

Don't Pitch Like a Girl!: How Gender Stereotypes Influence Investor Decisions

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Abstract

We consider the role that gender-stereotyped behaviors play in investors' evaluations of men- and women-owned ventures. Contrary to research suggesting that investors exhibit bias against women, we find that being a woman entrepreneur does not diminish interest by investors. Rather, our findings reveal that investors are biased against the display of feminine-stereotyped behaviors by entrepreneurs, men and women alike. Our study finds that investor decisions are driven in part by observations of gender-stereotyped behaviors and the implicit associations with the entrepreneur's business competency, rather than the entrepreneur's sex.

Keywords

women/minority issues, start-up, new ventures, entrepreneurship

Access to financial capital is one of the most important and challenging problems entrepreneurs face in growing their ventures. Venture capital is a key form of early-stage financing for start-up firms and is a key driver of start-up growth (Davila, Foster, & Gupta, 2003; Gompers & Lerner, 2004). A key question in the entrepreneurship literature is why investors have overwhelmingly provided venture capital to startups led by men. For example, in a recent study of 6,500 venture capital investments, only 3% were secured by women CEOs (Brush, Greene, Balachandra, & Davis, 2014). Further, companies with a woman on the management team that receive venture capital tend to be older and larger, suggesting they may go through a more stringent screening process (Brush et al., 2014; Edelman, Manolova, & Brush, 2017).

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This difference in investment has important implications for understanding the success of different entrepreneurs and the growth of their firms.

Conventional wisdom suggests venture capitalists invest more often in men than women due to a widespread bias against women entrepreneurs (Buttner & Rosen, 1989; Marlow & Patton, 2005). This bias also includes women who pursue high-growth opportunities (Cliff, 1998; Morris, Miyasaki, Watters, & Coombes, 2006). Researchers have found a significant equity funding gap between men and women entrepreneurs because of sex-based biases against women (Brush et al., 2014; Jennings & Brush, 2013; Greene, Brush, Hart, & Saporito, 2001), where sex refers to individuals' physical characteristics related to biology that is captured in binary categories of men and women (Muehlenhard & Peterson, 2011; Powell & Greenhaus, 2010; Unger, 1979). Some have found amplified sex-based biases, including increased funding preferences for men who were rated as "attractive" (Brooks, Huang, Kearney, & Murray, 2014).

While sex-based biases might seem to explain the lack of venture capital obtained by women, it may be too simplistic an explanation (Heilman, 2001; Heilman, Wallen, Fuchs, & Tamkins, 2004). Biases against women may also arise from gender stereotypes. Gender role theory explains that, due to stereotypes based on gender role expectations, there are differences in what are considered acceptable behaviors for men and women (Eagly & Wood, 2011; Heilman, 1983). In western societies, while men are expected to display masculine behaviors associated with assertiveness and dominance, women are expected to display feminine behaviors associated with warmth and emotional expressiveness (Bem, 1974; Eagly, 1987; Powell, 2011). Further, due to stereotypical characteristics attributed to each gender, jobs and occupations that are dominated by men or women can become stereotyped as masculine or feminine (Eagly & Karau, 1991; Heilman, 1983; Muehlenhard & Peterson, 2011; Wood, 1999). As a result, research applying gender role theory argues that success in male- and female-dominated occupations requires correspondingly gender stereotypical characteristics (Eagly, 1987; Eagly & Karau, 1991; Heilman, 1997). Extending this theory to entrepreneurship suggests that, because entrepreneurship is a "man's world," both men and women should display stereotypical masculine characteristic to garner more interest and support from resource providers like venture capitalists (Gupta, Turban, Wasti, & Sikdar, 2009, p. 399).

However, gender role congruity theory suggests that displaying more masculine characteristics may not solve sex-based biases against women (Eagly & Carli, 2003; Koenig, Eagly, Mitchell, & Ristikari, 2011). Gender role congruity theory extends gender role theory by explaining how the mismatch between being female and occupying a role deemed as masculine leads to biases against women (Eagly & Karau, 2002). For example, research acknowledging the male stereotype of leadership finds that female leaders who behave in masculine ways are considered overly assertive, viewed negatively, and experience career backlash (Carli, 2010; Eagly & Karau, 2002; Heilman et al., 2004). Indeed, research on the masculine-stereotyped behaviors of entrepreneurs suggests that the perceived incongruity between entrepreneurship and femininity creates roadblocks for women entrepreneurs (Gupta et al., 2009; Eddleston, Ladge, Mitteness, & Balachandra, 2016). Investors, therefore, may not be biased against funding women entrepreneurs simply because they are female; but rather, because they are biased against entrepreneurs who seem *too* feminine. Or, they might be biased against women who behave in ways that are inconsistent with their gender stereotype—in other words, the gender bias in venture capital funding may be against women entrepreneurs who are perceived as masculine.

To explore these possibilities, our study examines how observed gender-stereotyped behaviors of masculinity and femininity, displayed by men or women entrepreneurs during their pitches to investors, influence investor decisions about the ventures. By distinguishing the sex

of the entrepreneur from their displayed gender-stereotyped behaviors, we explore how entrepreneur behaviors are perceived rather than how or what the entrepreneur may have intended to portray when seeking growth capital (Bird, 2014; Bird & Schjoedt, 2009). In turn, this allows us to investigate whether potential biases against women entrepreneurs are due to their being female or their display of feminine versus masculine behaviors during the venture pitch.

To investigate how an entrepreneur's sex and gender-stereotyped behaviors influence investors' decisions, we use investor decisions from a pitch competition, rather than analyzing venture funding outcomes that are based on an aggregation of many decision points over time. Following a pitch, investors decide if they should begin a due diligence research process on the venture (Fried & Hisrich, 1994). The decision to enter due diligence directly impacts future funding outcomes (Chen, Yao, & Kotha, 2009; Mitteness, Sudek, & Cardon, 2012; Sudek, 2006). For consistency with our research question about perceptions, we use independent observations to determine sex (man/woman) distinctions between the pitching entrepreneurs, as well as their levels of displayed gender-stereotyped behaviors (masculinity/femininity). We analyze investor decisions that were made right after viewing the entrepreneur's pitch in order to directly link a critical step in the investment funding process to investor perceptions of the entrepreneur and preferences for the venture.

Our paper follows with a review of the literature, methods, and the results of our study. We demonstrate that, by separating men and women entrepreneurs from the display of masculine- and feminine-stereotyped behaviors, we can identify new sources of bias in the process of venture financing. In particular, our results suggest that gender stereotypes influence venture capitalists' evaluations, as we find bias against ventures pitched by entrepreneurs who display feminine-stereotyped behaviors during funding pitches, regardless of whether they are men or women. Contrary to the extant research and assumptions in the field, we find evidence that investors are not biased against women per se, but rather, that both men and women face biases when they display feminine-stereotyped behaviors. Our study, therefore, contributes to the literature by demonstrating the gendered lens of entrepreneurship in the venture capital arena that appears to reflect discrimination toward feminine behaviors. Additionally, we contribute to gender role congruity theory by showing that, regardless of whether an individual is a man or woman, if his or her gender-stereotyped behaviors are not congruent with role expectations, the individual will be penalized.

The Importance of the Entrepreneur's Pitch to Venture Capital Investors

We use the entrepreneur's pitch and subsequent investor evaluations of the venture as our context to examine how observing an entrepreneur's sex and/or gender-stereotyped behaviors of masculinity and femininity may be a driver of the gap between men and women entrepreneurs in equity funding. The pitch is a critical component in the investor's vetting process for funding and is often the initial introduction to and presentation of the venture to potential investors (Chen et al., 2009; Clark, 2008; Van Osnabrugge, & Robinson, 2000; Wiltbank, 2005). During the pitch, investors evaluate the venture's market potential, as well as the entrepreneur's capabilities, to lead and grow the venture (Fried & Hisrich, 1994). An investor pitch is a critical opportunity for an entrepreneur to articulate the venture's business propositions to venture capitalists to create interest for further investment consideration (Hargadon & Douglas, 2001; Mason & Harrison, 1996). If investors form negative impressions of the entrepreneur's abilities to lead the venture during these presentations, the entrepreneur is highly unlikely to obtain funding (Hoehn-Weiss, Brush, & Baron, 2004; Martens, Jennings, & Jennings, 2007; Mason & Harrison, 1996; Mitteness et al., 2012).

Venture Capital Pitching and Women Entrepreneurs

Pitches are opportunities to persuade venture capitalists of the investment potential of ventures. Persuasion skills may be leveraged differently by men and women during their pitches, and research has indicated that investors are more persuaded by pitches made by men (Brooks et al., 2014). Investors may evaluate the pitches by men more favorably than those by women since most high-profile entrepreneur role models are men (Ahl & Marlow, 2012), and men are believed to be more entrepreneurial and growth-oriented than women (Bird & Brush, 2002; De Bruin, Brush & Welter, 2006; Eddleston et al., 2016). It also has been argued that investors perceive women-led ventures as less legitimate and riskier investments than those owned by men (Greene et al., 2001). In turn, studies have found that, despite similar efforts to seek funding, women experience greater difficulty in obtaining funding for their ventures relative to men (Brush, Carter, Gatewood, Greene, & Hart, 2006; Orser, Riding & Manley, 2006; Eddleston et al., 2016; Verheul & Thurik, 2001). Findings like these have led some to believe that women entrepreneurs face discriminatory practices when seeking funding (Buttner & Rosen, 1989; Greene et al., 2001; Riding & Swift, 1990). Therefore, in line with previous research examining differences between men and women entrepreneurs' ability to attract investor interest, we begin our investigation by predicting that investors prefer pitches given by men entrepreneurs more than those by women entrepreneurs.

***Hypothesis 1:** Investors prefer ventures pitched by men entrepreneurs more than those by women entrepreneurs.*

Extending Gender Role Theory to Investors' Decisions on Entrepreneur Pitches

Gender role theory, also referred to as social role theory in the gender literature (Powell, 2011), posits that because men and women tend to occupy different roles in society, there are differences in what are considered acceptable behaviors for men and women that reflect gender stereotypes (Eagly, 1987; Eagly & Wood, 2011; Heilman, 1983; Powell, 2011). Since women are considered responsible for the family role, communal and interpersonally oriented traits are labeled *feminine*-stereotyped behaviors (e.g., nurturing, warm, expressive) (Bem, 1974; Eagly, 1987; Powell & Butterfield, 2015). In contrast, since men are presumed to focus on work, agentic and task-oriented traits are labeled *masculine*-stereotyped behaviors (e.g. aggressive, dominant, independent) (Eagly, 1987; Powell & Butterfield, 2015). In turn, gender stereotypes can exert powerful influences on people's perceptions of the appropriateness of others' behaviors since they establish a set of norms, or gendered expectations of behavior, for success in specific tasks and occupations (Fiske, 2000; Fiske & Taylor, 1991; Heilman, 2001).

Gender role theory further explains that expectations related to men's and women's roles shape perceptions about the types of occupations considered appropriate for each sex (Eagly, 1987; Eagly & Karau, 2002), which thereby leads to occupations being stereotyped as *masculine* or *feminine* (Heilman, 1997). For example, engineering and construction are considered masculine occupations, while nursing and childcare are viewed as feminine occupations (Heilman, 2012). Furthermore, professions associated with behaviors of power, leadership, and authority tend to be stereotyped as masculine (Karlin, England, & Richardson, 2002; Powell & Butterfield, 2015), whereas professions stereotyped as feminine more often involve nurturing and care-giving behaviors (Cejka & Eagly, 1999).

Entrepreneurship has long been stereotyped as a masculine profession (Ahl, 2006; Bird & Brush, 2002; Bruni, Gherardi, & Poggio, 2004; Cekja & Eagly, 1999; Marlow, 2002). Collins and Moore (1964, p. 5) noted, “however we may feel about the entrepreneur, he emerges as essentially more masculine than feminine.” Although classifications can shift over time, being an entrepreneur continues to be viewed as a *masculine* occupation (Gupta et al., 2009). Importantly, achieving success as an entrepreneur has been associated with masculinity (Bird & Brush, 2002; Collins & Moore, 1964; Eddleston & Powell, 2008; Hisrich & Brush, 1984; Gupta & Turban, 2012; Schein, 1975), as successful entrepreneurs have been described as bold, aggressive risk-takers—behaviors that are typically associated with masculinity (Baughn, Chua, & Neupert, 2006; Gupta & Turban, 2012). Due to the masculine context of entrepreneurship, “the stereotype of ‘think successful entrepreneur – think male’” continues to endure (Eddleston et al., 2016: 497). The very practice of pursuing high-growth entrepreneurship—with its aggressive funding goals and interest in pursuing venture capital funding—has been considered a masculine behavior (Gupta et al., 2009; Gupta & Turban, 2012). Indeed, Gupta et al. (2009) found that most entrepreneurs, and in particular those who created high-performing, high-growth ventures, are perceived as more stereotypically masculine than feminine. Thus, extending this logic to venture funding decisions suggests that entrepreneurs who display masculine-stereotyped behaviors may have an advantage in competing for venture capital over those who display more feminine-stereotyped behaviors.

When considering a venture for funding, investors simultaneously assess qualities of the entrepreneur, such as competence (Bird, Schjoedt, & Baum, 2012), and characteristics of the proposed venture, such as the size and growth potential of the venture’s market (Kollmann & Kuckertz, 2010). Investors prefer entrepreneurs who can clearly demonstrate their business competency (Amit, Glosten, & Muller, 1990; Coglisier & Brigham, 2004; MacMillan, Siegal, & Narasimha, 1985; Tyebjee & Bruno, 1984). Because of the relationship between successful entrepreneurship and masculinity (Gupta et al., 2009), entrepreneurs who display masculine-stereotyped behaviors may be assumed to possess more entrepreneurial competencies. Therefore, we expect that the display of masculine-stereotyped behaviors by entrepreneurs will be positively related to investors’ preference for a venture.

Conversely, femininity has not been associated with *successful* entrepreneurs (Bird & Brush, 2002; Ridgeway, 2001; Rudman & Glick, 2001). Entrepreneurs who exhibit more feminine-stereotyped behaviors may be seen as lacking the level of competency required for business growth and success (Bird, Schjoedt & Baum, 2012; Cejka & Eagly, 1999; Martens et al., 2007). By behaving in a feminine manner, entrepreneurs are likely to transfer the perception of societal myths regarding the incompatibility between femininity and venture success to their venture pitch. Given the perceived inverse relationship between femininity and successful entrepreneurship, when entrepreneurs of either sex—man or woman—are seen as feminine, they may, therefore, face investor bias. Separating masculinity and femininity from the sex of the entrepreneur is an important distinction from our earlier hypothesis that focused solely on comparing men and women entrepreneurs. We include both men and women in our gender stereotype analysis, as both can display varying degrees of masculine- and feminine-stereotyped behaviors (Eddleston & Powell, 2008). We hypothesize:

Hypothesis 2a: *The display of masculine-stereotyped behaviors by entrepreneurs during a venture pitch is positively related to investor preference.*

Hypothesis 2b: *The display of feminine-stereotyped behaviors by entrepreneurs during a venture pitch is negatively related to investor preference.*

The Moderating Role of Entrepreneurs' Gender-Stereotyped Behavior

There may also be an interaction effect between the entrepreneur's sex and gender-stereotyped behaviors when an entrepreneur does not pitch with behaviors that match his or her gender stereotype. Although we argue that entrepreneurs are more highly evaluated when they portray masculine behaviors that conform to the norms of the profession, women may be poorly served by exhibiting masculine-stereotyped behaviors due to the perceived gender role inconsistency.

Early foundational research in the management domain found that men are more likely than women to be evaluated as competent managers because "a woman, by virtue of her gender alone, was viewed as less qualified than her counterpart" (Schein, 1975, p. 42). This perception persists today; women often are perceived as inferior to men in terms of having the necessary abilities to lead a business, regardless of their level of prior business achievement or display of masculine behaviors (Marlow, 2002; Powell, 2011; Schein, 2001). Gender role congruity theory explains that the prescriptive aspects of stereotyping produce conflicting expectations for women leaders since they are expected to display communal traits to fulfill their female gender role, which are in contrast to the leadership role's requirement for agentic traits (Koenig et al., 2011). Yet, the remedies are challenging as other research has identified that women managers are negatively judged when they are perceived as more masculine than feminine (Eagly & Karau, 2002; Heilman, 1983; Heilman et al., 2004). Furthermore, acting more masculine does not appear to help women effectively overcome the perceived *competency deficiency* in the management domain (Eagly & Karau, 2002; Heilman, 2001; Rudman & Glick, 1999).

Similarly, in the entrepreneurship domain, acting *masculine* may have negative consequences for women entrepreneurs. While some suggest that adopting masculine-stereotyped behaviors could help women entrepreneurs gain legitimacy (Marlow & McAdams, 2013), others note that, because of the conflicting discourse between the masculine domain of entrepreneurship and feminine domain of womanhood, displaying masculine-stereotyped behaviors could lead others to question if they are capable entrepreneurs (Lewis, 2006; 2015; Diaz-Garcia & Welter, 2013). Because sex is difficult to hide, women entrepreneurs who disrupt gender norms by adopting masculine-stereotyped behaviors are likely to lose approval and be negatively perceived by others (Diaz-Garcia & Welter, 2013).

Although women may be seen as less masculine by virtue of their female sex, they are also expected to follow prescribed gender-stereotyped behavioral *rules* such as "males should not cry; females (except in a maternal role) should not show anger" (Ekman, 1984, p. 320). In line with gender role congruity theory, research further suggests that when women deviate from expected feminine-stereotyped behaviors, they are viewed unfavorably as these behaviors often elicit strong disapproval for violating gender stereotypes (Cialdini & Trost, 1998; Koenig et al., 2011). Indeed, Rudman and Fairchild (2004) provide experimental evidence that when men and women behave in ways that are inconsistent with their prescribed gender stereotype, strong negative reactions are often provoked in others. Additionally, women in jobs traditionally occupied by men, who exhibit more masculine characteristics, tend to receive lower performance ratings and recommendations than men in similar positions (Heilman et al., 2004). As such, women engaged in vocations classified as masculine, like entrepreneurship, who display masculine-stereotyped behaviors, are likely to experience high levels of negativity from others (Eagly & Karau, 2002; Heilman, 2001).

The importance of gender role congruity has been well documented in politics, another strongly masculine occupation, such as during Hillary Clinton's first presidential run in 2008 (Cejka & Eagly, 1999; Meeks, 2012). Her polling numbers declined after speeches and appearances in which she seemed very *assertive* and *aggressive*, or when she behaved in a stereotypically masculine manner (Brescoll & Uhlmann, 2008; Meeks, 2012). However, when Clinton behaved in a more feminine manner that was consistent with her being female, she experienced a positive response from voters: when Clinton "cried in a coffee shop in New Hampshire," displaying her *feminine* side, she received an immediate positive jump in national polls (Meeks, 2012).

As the context of entrepreneurship and its association with masculinity is highly institutionalized, women entrepreneurs may face a *catch 22*. If they conform to the femininity expected of their gender stereotype, they will fail to be viewed as competent and successful entrepreneurs. However, if they behave in the masculine ways expected of successful entrepreneurs, they will fail to conform to their gender stereotype and violate gender norms. Given evidence that demonstrates the benefits of behaving in gender-stereotype consistent ways, we expect that investors will prefer women entrepreneurs who display more feminine-stereotyped behaviors during their pitch, as they do not violate their female gender norms. Conversely, women entrepreneurs who conform to the *masculine* norms of entrepreneurship by displaying more masculine-stereotyped behaviors during their pitches will violate female gender norms. Their venture may not be viewed positively by investors similar to the negative effects observed in other masculine occupations (e.g., Heilman, 2001; Heilman & Welle, 2006; Lyness & Heilman, 2006; Meeks, 2012).

Additionally, we hypothesize that men are rewarded for exhibiting masculine-stereotyped behaviors as they are maintaining consistency with being male and the masculine stereotype for the occupation of entrepreneurship (Bird & Schjoedt, 2009; Bird et al., 2012). However, men may experience backlash when exhibiting stereotypical feminine behaviors since they contrast with their prescribed male gender *and* the masculine stereotype of the entrepreneurship occupation. We, therefore, propose the following hypotheses.

***Hypothesis 3a:** Investors prefer ventures pitched by men who display more masculine-stereotyped behaviors than those by men who display more feminine-stereotyped behaviors.*

***Hypothesis 3b:** Investors prefer ventures pitched by women who display more feminine-stereotyped behaviors than those by women who display more masculine-stereotyped behaviors.*

Method

Data Sample

We obtained videos of men and women entrepreneurs pitching to venture capital investors where the investors decided immediately after the pitch if they were interested in learning more about the venture for potential funding. We worked with a large, top-tier, northeastern university, which provided access to sessions and high-quality digital recordings of entrepreneurs pitching to investors as part of its annual elevator pitch competition (EPC). Although there was no prescreening process that would limit entrants from participating in the EPC, they were required to pitch an already established (ongoing) start-up venture. As this is an *elevator* pitch competition, each entrepreneur was allowed only 1 min to pitch the venture, and props and slides were not allowed. Our sample includes all 185 entrant pitches during 2 years of the EPC, 2007–2008.

Each entrepreneur pitched in a designated *industry* room, reflecting the proposed venture's industry categorization, and where the assigned judges were three experienced, local venture capitalists who had funded ventures in that industry. There were six industry categories for a total of 18 judges (15 men and 3 women¹) across the six rooms. All of the judges were seasoned investors—typically partner-level venture capitalists at local area venture capital funds. After the pitches, judges in each room collaboratively selected two finalists to pitch in a separate finalist competition at the end of the evening to determine which would win the cash prizes. The ventures selected as finalists were the two entrepreneurs the judges would be most interested in meeting with again after the competition. We used this selection process as a proxy for investors' decision: if these had been actual pitches to venture capital firms for funding, the firms would determine whether or not to continue meeting with the company to determine potential investment by beginning the due diligence process (e.g., Fried & Hisrich, 1994). The investors' selection of the finalists was representative of investor decisions based on the pitch and is the dependent variable for our analysis.

The EPC offered a compelling setting for our analysis for two key reasons. First, the pitches represented functioning startups in the process of seeking growth capital. Several businesses that participated in the EPC went on to spawn successful, innovative, venture-financed businesses (e.g., FastCap Systems, 3PlayMedia, and RunKeeper). The companies pitched were established entities, and the judges were current, active venture investors in their respective industries. As such, our context provides a high level of real-world validity. Second, the majority of the EPC participants came from STEM (science, technology, engineering, or math) backgrounds. This criterion is important as the EPC offered a unique dataset containing a significant number of pitches by women pursuing high-growth ventures due to significant gender parity improvements across the university (e.g., the student population in 2007 was roughly 35% female). Therefore, we believe our setting allowed for a higher number of women involved in start-up ventures and entering the EPC in comparison to previous research. Fewer women enter high-growth businesses in science and engineering technology, which are the sectors most likely to seek venture capital financing (Brush, Carter, Gatewood, Greene, & Hart, 2006; Robb & Watson, 2012). Pitch samples that contain data on both the entrepreneur pitching as well as the subsequent investor decisions from the pitches with sufficient representation of women entrepreneurs can be difficult to obtain. Our sample, perhaps due to its affiliation with the university, had a large enough sample of female entrepreneurs (20% of the pitches) for our statistical analysis (38 women entrepreneurs out of a total sample of 185²).

To ensure the robustness of our statistical analysis, we still required more women entrepreneur finalists to achieve a comparative statistical analysis. The EPC did not continue to videotape all of the competition entrants after 2008 (the competition stopped recording pitches in the industry rooms and decided to only record the finalists' pitch session of the EPC years following 2008), so similar high-quality videos of the pitches evaluated by venture capital judges were not available from subsequent years. To increase our sample of women entrepreneur finalists, we oversampled from the finalists' pitches from 2009 to 2012, such that we included all of the women entrepreneurs who had been finalists (13 additional women finalists and 7 additional men finalists). Our sample of finalists, therefore, consisted of 16 women and 25 men. The additional pitches were factor weighted by entrepreneur sex to prevent oversampling that could create an overrepresentation of rare events. With the `SVYSET` and `SVY LOGIT` commands in STATA version 12.1, we factor weighted the additional 20 pitches using the overall sex distributions from the 2007–2008 pitch samples. We present the results from the original sample of 185 pitches (not factor weighted; 38 women and 147 men) as the results remained the same across both the 185 and 205 samples.

Pitch Coding Process. Two independent coders (graduate research assistants, one man and one woman) rated the pitching entrepreneurs for their attractiveness and a series of masculine- and feminine-stereotyped behaviors (forcefulness, dominance, aggressiveness, and assertiveness for masculine; and warmth, sensitiveness, expressiveness, and emotiveness for feminine) on a scale of 1–5 by watching the pitches without sound. This nonverbal approach has been well-documented in psychology studies as a method to assess various behaviors (Ambady, Bernieri, & Richeson, 2000). Unrelated individuals have been shown to make accurate predictions about others from observing *thin slices* of their nonverbal behaviors, across a variety of contexts (Ambady et al., 2000), in as little as 30 sec (Ambady & Rosenthal, 1993; Borkenau, Mauer, Reimann, Spinath, & Angleitner, 2004). Similar nonverbal ratings of the observed masculine-stereotyped and feminine-stereotyped behaviors of others have been rated by independent coders in prior studies, but in those studies, the coders were aware of their study's focus and the measurement objective (levels of masculinity and femininity) (e.g., Lippa & Dietz, 2000; Rieger, Linsenmeier, Gygax, Garcia, & Bailey, 2010).

Our coders were not aware of our gender stereotyping research objectives when making their ratings so as to remove the possibility of coders rating the entrepreneurs on any personal generalized conceptions of masculine- and feminine-stereotyped behaviors. We provided our coders with masculine- and feminine-stereotyped behaviors that they were to observe and determine the level at which this behavior was displayed by each entrepreneur during a pitch. These gender-stereotyped behaviors were drawn from validated scales of masculinity and femininity (Bem, 1974; Choi, Fuqua, & Newman, 2009).

The coders were also not aware of the content of the entrepreneurs' pitches or the investor decisions to ensure there was no anchoring or influence on their ratings. The coders watched a video of each 1-min pitch without sound and then filled out a rating form where they filled out their perception of entrepreneur's sex (man or woman), their perception of how much each entrepreneur displayed gender-stereotyped behaviors, as well how attractive they found the entrepreneur. Coders could rewind and review the video again to confirm their ratings. Coders varied the order in which they rated items across the sample and rated all 185 pitches independently. The coders calibrated their ratings by scoring a series of 10 pitches (not used in the sample) together and discussing any discrepancies that arose. For the most conservative approach, we averaged the coders' ratings of each pitch for our analysis (rather than having them negotiate any rating disagreements). Our inter-rater reliability across items had a strong alpha of .84, providing confidence that ratings of the gender-stereotyped behaviors do not vary greatly in perception.

The EPC format aided in reducing experimental variation. The discrete and consistent timeframe of 1 min for all the pitches in this sample provided the opportunity for us to rate masculine- and feminine-stereotyped behaviors across all entrepreneurs consistently. In addition, the pitches were consistent in quality as there were no appealing presentation visuals that could have influenced the coders: entrepreneurs in the EPC were not allowed to show visuals, use props, or create demonstrations of any kind during the pitch. Prior studies of perceived entrepreneur qualities relied on ratings by investors who were at the same time also evaluating their own level of interest in potentially investing in the venture (Chen et al., 2009; Mitteness et al., 2012). By using independent raters, we remove the potential for confirmation bias by investors.

Measures

Dependent Variable. Evaluation of the pitch is the dependent variable, and it is binary. The investors' selection of a pitch as a finalist was representative of investor preference for the

venture and was the dependent variable for our analysis. Pitches selected as finalists were assigned a value of 1 if selected and 0 if not selected. The selection rate was 10.8%, which is typical of venture capital early-stage selection rates (Stevens & Burley, 1997).

Independent and Moderator Variables. *Entrepreneur's Sex.* Raters assigned 1 or 0 value for the pitching entrepreneur's perceived sex, whereby 1 was designated for a man and 0 was designated for a woman. Inter-rater reliability was 100% on this measure.

Gender-Stereotyped Behaviors (masculine and feminine). These items were assessed through ratings of the pitching entrepreneurs on social masculinity characteristics and social femininity characteristics from the short-form BSRI (BSRI; Bem, 1974) that were recently validated by Choi et al. (2009). Choi et al. (2009) found two dimensions of masculinity—internal masculinity and social masculinity. As internal masculinity factors were based on an individual's internal beliefs (e.g., willing to take a stand, defends own beliefs), we did not include these and focused solely on the social masculinity dimensions of forcefulness, dominance, aggressiveness, and assertiveness (Choi et al., 2009). The social femininity dimensions of warmth, sensitiveness, expressiveness, and emotiveness were used even though there was no separation between social and internal characteristics in the feminine items by Choi et al. (2009) to balance our ratings with the social masculinity characteristics scale utilized. We, therefore, omitted items of femininity that were based on an individual's internal beliefs (e.g., sensitive to others' needs, loves children) to be in line with our assessment of gender-stereotyped masculine behaviors.

Thus, our coders rated each entrepreneur on a scale of 1 (*strongly disagree*) to 5 (*strongly agree*) on the following items: forcefulness, dominance, aggressiveness, and assertiveness for masculine-stereotyped behaviors (confirmatory factor analysis Cronbach's $\alpha = .90$, consistent with Choi et al. (2009) for self-reported scale measures) and warmth, sensitiveness, expressiveness, and emotiveness for feminine-stereotyped behaviors (confirmatory factor analysis Cronbach's α value of .80 consistent with Choi et al. (2009) for self-reported scale measures). These measures were selected and the developed scale measures had high internal reliability ($\alpha > .70$), for single, composite scores of masculine- and feminine-stereotyped behaviors.

Control Variables. We controlled for two variables that may have influenced the relationships under examination. Raters evaluated the physical attractiveness of each entrepreneur from 1 (*not at all attractive*) to 5 (*very attractive*) as previous research has found investors to prefer entrepreneurs who are more *attractive* (Brooks et al., 2014). Raters evaluated a series of entrepreneurs in pitches (not used in our sample) together to determine how they rated attractiveness. They each rated an entrepreneur alone, then shared their rating with the other. Any variations in coding disagreements were discussed so that a common scale of *attractiveness* across men and women was established between our raters. They then rated each entrepreneur in the sample for attractiveness using this one-item scale rating. Inter-rater reliability on this item across our pitch sample was very strong at .92, which is consistent with prior studies that have used similar methods to measure attractiveness of others from observing faces (Eagly, Ashmore, Makhijani, & Longo, 1991; Langlois, Kalakanis, Rubenstein, Larson, Hallam, & Smoot, 2000).

While investors often consider other attributes of a venture like the business model and the financials, these are not always part of the pitch evaluation in this sample due in part to the (a) stage of the venture under consideration (nascent, early-stage vs. Series A or Series B rounds) and (b) the timeframe of the pitch (1 min). Such considerations would be more thoroughly investigated in the due diligence stage, when the venture is more closely evaluated for investment (Van Osnabrugge & Robinson, 2000). In addition, an earlier-stage venture may not have clearly established its business model and may not have any sales/revenues to report.

Market potential, however, is always a key consideration for investors at any stage (Fried & Hisrich, 1994), and all of the pitches in the competition supplied this information; therefore, we included this factor as a control in our study. Investors prefer to invest in ventures that are in robust, large markets (Fried & Hisrich, 1994; Maxwell, Jeffrey, & Levesque, 2011; Zacharakis, Meyer, & De Castro, 1999). We controlled for information on the market potential by coding pitches on the market size mentioned by the entrepreneur during the pitch on a five-point scale (1 = *less than \$1 million* to 5 = *over \$1 billion*) (Maxwell et al., 2011). Because this categorization was nonlinear, we squared the values for the logistic regression analysis. We did not control for industry, as industry-specific venture capitalists judged only pitches pertaining to their own investment expertise, or ventures based in their industry specialty. The designated evaluations by industries also minimized any potential sex-based disparity in terms of the markets that women tend to select for their entrepreneurial ventures (Brush, 1992; Kelley et al., 2015).

Results

Table 1 reports means, standard deviations, and correlations for the variables, illustrating the differences in mean statistics between samples of men and women entrepreneurs. Although there were fewer women in our sample, they exhibited equal levels of masculine-stereotyped behaviors as men. Women were rated higher in both feminine-stereotyped behaviors and attractiveness. The attractiveness measure and the market potential measure were correlated with masculine-stereotyped behaviors; however, these variables did not correlate with finalist selection. There was a slight positive correlation between masculine-stereotyped behaviors and finalist selection. In contrast with previous research (Brush et al., 2003; Cliff, 1998), there was no significant difference between men and women in the stated market potential of their ventures. We address this unexpected finding further in the discussion section of this paper.

Table 2 reports the results of the binary logistic regression analysis that was conducted to test the hypotheses. The regressions were run with and without the control variables of attractiveness and market potential. Additionally, entrepreneur sex was controlled when testing the effect of gender-stereotyped behavior and moderation (Schjoedt & Bird, 2014).

Table 1. Correlation Table.

Variable	Men Mean	Women Mean	Total sample Mean	Total sample SD	1	2	3	4	5	6
1. Investor decision			.10	.31	1					
2. Sex (men/women)			.14	.34	-.04	1				
3. Masculinity (masculine behaviors)	11.8	13.3	12.1	4.1	.06*	.11*	1			
4. Femininity (feminine behaviors)	11.7	13.7	11.9	4.3	-.15*	.00	-.25**	1		
5. Attractiveness	3.0	3.1	3.0	1.1	.12	.04	.23**	.02	1	
6. Market potential	3.3	3.2	3.0	1.2	.14	.08	.20**	-.13	.13	1

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

Table 2. Logistic Regression Analysis: Dependent Variable—Investor Pitch Selected.

Variables	Model 1	Model 2	Model 3	Model 4	Model 5
Controls		With/ without	With/ without	With/ without	With/ without
Attractiveness	1.3	.315	.375	.375	.356
Market potential	1.4 [†]	.351 [†]	.330	.333	.322
Sex (men/women)		-.549	-.473	3.17	.777
Main effects:					
Sex (men/women)	-.59 /-.38				
Masculinity (masculine behaviors)		.01/.05	-.02	-.01	.02
Femininity (feminine behaviors)			-.13*/-.14*	-.138*	-.125*
Interaction effects with sex					
Sex* masculinity				-.274/- .047	
Sex* femininity					-.75/- .301
Constant with controls	-.015***	-4.30***	-2.02	-.127***	-.127***
Without controls	-2.11**	-2.68***	-.13	-2.04***	-2.11***
Log likelihood w	120.7/126.5	120.2/126.1	121.9/116.6	114.6/126.1	125.5/126.1
Nagelkerke R ²	.064/.003	.07*/.007	.051 [†] /.049*	.128*/.007	.013/.006

Note. N = 185. *p < .05. **p < .01. ***p < .001. [†]p < .10.

The control variables did not show any significant effects. Hence, we present our analyses with and without the control variables (Schjoedt & Bird, 2014).

In Model 1, we found that sex of the entrepreneur was not related to investor preference evaluation (pitch finalist selection). Ventures pitched by men were not more likely to be preferred over those pitched by women, thus Hypothesis 1 was not supported. In Model 2, masculine-stereotyped behaviors, though positively related to venture finalist selection, were not significant. Therefore, Hypothesis 2a was not supported. In Model 3, feminine-stereotyped behaviors were shown to be negatively related to venture finalist selection ($\beta = -.140$, $p < .05$), thereby supporting Hypothesis 2b. Contrary to our hypotheses, neither interaction effect was significantly related to investor preferences. Therefore, Hypotheses 3a and 3b were not supported. Our results are discussed more fully in the following section.

Due to the support for Hypothesis 2b, we conducted a post-hoc experiment to determine if gender-stereotyped behaviors relate to the assessment of an entrepreneur's business competence (Bird & Schjoedt, 2009). This experiment provides additional validity for the investor-entrepreneur evaluation, given the context of our study. In line with our framework, we hypothesized that investors would prefer ventures pitched by entrepreneurs who displayed more masculine-stereotyped behaviors due to an increased perception of business competence and that entrepreneurs who displayed more feminine-stereotyped behaviors would lack investor preference due to a decreased perception of business competence. Accordingly, we created an experiment using videos of two men from our sample that were from the same industry category (judging room), whereby one was rated high in masculine-stereotyped behaviors and the other was rated high in feminine-stereotyped behaviors. We presented these two videos without sound to a diverse U.S. sample of investors nationwide with voluntary participation. Our experimental sample included 20 angel investors and venture capitalists (10 men and 10 women) who were told that the two entrepreneurs had been identified as

having impressive business ideas. The investors were then asked to decide, solely by watching the pitches without sound, which entrepreneur they would prefer to meet in order to learn more about his venture.

After viewing the video segments, the study participants were given a short survey where they rated each entrepreneur on various business competence measures such as leadership, preparedness, and general competence (Amit, Brander, & Zott, 1998), using Likert-type scales ranging from 1 (not at all) to 7 (very/highly demonstrates). Surveys were completed with no personal identifying information, although we captured participants' sex³, age, and number of years of investment experience.

Our results showed that indices that reflect business competence (i.e., general competence ($t(19) = 2.1$, $p = .05$), preparedness ($t(19) = 2.9$, $p = .01$), and strong leadership ($t(19) = 3.0$, $p = .0001$)) are positively correlated with masculine-stereotyped behaviors and negatively correlated with feminine-stereotyped behaviors. Thus, this post-hoc test suggests that the display of feminine-stereotyped behaviors by entrepreneurs damages how venture capitalists evaluate their venture because feminine-stereotyped behaviors are negatively related to business competence, preparedness, and leadership. The results further suggest that men who demonstrate masculine-stereotyped behaviors may receive stronger evaluations of their ventures because of the positive relationship between these behaviors and business competence, preparedness, and leadership.

Discussion

Our findings that investors are *not* biased against women entrepreneurs, or against women entrepreneurs who act in contrast to their gender stereotype, are unexpected and particularly noteworthy because they identify a new mechanism for gender-based discrimination in entrepreneurial finance. By using techniques from social psychology research to focus our analysis on entrepreneur sex (man/woman) and gender-stereotyped behaviors (masculinity/femininity), our study contributes to research on women entrepreneurs and answers calls in the literature to examine the impact of gender more finely than merely assuming biological sex considerations (Byrne & Fayolle, 2010; Thebaud, 2015; Yang & Aldrich, 2014). More specifically, our study makes four important contributions to the entrepreneurship literature:

First, and most importantly, our study indicates that women entrepreneurs are just as likely as men to receive investor interest in their ventures and do not face barriers for *potential* funding, at least during the pitch stage. This result appears to be consistent with a recent examination of women entrepreneurs who applied for angel funding, which found that women are no less likely than men to progress through the angel investor decision process from screening to presentation (Edelman et al., 2017). However, it is in direct contrast to a recent study on pitches that found that men entrepreneurs were preferred (Brooks et al., 2014). The difference may reflect the context as the latter study used randomly selected people as *decision makers* (i.e., mTurk participants) rather than experienced, professional investors. Their experimental context may have created an overreaching dependent variable that then incorrectly suggested how experienced professional investors may develop bias from the pitch (e.g., Levitt & List, 2007).

Future research can build on these insights by examining how investors' funding interests change as the decision-making process moves from an initial pitch to the investors' due diligence practices. This includes additional, different, and varied criteria (e.g., Fried & Hisrich, 1994; Edelman et al., 2017), and there may be later factors in the process that impact the gender gap in equity funding. Our study, with its unique dataset, offers a window into

determining if just being a woman negatively impacts an investor's interest in the venture *early* in the funding decision process, and we find that it does not.

Second, we find that investors are biased against ventures pitched by entrepreneurs who display more feminine-stereotyped behaviors, both men and women alike. Our finding that investors are averse to the display of feminine behaviors complements recent research that has highlighted the importance of gender stereotypes in understanding why women are disadvantaged in gaining leadership positions in entrepreneurial teams (Yang & Aldrich, 2014) and within corporate hierarchies (Koenig et al., 2011). However, rather than assuming that women entrepreneurs are disadvantaged due to their female gender role, we investigated the influence of sex and gender independently, capturing gender-stereotyped behaviors from the perspective of the investor. This led us to a finding that that sex-based biases do not appear to be present in venture capital evaluations, but rather, a significant feminine-based bias exists that appears to promote prejudice against men and women entrepreneurs who display feminine-stereotyped behaviors. Because entrepreneurship is seen as a masculine domain (Ahl, 2006; Bird & Brush, 2002; Bruni et al., 2004; Marlow, 2002), demonstrating more feminine-stereotyped behaviors during a pitch may create a hurdle for any entrepreneur seeking funding. As our post-hoc analysis suggests, feminine-stereotyped behaviors are negatively associated with an entrepreneur's perceived business competence, preparedness, and leadership. The venture capital industry, which is predominantly male (94% of decision makers are male) (Brush et al., 2014), may make the aversion to feminine-stereotyped behaviors particularly salient. Future research should build on our study by exploring how displaying an array of feminine-stereotyped behaviors may prevent success in other domains of entrepreneurship. It may also be worthwhile to consider how feminine-stereotyped behaviors could offer advantages for certain entrepreneurship activities, for example, building customer and supplier relationships, or motivating employees (Brush, 1992; Bird & Brush, 2002; Eddleston & Powell, 2008).

Third, we extend gender role theory and gender role congruity theory to the venture capital context by capturing how perceptions of entrepreneurs' gender-stereotyped behaviors affect venture capital decisions. In conjunction with our post-hoc test, our findings revealed that venture capitalists evaluate entrepreneurs who displayed feminine-stereotyped behaviors more harshly because perceived femininity is positively associated with a lack of business competence, preparedness, and leadership. As such, women entrepreneurs do not experience bias from venture capitalists because they are women, but rather, when they display strong feminine-stereotyped behaviors. Our findings, therefore, suggest that discrimination against women entrepreneurs might not be overt, particularly when taking into account previous research linking women to feminine-stereotyped behaviors. For example, since research shows that women entrepreneurs see themselves as possessing significantly more feminine behaviors than do men entrepreneurs (Eddleston & Powell, 2008), women may have a tendency to display more feminine-stereotyped behaviors, which, in turn, would lead to challenges when seeking funding from venture capitalists.

Additionally, because our findings reveal a bias against feminine-stereotyped behaviors displayed by both men and women, our study contributes to gender role congruity theory. While gender role congruity theory focuses on how women are evaluated negatively in roles seen as masculine, suggesting an incongruence between sex and a gendered-role could lead to discrimination (Eagly & Karau, 2002; Koenig et al., 2011; Powell & Butterfield, 2015), our study shows the importance of incongruity between gender-stereotyped behaviors and the gendered role. As such, gender role congruity theory may need to consider how the display of feminine- and masculine-stereotyped behaviors by men and women affect how they are evaluated in different gendered contexts. We believe ours is the first study to show that the display

of behaviors seen as feminine negatively affects the evaluation of men and women entrepreneurs' pitches by venture capitalists. However, we also find that the display of masculine-stereotyped behaviors was not positively related to venture evaluations. Thus, our study suggests that it is not masculinity that provides an advantage in venture capital pitches, but instead, femininity leads to a disadvantage. Taken together, our results, therefore, contribute to gender role congruity theory research regarding how the congruity and incongruity of masculine- and feminine-stereotyped behaviors with roles/occupations described as masculine and feminine affect performance evaluations and opportunities.

Finally, in contrast to previous research on women in other masculine-type occupations, we did not find a penalty for women who acted inconsistently with their gender stereotype. Studies have shown that women who display masculine-stereotyped behaviors in occupations classified as masculine, like corporate leadership (Koenig et al., 2011; Garcia-Retamero & Lopez-Zafra, 2006), politics (Meeks, 2012; Smith, Paul, & Paul, 2007), and management (i.e., the glass cliff effect; Ryan & Haslam, 2007), experience penalties such as negative performance evaluations and being passed over for promotions. Given that we did not find women who displayed strong masculine-stereotyped behaviors to be disfavored by investors and that entrepreneurs who displayed feminine-stereotyped behaviors were disadvantaged, our study suggests that gender role congruity may be more complex in entrepreneurship. That is, our study suggests that the *incongruity* between feminine-stereotyped behaviors and the masculine setting of entrepreneurship is what matters in venture capital evaluations, leading to both men and women who display more feminine-stereotyped behaviors to be penalized. Unlike the aforementioned masculine domains of corporate leadership, politics and management, entrepreneurship, and in particular, the activity of seeking venture capital may provide a context in which women can freely act in ways *inconsistent* with their gender stereotype in order to receive better evaluations from investors. Thus, an important practical implication from our work is that women seeking funding should ensure they are not demonstrating strong feminine behaviors that may be more natural to their presentation style.

Notably, research in the masculine-classified profession of law has found a similar, counterintuitive result for women lawyers who act inconsistently with their gender stereotype. Women lawyers did not receive negative evaluations of their competence or abilities when they behaved in masculine ways (Schneider, Tinsley, Cheldelin, & Amanatullah, 2010). The authors argued that excellence in legal capabilities is firmly entrenched in masculine-stereotyped behaviors so that women who act masculine are rewarded since their behaviors serve "to align assertive behavior with gendered expectations thereby alleviating the perception of stereotype-violation that results in backlash" (Schneider et al., 2010; p. 378). Similar effects may be occurring for women entrepreneurs, as investors view success in entrepreneurship as entrenched in masculine-stereotyped behaviors.

Our research is not without limitations. We used entrants in a large, well-established pitch competition where entrepreneurs showcased their ventures to investors using a 1-min pitch. Further experiments should determine if our findings are consistent during longer pitches. Additionally, our research focus was limited to investigating one aspect of gender and the related continuums of masculine and feminine stereotypes. We recognize that gender-stereotyped behaviors consist of two continuums and that men and women may not be easily classified as *masculine* or *feminine*, but could instead be classified as *undifferentiated* when low in masculinity and femininity qualities and *androgynous* when high in both masculinity and femininity qualities (Bem, 1974). We explored these interactions (not presented here), but did not find any significant effect. Future research should examine such distinctions in gender-stereotyped behaviors directly.

We also examined attractiveness as a control based on prior research that indicated more attractive entrepreneurs were preferred by venture capitalists when funding certain pitches over others (Brooks et al., 2014). Our data questions these results, which may be due to our use of professional investors rather than experimental conditions with novices. However, other aspects of the entrepreneur's demeanor or style during the pitch (e.g., the ability to present well) that may influence investor interest were not included in our study. Future research should incorporate an analysis of the presentation skills of entrepreneurs in pitch presentations and determine how they affect venture capital investors' decisions.

A final limitation of this study and an important avenue for future research may be in the sex and geographic composition of the venture capital investors in our sample. Most of the venture capitalist judges in our sample were men (85%), which reflects the reality of the investor community; recent figures estimate that the venture capital industry is composed of 94% men (Brush et al., 2014). The venture capitalists in our study were also all U.S.-based, specifically, in the Northeastern U.S. This significant disparity between the numbers of men vs. women investors overall and the U.S. focus of our sample may contribute to the strong influence of traditionally masculine perspectives, practices, and expectations for entrepreneurs (Marlow & Patton, 2005; Morrisette & Schrader, 2007). Women and non-U.S. investors may not have the same gender-based biases, according to research that suggests differences in entrepreneurial opportunity evaluations by women and men (Gupta et al., 2009) and the variation in venture capital funding patterns internationally (Kelley et al., 2015). Future research should explore if investor sex or geographic experience of the investor reduces biases against feminine-stereotyped behaviors in pitching.

Conclusions

There have been great strides in explaining how gender, and specifically how gender stereotypes, may affect the entrepreneurial process (Brush et al., 2006; Gupta et al., 2009; Gupta, Goktan, & Gunay, 2014; Jennings & Brush, 2013; Yang & Aldrich, 2014), yet these studies have predominately focused on the impact of gender stereotypes from the *entrepreneur's* perspective. We integrate this important foundational work with the *investors'* perspective, and specifically, the investors' perceptions of entrepreneurs' gender-stereotyped behaviors. The relationship between sex and gender-stereotyped behaviors and evaluations of individuals has been theorized and researched by scholars in other domains (i.e., Eagly & Karau, 2002; Ridgeway, 2001), and in our study, we bring this important focus to entrepreneurship.

We contend that women are not disadvantaged due to their female sex when investors evaluate their pitches. Instead, we find that when pitching to investors, displays of more feminine-stereotyped behaviors result in poorer evaluations of entrepreneurs, men and women alike, whereas those who exhibit less feminine-stereotyped behaviors increase investor interest during the pitch. The venture capital funding disparity between men and women entrepreneurs, thus, may not be attributed solely to sex-based biases against women. When considered through a gendered lens, our findings, therefore, provide several fruitful avenues of research for entrepreneurship scholars contemplating the imbalanced state of venture capital funding between men and women.

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Notes

1. We determined the sex breakdown of the judges by the authors' observations of the judges in each industry room. This analysis was used to be consistent with the methodology used to determine sex of the EPC participants.
2. The participants' sex was determined by the raters' perceptions—the participants were labeled as “man” or “woman” based on observing the video of the participant pitching.
3. Participants self-identified as male or female.

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