
4	Female directors	0.12	0.10	0.03	−0.02	0.02																				
5	ROA	0.03	0.11	0.04	0.01	0.09	0.08																			
6	Total assets (logged)	7.90	1.67	−0.09	−0.02	−0.01	0.22	0.11																		
7	Stock returns	2.25	35.80	−0.04	−0.02	−0.02	0.05	−0.07	0.01																	
8	Analyst recommendations	2.35	0.47	−0.07	−0.08	0.03	0.10	−0.07	0.10	0.01																
9	Analyst recommendation dispersion	0.79	0.26	0.02	0.00	−0.02	−0.01	0.00	0.09	−0.03	−0.03															
10	CEO total compensation (logged)	8.19	1.06	0.00	−0.01	0.03	0.17	0.04	0.51	−0.10	0.05	0.11														
11	CEO age	52.45	6.44	−0.01	0.04	−0.04	0.03	−0.05	0.09	0.04	0.08	−0.04	−0.02													
12	Nature of succession	0.23	0.42	−0.02	−0.01	0.04	0.01	−0.16	−0.14	−0.03	0.07	−0.06	−0.03	0.09												
13	Independent directors percent	0.84	0.08	−0.01	0.05	0.03	0.08	0.01	0.11	0.01	0.03	−0.06	0.05	0.04	0.20											
14	Minority directors percent	0.14	0.18	0.05	0.08	0.01	0.01	0.00	0.01	0.02	−0.06	0.08	−0.03	−0.03	−0.02	0.04										
15	Average number of interlocks	0.84	0.41	0.07	−0.01	0.01	0.17	0.04	0.30	−0.01	0.01	0.07	0.27	0.01	0.05	0.18	0.02									
16	Female chair	0.02	0.15	−0.01	0.05	0.05	0.14	−0.13	−0.06	0.05	0.05	−0.01	−0.01	0.01	0.03	0.04	0.05	0.01								
17	Dedicated institutional investor %	0.07	0.07	−0.03	0.07	−0.09	0.03	−0.10	−0.01	−0.02	0.04	−0.04	0.11	−0.01	0.06	0.04	0.03	0.02	0.06							
18	Transient institutional investor %	0.14	0.08	0.08	0.06	0.02	−0.09	−0.06	−0.36	−0.02	−0.04	−0.02	−0.14	−0.04	0.12	−0.01	0.08	−0.10	0.05	0.04						
19	Optimism	51.01	2.09	0.06	0.04	0.01	0.01	−0.02	0.06	−0.03	0.02	−0.01	0.11	−0.02	−0.01	−0.02	−0.01	0.03	−0.10	0.01	0.03					
20	Certainty	54.13	3.89	0.02	0.00	−0.06	−0.04	0.00	−0.10	0.10	−0.05	−0.04	−0.10	−0.01	0.03	−0.06	−0.07	0.00	0.03	0.00	0.02	−0.21				
21	Information clarity	29.76	7.99	0.09	0.03	−0.05	0.00	0.01	0.00	−0.06	−0.06	0.00	0.02	0.01	0.00	0.05	0.02	0.04	−0.02	0.01	0.00	0.05	0.10			
22	Past temporal focus	1.02	1.03	−0.11	−0.08	−0.03	0.09	−0.01	0.08	0.00	0.06	−0.03	0.00	0.01	−0.02	0.01	0.02	0.01	0.05	−0.05	−0.03	−0.04	−0.17	−0.15		
23	Future temporal focus	0.65	0.65	0.07	−0.04	0.01	0.06	0.06	0.13	−0.04	−0.01	0.03	0.04	−0.03	−0.05	0.10	−0.06	0.10	−0.04	−0.12	−0.08	−0.07	0.03	0.03	−0.03	
24	Negative language	0.53	1.09	−0.04	0.05	0.00	−0.02	0.00	−0.11	0.00	−0.09	−0.03	−0.20	0.03	−0.04	−0.03	0.04	−0.04	0.14	−0.02	0.02	−0.64	0.25	−0.01	−0.12	0.03

Note. n = 523; When |r| > 0.08, $p < .05$.

TABLE 2 Seemingly unrelated bivariate probit models

	Control variables				Hypotheses 1 & 2				Hypotheses 3 & 4			
	(I) Collaboration		(II) control		(III) collaboration		(IV) control		(V) Collaboration		(VI) control	
Controls	**Estimate**	***p*-Value**	**Estimate**	***p*-Value**	**Estimate**	***p*-Value**	**Estimate**	***p*-Value**	**Estimate**	***p*-Value**	**Estimate**	***p*-Value**
Constant	−0.629	.826	−5.201	.040	−0.479	.869	−5.165	.042	−0.582	.843	−5.253	.038
ROA	0.329	.337	0.317	.559	0.152	.662	0.318	.557	0.107	.768	0.284	.591
Total assets (logged)	−0.103	.013	0.005	.902	−0.108	.012	0.002	.956	−0.110	.013	0.001	.982
Stock returns	−0.002	.149	−0.002	.318	−0.002	.122	−0.002	.327	−0.002	.122	−0.002	.321
Analyst recommendations	−0.096	.531	−0.221	.074	−0.118	.448	−0.226	.079	−0.109	.491	−0.220	.087
Analyst recommendation dispersion	0.036	.893	0.074	.752	0.077	.772	0.072	.761	0.047	.862	0.046	.846
CEO total compensation (logged)	0.053	.449	−0.004	.938	0.037	.606	−0.003	.954	0.043	.560	0.002	.972
CEO age	0.003	.664	0.012	.215	0.004	.645	0.012	.209	0.004	.581	0.013	.187
Nature of succession	−0.094	.465	−0.046	.805	−0.108	.406	−0.052	.780	−0.108	.405	−0.053	.779
Independent directors %	−0.206	.785	1.042	.143	−0.246	.748	1.042	.146	−0.294	.703	1.002	.173
Minority directors %	0.290	.470	0.254	.389	0.255	.523	0.259	.381	0.289	.456	0.279	.339
Average number of interlocks	0.310	.121	−0.072	.616	0.289	.151	−0.067	.649	0.284	.163	−0.073	.619
Female chair	0.103	.781	0.387	.321	−0.012	.973	0.396	.323	−0.072	.848	0.354	.387
Dedicated institutional investors %	−0.617	.408	1.221	.233	−0.364	.636	1.230	.229	−0.440	.572	1.167	.255
Transient institutional investors %	0.923	.136	0.708	.379	0.905	.144	0.686	.398	0.908	.147	0.695	.391
Optimism	0.012	.756	0.065	.098	0.008	.835	0.064	.099	0.011	.781	0.067	.086
Certainty	0.001	.927	−0.002	.889	0.005	.762	−0.002	.905	0.003	.833	−0.003	.836
Information clarity	0.011	.150	0.001	.891	0.011	.126	0.001	.869	0.010	.142	0.001	.936
Past temporal focus	−0.115	.034	−0.069	.327	−0.109	.039	−0.070	.338	−0.113	.029	−0.072	.319
Future temporal focus	0.175	.091	−0.065	.450	0.170	.105	−0.058	.497	0.164	.118	−0.066	.453
Negative language	−0.077	.319	0.102	.184	−0.083	.278	0.100	.190	−0.081	.292	0.101	.191
Hypothesized variables												
Female CEO					0.662	.001	0.063	.798	1.196	.000	0.453	.108
Female directors					0.745	.152	−0.091	.880	1.075	.045	0.179	.780
Female CEO × female directors									−3.974	.017	−3.411	.071
Model statistics												

(*Continues*)

TABLE 2 (Continued)

	Control variables				Hypotheses 1 & 2				Hypotheses 3 & 4			
	(I) Collaboration		(II) control		(III) collaboration		(IV) control		(V) Collaboration		(VI) control	
Controls	**Estimate**	***p*-Value**	**Estimate**	***p*-Value**	**Estimate**	***p*-Value**	**Estimate**	***p*-Value**	**Estimate**	***p*-Value**	**Estimate**	***p*-Value**
Sample size	523				523				523			
Year fixed effects	Yes				Yes				Yes			
Industry clusters	Yes				Yes				Yes			
Rho	0.225				0.226				0.218			
Test of Rho = 0	8.069**				7.677**				7.052**			

Note. Each model features year fixed effects. We employed robust standard errors clustered by SIC at the 3-digit level.

**$p < .010$.

TABLE 3 Moderating effect analysis of female board representation on the marginal effect of female CEO on the probability of collaboration board chair orientation

Level of moderator	Percent of women directors (%)	Marginal effect of a female CEO	z-statistic
1 SD below mean	2.3	0.389	6.44
Mean	12.2	0.263	3.92
1 SD above mean	22.1	0.117	1.10

increases from 2.3% females to 22.1% females (one standard deviation below and above the mean, respectively), supporting Hypothesis 3.

Hypothesis 4 similarly states that female representation on the board attenuates the negative relationship between the appointment of a female CEO and the probability of a control board chair orientation. In Column VI we found weak support for the opposite effect ($\beta = -3.411$, $p = .071$). As we describe above, this single parameter estimate does not comprehensively depict the moderated relationship. Accordingly, Table 4 displays the marginal effects of having a female CEO on the probability of adopting a control orientation across several levels of the percentage of females on the board. We find a positive effect of female CEOs on the adoption of a control orientation when female board representation is low and a negative effect when female board representation is high. Neither these effects nor any marginal effect within this range is statistically significant, indicating that there is not a meaningful effect manifesting in the data, and it would be inappropriate to draw any strong conclusions regarding the interaction. We cannot therefore claim any support for Hypothesis 4.

5 | DISCUSSION

The percentage of female CEOs at S&P 500 firms has tripled in the last decade to 5.6% (Catalyst, 2017). Despite this progress, the *New York Times* recently reported that "fewer women run big companies than men named John" (Wolfers, 2015). Perhaps due to the continued rarity of female CEOs, much of the research on CEO gender has focused on the conditions under which female CEOs are likely to be appointed (Cook & Glass, 2014) and the subsequent market reactions to those appointments (Dixon-Fowler et al., 2013). There is limited focus on female CEOs' experiences, working relationships, and potential success.

With the present research, we focus on a critical post-promotion working relationship: that between the board chair and CEO. We connect the literature on gender stereotypes and benevolent sexism with stewardship theory and agency theory in a number of ways to examine board chair orientation. We first argue that board chairs may see female CEOs as more steward-like and less agentic than males, such that female CEOs require less oversight and monitoring than male CEOs. We then suggest that board chairs may believe female CEOs need more support and protection to cope with difficult job demands. Based on these premises, we predict that firms appointing female CEOs

TABLE 4 Moderating effect analysis of female board representation on the marginal effect of female CEO on the probability of control board chair orientation

Level of moderator	Percent of women directors (%)	Marginal effect of a female CEO	z-statistic
1 SD below mean	2.3	0.143	1.59
Mean	12.2	0.013	0.15
1 SD above mean	22.1	−0.102	−0.90

are more likely to adopt a collaboration board chair orientation and less likely to adopt a control orientation than firms appointing male CEOs. Our results show that firms appointing female CEOs were indeed more likely to adopt a collaboration orientation. We did not find any effect on control orientation.

We also examine the moderating role of female board representation (Hillman et al., 2007). We found that the tendency of firms to disproportionately exhibit a collaboration board chair orientation with a female CEO wanes as female board representation increases. In other words, firms with more females on the board are less likely to adopt a collaboration orientation when appointing a female CEO than firms with fewer females on the board. It is important to note our study tests differences between firms; our data do not permit us to examine within-firm changes in board chair orientation when a female CEO succeeds a male CEO.

With the results of this study, we aim to make a number of contributions to theory and practice. By linking the stewardship and agency models of man with the female and male gender stereotypes, respectively, we bring much needed clarity to the often under-socialized and conflicting views of stewardship theory and agency theory. By identifying gender as a salient characteristic that influences how a board chair views his or her working relationship with the CEO, we also illustrate how benevolent sexism—the mindset that "men are bad but bold and women are wonderful but weaker"—permeates even the most influential of relationships in the boardroom (Glick et al., 2004, p. 714). In doing so, we turn scholars' attention to the post-promotion circumstances faced by those who, against all odds, break through the glass ceiling.

We also work to unpack the conditions when firms are apt to select collaboration and/or control board chair orientations. Since the board chair–CEO relationship must be a good fit (personally, strategically, etc.) to operate effectively (Krause, 2017; Krause & Semadeni, 2013), understanding this relationship is critical for scholars as well as for CEOs and board chairs. A functioning partnership necessitates better outcomes for the organization and its shareholders (Kakabadse, Kakabadse, & Barratt, 2006), and it is especially important given the proliferation of CEO–board chair separation in recent years (Krause & Semadeni, 2013).

Future research could investigate the performance implications of such circumstances. Perhaps the pervasive perspective of females as stewards undermines their discretion, or perhaps it helps them achieve success in particularly tricky situations. We also show that potential benevolent sexism in board chair orientations can be curtailed by the presence of more female directors on the board. It seems that as long as female CEOs remain a small minority, female board representation will affect the working relationship between the CEO and the board chair. As female CEOs become more common, it is likely that their interactions with board chairs will become more nuanced, meriting additional and equally nuanced scholarly investigation.

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SUPPORTING INFORMATION

Additional Supporting Information may be found online in the supporting information tab for this article.

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