



Can Gender-Disposed Personality Traits Explain Who Initiates Negotiations?

Denise L. Reyes¹ · Julie Dinh² · Eduardo Salas³

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Abstract

In the professional world, there remains an obvious gender wage gap, partly because men ask for raises more often and in greater increments than women (Babcock et al., in Den De Cremer M, Zeelenberg, Murnighan JK (eds), *Social psychology and economics*, pp. 239–262, Erlbaum, 2006). In the current study, we seek to extend the literature on individual differences and negotiation by testing theory regarding how dispositional traits—namely Big Five subfacet personalities—may contribute to salary negotiation initiation. In summary, we found that women are generally higher in politeness and compassion than men, but neither of these personality traits were related to the propensity to initiate a negotiation. Rather, assertiveness was positively related to initiating negotiations. We also found evidence supporting the hypothesis that women are less likely to initiate a negotiation, but that this gender difference only exists with male supervisors.

Despite the nearly ubiquitous opportunity to negotiate wage and salary in the professional world, there remains an obvious gender wage gap. The U.S. Department of Labor, Bureau of Labor Statistics (2015) compared the median earnings of full-time wage and salary workers and found that, on average, women earned 83% of

✉ Denise L. Reyes
dlreyes@central.uh.edu

Julie Dinh
Julie.Dinh@baruch.cuny.edu

Eduardo Salas
Eduardo.Salas@rice.edu

¹ Department of Psychology, University of Houston, 4800 Calhoun Road, Houston, TX 77204, USA

² Department of Psychology, Baruch College, CUNY, 55 Lexington Avenue, New York, NY 10010, USA

³ Department of Psychological Sciences, Sewall Hall 429B, 6100 Main Street, Houston, TX 77005-1827, USA

their male counterparts' compensation in 2014. Starting wages have been found to be higher for men than women (Bowles et al. 2005; Devanna 1984; Reder 1978; Strober 1982), which consequently affects wage gaps over time. Both popular press articles and scholarly articles note that part of the explanation is that men ask for raises more often, and in greater increments, than women (Babcock et al. 2006; Bussey 2014; Elssesser 2016; Heath 2014; Kugler et al. 2018; Rigdon 2012), underscoring the role of wage and salary negotiation in gender pay disparities.

An extensive body of work has identified the role of gender differences in initiating negotiation (Babcock et al. 2006; Babcock and Laschever 2007; Eriksson and Sandberg 2012; Fractl 2016; Greig 2008; Hall and Krueger 2008; Kray et al. 2002; Leibbrandt and List 2014; Rigdon 2012; Small et al. 2007). However, there is scant research on individual differences that can explain who initiates and successfully performs negotiations. In other words, although there is stark evidence of gender differences in initiating negotiations, there may also be interesting individual differences in the women who do initiate negotiations and the men who do not. In the current study, we seek to extend the literature on individual differences and negotiation by testing theory regarding how dispositional traits, particularly gender-disposed subfacets of the Big Five personalities, may contribute to salary negotiation initiation. Furthermore, given that negotiation involves at least two parties, the present investigation tests for gender differences in the dyad (gender of participant $\times$ gender of negotiation counterpart) and how this impacts the propensity to initiate a negotiation.

This study contributes to the literature in several ways. First, it aims to replicate findings in terms of the relationship between personality and negotiation, to strengthen the literature, given the large number of inconsistencies in past studies (Barry and Friedman 1998). Second, as Gelfand and Stayn (2013) mention, "identifying the mediating processes will help explain gender differences" (p. 241) in propensity to initiate negotiations. This study looks at how individual characteristics can better explain this difference. Elfenbein (2015) stressed, "It is unfortunate that the field [of organizational psychology] allowed this topic [of negotiation] to become marginalized based largely on a decades-old book that reviewed few relevant studies" (p. 135). Given this concern, we readdress negotiations with a new lens that investigates the role of Big Five personality subfacets. Third, the present study investigates how the gender composition of a negotiation dyad may affect the propensity on an individual to initiate a negotiation.

1 Literature Review

1.1 Salary Negotiations

Negotiations can either be *distributive* (win-lose outcome), *integrative* (potential for a win-win outcome), or a combination of both, which typically is the case (Barry and Friedman 1998; Walton and McKersie 1965). Negotiating occurs regularly, but some scenarios can be more nerve-racking than others. Salary negotiations, for instance, can be a particularly dreadful experience for many individuals.

Fractl (2016) administered a survey to approximately 1,100 workers and found that 58% of the respondents felt uncomfortable asking for a raise. They also rated it as the most uncomfortable conversation to have in the workplace, above five other types of conversations: (1) handling a difficult personality, (2) discussing your lack of accountability, (3) discussing someone else's lack of accountability, (4) apologizing for a mistake, and (5) discussing a lack of clear direction.

Fractl (2016) conducted a follow-up survey of 2000 American workers and found that gender played a large role in asking for a raise. They found that men are more comfortable negotiating and more likely to ask for a raise and for more money than women. Gender differences in initiating negotiations and negotiation performance are noticeable in the literature in both experimental (Eriksson and Sandberg 2012; Kray et al. 2002; Rigdon 2012; Small et al. 2007) and field studies (e.g., Fractl 2016; Greig 2008; Hall and Krueger 2008; Leibbrandt and List 2014).

The current study aims to identify whether gender-disposed personality traits can explain this drastic gender difference in initiating negotiations. We draw from Wood and Eagly's (2012) biosocial construction model to provide the theoretical rationale behind this thesis. This theory suggests that gender differences develop as a product of both social factors and biological characteristics. These factors have contributed to men typically serving strength-intensive and high-status roles that involve agentic characteristics, such as assertiveness and competitiveness; in contrast, women typically serve communal roles that involve feminine characteristics, such as warmth and concern for others (Bakan 1966; Conway et al. 1996; Fiske et al. 2002). Social Role Theory suggests that there are gender roles that predict social behavior and, consequently, individuals who act in a way that conflicts with their appropriate social role may suffer backlash (Eagly 1987). In other words, women and men are typically evaluated more favorably when they align with the traits that stereotypically fit their gender (Eagly and Mladinic 1994; Rudman and Goodwin 2004).

Moreover, Wood and Eagly (2012) suggest that these roles are not only performative or culturally meaningful, but they also become internalized into personal standards of behavior. These gender identities can then constitute individuals' sense of themselves as male or female, such that individuals will identify and act consistently with their self-views even in the absence of others. Therefore, expectations of male agency and female communion are not only a product of social pressure, but of personal identities as well.

There is not a substantial amount of evidence for individual difference factors that come into play when initiating a negotiation. Elfenbein (2015) expressed her concern in a recent review on individual differences in negotiating. She explained that there is a commonsense notion that there must be individual differences that affect negotiation performance; however, researchers have nearly abandoned the topic after an influential publication by Rubin and Brown in 1975 that "covered the scant research on individual differences available at that time and made strongly worded conclusions that further pursuit was misguided" (p. 131). Thompson's (1990) extensive literature review on negotiation performance concluded that individual differences do not appear to play an important role in experiments. However, Thompson posits that this inconclusive finding could be due to studies using homogenous samples

(e.g., college samples), or that individual differences play a role in pre-negotiation behaviors, inadvertently serving as a self-selection process for those who do or do not perform a negotiation in the first place.

A meta-analysis conducted by Sharma, Bottom, and Elfenbein (2013) found negotiation self-efficacy to have the strongest effect in predicting negotiation outcomes, compared to any other individual difference variable that had been tested, possibly because it makes the individual feel confident and comfortable enough to engage in a negotiation. However, the majority of studies on negotiation outcomes did not find any effects regarding personality (Elfenbein 2015). Given the shortage of findings, Lewicki et al. (1994) emphasize, “researchers may have closed the book on the effects of individual differences on negotiation prematurely” (p. 348). For that reason, the current study will reopen the book and start by testing the effects of subfacets of the Big Five personality traits on initiating negotiations, particularly those related to gender differences.

1.2 Effects of the Big Five Personality Subfacet Traits on Negotiating

Previous research has shown minimal support for the main Big Five personality traits’ influence on negotiations (Elfenbein 2015). Rather than entirely abandon the possible relationship between personality and negotiating, the current study evaluated more specific aspects of the Big Five identified by DeYoung, Quilty, and Peterson (2007). Each Big Five personality trait has two primary and distinct subdomains, which have also revealed more extensive gender differences than the original Big Five (Weisberg et al. 2011). Table 1 displays the gender differences that Weisberg et al. found for each of the ten aspects, as well as whether the aspect is theoretically related to negotiations. Below, we elaborate on the theoretical rationale for the subfacets selected to observe in the current study based on their relationship with both gender and the propensity to initiate negotiations.

Neuroticism Neuroticism describes an individual’s level of anxiety, worry, and insecurity, which is the opposite of emotional stability (Costa and McCrae 1992). Individuals high in this trait are more likely to experience negative feelings in response to a perceived threat. Two subfacets of neuroticism are volatility and withdrawal (DeYoung et al. 2007). Volatility refers to an individual’s level of irritability and anger. Withdrawal has to do with an individual’s anxiety, self-consciousness, and feelings of vulnerability. Previous research has consistently found women to score higher in neuroticism, however when considering the unique variance of the two subfacets, Weisberg et al. (2011) found that this gender difference existed for withdrawal but not for volatility. This gender difference for withdrawal could occur as a reaction to violating social norms. In other words, if met with backlash for violating social norms, men and women will change their attitudes and behaviors to fit more with their gender stereotypes (Eagly and Mladinic 1994). This could even develop at a younger age. Throughout childhood and adolescence, gender norms are reinforced, such that girls are viewed to be shyer and more withdrawn than boys, and boys are typically social assertive and dominant (Doey et al. 2014; Rubin et al.

Table 1 Ten aspects of Big Five in relation to gender and initiating negotiations

Personality trait	Gender difference*	Research supporting relevance with negotiations
Neuroticism	Yes (higher for W)	
Volatility	No	No
Withdrawal	Yes (higher for W)	Yes (Elfenbein 2015; Sharma et al. 2013)
Agreeableness	Yes (higher for W)	
Compassion	Yes (higher for W)	Yes (Barry and Friedman 1998; Messick and McClintock 1968)
Politeness	Yes (higher for W)	Yes (Barry and Friedman 1998; Messick and McClintock 1968)
Conscientiousness	No	
Industriousness	Yes (higher for M)	Yes (Barrick et al. 2002)
Orderliness	Yes (higher for W)	No
Extraversion	Yes (higher for W)	
Enthusiasm	Yes (higher for W)	No
Assertiveness	Yes (higher for M)	Yes (Elfenbein et al. 2009)
Openness to Experience	No	
Intellect	Yes (higher for M)	No
Openness	Yes (higher for W)	No

*Gender differences are based on findings from Weisberg, DeYoung, & Hirsh, 2011. W=Women, M=Men

2006). This development can carry into adulthood and impact work-related behaviors, such as negotiating.

Individuals who tend to experience more fear and anxiety are probably less likely to volunteer to put themselves in situations that could provoke emotional distress. Therefore, they may have trouble engaging in a negotiation task (Sharma et al. 2013). Also, trait negative affect, which aligns with neuroticism (Costa and McCrae 1992), has been shown to be negatively related to negotiation performance (Elfenbein 2015). Intuitively, someone high in withdrawal, is likely to remove themselves from a situation that could potentially have undesirable outcomes (e.g., request being rejected).

Agreeableness Agreeable individuals tend to be prosocial, cooperative, helpful, and value interpersonal relationships (Graziano et al. 2007; Graziano and Tobin 2002; LePine and Van Dyne 1998). Compassion (i.e., sympathy and concern for others) and politeness (i.e., respect and consideration of others) make up the two subfacets of agreeableness. Previous research has found that women score higher than men in both traits (DeYoung et al. 2007; Weisberg et al. 2011). Both compassion and politeness directly align with Bakan's (1966) notion of communion. As mentioned previously, women are presumed to serve communal social roles because of both social and biological factors (Wood and Eagly 2012).

Research suggests that agreeable individuals typically have lower income and earnings (Bozionelos 2004; Ng et al. 2005; Rode et al. 2008; Spurk and Abele 2011). Interestingly, Judge, Livingston, and Hurst (2012) found that although agreeableness is negatively related to income, it is statistically significantly more negative for agreeable

men than women possibly because these men do not fit conventional gender roles. The relationship between agreeableness and income could possibly be a product of failing to initiate salary negotiations or performing poorly during salary negotiations.

Both compassion and politeness reflect an agreeable individual's inclination to have a social value orientation rather than an individualistic or competitive orientation, which could motivate the individual to focus more on maintaining relationships than getting ahead (Messick and McClintock 1968). An example of this is related to anchoring during negotiations. Ritov (1996) explains that *anchoring* is a cognitive heuristic that occurs during decision making when one party provides an "anchor" or a salient available point that is supposed to be an estimate of an unknown value. The other party then tries to make adjustments away from the anchor to find the most suitable value. However, "the adjustment is typically insufficient, thus yielding a final estimate which is overly affected by the anchor" (Ritov 1996, p. 16). Barry and Friedman (1998) mention that when an individual has a social value orientation, he or she may fall victim to anchoring because the individual "focuses on the interaction (including the other party's initial offer) rather than just on one's own plans" (p. 347). Barry and Friedman's study was able to find an effect of agreeableness on distributive (win-lose outcome) negotiations. Specifically, they found that individuals who are highly agreeable were more susceptible to anchoring. If an individual is given a salary offer that is anchored, the individual has the opportunity to initiate a negotiation and make adjustments of the initial offer or accept the offer as is. Rather than initiating a negotiation, some individuals may choose to accept the offer because they do not want to jeopardize their relationship with the counterpart who provided the initial offer. Those who accept the anchor rather than initiate negotiations, tend to be higher in agreeableness.

Extraversion Extraverts, as opposed to more introverted individuals, are characterized as being talkative, outgoing, and confident in social interactions (Costa and McCrae 1992). Enthusiasm and assertiveness make up the two aspects of extraversion (DeYoung et al. 2007). Enthusiasm relates to expressing positive emotions and sociability, whereas assertiveness refers to traits related to agency and dominance. Elfenbein et al. (2009) found that dominance-related behaviors such as talking more and using fewer non-fluencies (e.g., saying "umm" and "er") were strongly, and positively, related to negotiation performance. Assertive individuals tend to act in a way that supports their goals, values, and preferences (Costa and McCrae 1992; Wilson and Gallois 1993). In which case, they are more likely to initiate a negotiation than a less assertive individual.

Previous research has shown that men score higher in assertiveness (Costa et al. 2001; Feingold 1994; Weisberg et al. 2011). Assertiveness directly aligns with Bakan's (1966) notion of agency. As mentioned previously, men are presumed to serve agentic social roles because of both social and biological factors (Wood and Eagly 2012). In line with the Social Role Theory (Eagly 1987), women who act in an assertive way would be met with backlash and conversely, men who do not act in an assertive way would be met with backlash, so they are more inclined to act in a way that aligns with their gender stereotype.

Conscientiousness Conscientious individuals tend to be organized, reliable, mindful, hardworking, task focused, determined, self-disciplined, and achievement oriented (Costa and McCrae 1992; Goldberg 1992; McCrae and John 1992). Conscientiousness is divided into industriousness and orderliness.

Industriousness reflects an individual's commitment to work and need for achievement, whereas orderliness has more to do with the person's attention to detail and meticulousness.

Subfacets of conscientiousness, and more specifically industriousness, may evince gendered differences. A common perception of conscientious individuals is that they focus more on task achievement (i.e., industriousness) rather than being concerned with socioemotional involvement (Aronoff and Wilson 1985). Consequently, men are stereotypically seen as, or expected to be, more status-striving, which may amplify this trait. Conversely, women are expected to be communal, thereby prioritizing interpersonal dynamics over bottom-line performance; such attitudes are inconsistent with industriousness (Bakan 1966). Indeed, Weisberg et al. (2011) found that men scored higher than women in industriousness (even among those with equal levels of orderliness), whereas women rated relatively higher orderliness. These findings suggest that there are indeed subfacet-level gender differences within conscientiousness, which may in turn influence negotiation. Barry and Friedman (1998) studied the effect of conscientiousness on negotiation success and had inconclusive findings. However, they believed that could have been due to range restriction from using a college sample. All in all, as the literature suggests, industriousness seems to be related to initiating negotiations, whereas orderliness does not.

Openness to Experience Individuals who are high in openness to experience are thought to be divergent thinkers who are flexible, creative, and willing to consider unconventional ideas (Costa and McCrae 1992). The two subfacets of this trait are openness (i.e., creativity and interest in esthetics) and intellect (i.e., interest in learning new ideas). Regarding negotiations, openness can help an individual devise creative strategies to approach a negotiation (Barry and Friedman 1998).

Furthermore, openness may influence the way in which individuals frame and respond to events. Previous research has found that this trait is related to having positive attitudes toward learning experiences in general (Barrick and Mount 1991). Since there is some evidence that experiencing rejection or failure can serve as a learning experience (Bennis 1989; Howard and Bray 1988; McCall et al. 1988) an individual who is high in openness to experience may interpret the possibility of rejection as a developmental opportunity, and consequently initiate a negotiation. However, there is little theoretical or empirical evidence to suggest whether openness is related to initiating negotiations, so we did not make a hypothesis about this trait.

Aligned with Weisberg et al. (2011) findings, we hypothesize:

Hypothesis 1a–e On average, women are higher in (a) withdrawal, (b) politeness, (c) compassion, and lower in (d) assertiveness, and (e) industriousness than men.

In accordance to the mentioned theory and research, we hypothesize:

Hypothesis 2a Individuals who are low in withdrawal are more likely to initiate negotiations than those who are high in withdrawal.

Hypothesis 2b Highly polite individuals are less likely to initiate negotiations than less polite individuals are.

Hypothesis 2c Highly compassionate individuals are less likely to initiate negotiations than less compassionate individuals are.

Hypothesis 2d Highly assertive individuals are more likely to initiate negotiations than less assertive individuals are.

Hypothesis 2e Highly industrious individuals are more likely to initiate negotiations than less industrious individuals are.

Leveraging the motivation literature, the expectancy theory suggests that an individual's belief of how probable a favorable outcome will occur, determines how much effort he or she will exert (Vroom 1964). Elfenbein et al. (2008) found that strong positive negotiation expectancies and beliefs had a higher total negotiation value than those with weak beliefs. In their analyses, negotiation-related expectancies and beliefs revealed the strongest trait association trend relating to objective negotiation performance (Elfenbein et al. 2008).

Gender of the Negotiation Counterpart Up until this point, we have discussed how gender-disposed personality traits may be related to initiating negotiations. However, negotiations occur in dyads, therefore, we must also consider characteristics of the negotiation counterpart. In the current study, we address whether the gender of the negotiation counterpart can partially explain why women are less likely to initiate a negotiation. We believe that given the gender roles of men and women, accounting for the gender of the counterpart will explain the reasons for gender differences in initiating negotiations.

As we have covered previously, there is strong evidence of gender differences in initiating negotiations favoring men over women (Babcock et al. 2006; Bowles et al. 2005; Gerhart 1990; Gerhart and Rynes 1991). One particular example is Small et al. (2007) study that found a statistically significant gender difference in initiating negotiations, such that men were more likely to ask for more money than women were in a laboratory experiment. As the Social Role Theory (Eagly 1987) would suggest, when a woman is in the position to initiate a negotiation, she may feel that it is inappropriate to ask, because feminine characteristics include being agreeable, cooperative, and modest. As Rudman (1998) pointed out, women who display more agentic traits may suffer social punishment. Consequently, women may be fearful of violating their gendered prescriptions, suggesting that they will initiate less often than men, and when they do initiate, they will not ask for as much as men.

As mentioned before, research has found that gender of the negotiation counterpart can impact how an employee approaches a negotiation (Bowles et al. 2007; Eriksson and Sandberg 2012). Although research has sufficiently demonstrated that women are at social risk when violating their gender roles, researchers disagree on how the gender of the negotiation counterpart may play a role. Some researchers argue that women are less likely to initiate negotiations with a male counterpart because the difference in status is greatest in this interaction (Bowles et al. 2007; Carli 1990; Deaux and Major 1987; Ridgeway and Berger 1986).

Others argue that both male and female evaluators penalize women equally for violating gender-norms (Butler and Geis 1990; Heilman and Chen 2005; Heilman et al. 2004; Rudman et al. 2012; Rudman and Phelan 2008). And some argue that female evaluators are harsher than male evaluators toward women for breaking gender norms (Rudman 1998). To our knowledge, Eriksson and Sandberg (2012) and Bowles, Babcock, and Lai (2007) are the only two studies that have investigated how gender composition of a dyad affects whether or not an individual *initiates* a negotiation. Bowles et al. (2007) found that women were less likely to initiate a negotiation (as compared to men), but only when the negotiation counterpart was a male. On the contrary, Eriksson and Sandberg (2012) study found that women were less likely than men to initiate a negotiation when they interacted with a female negotiation counterpart, and the gender difference was not statistically significant when they interacted with a male negotiation counterpart.

We argue that women are less likely to initiate negotiations with a male counterpart than a female counterpart for a few reasons. In line with the Social Role Theory (Eagly 1987), a woman's fear of rejection because of her gender may be reduced when the negotiation counterpart is also a woman because she does not have to worry about being judged as violating gender norms, because the person in authority is doing the same. Second, the status hierarchy is most noticeable when the negotiator is female and the negotiation counterpart is male (Berger et al. 1977; Bowles et al. 2007; Deaux and Major 1987). Regardless of whether female and male evaluators actually penalize women for violating gender norms, women may not *expect* or perceive female evaluators as being as harsh, making them more comfortable to initiate a negotiation. Lastly, the majority of individuals in leadership or managerial positions are men (American Association of University Women (AAUW) 2016) and there is evidence that women initiate negotiations less often and ask for less than men in the workforce (Fractl 2016). Therefore, if it were the case that women and men are equally likely to negotiate with male counterparts, we would expect this issue to be less prevalent.

Hypothesis 3 Women are less likely to initiate negotiations than men.

Hypothesis 4 (a) Withdrawal, (b) politeness, (c) compassion, (d) assertiveness, and (e) industriousness will partially explain the gender differences in the propensity to initiate negotiations.

Hypothesis 5 The gender difference in initiating negotiations (men are more likely to initiate than women) is larger when interacting with a male boss.

Altogether, our hypotheses are represented in a theoretical model, Fig. 1. As shown, our first several hypotheses are meant to build foundational relationships between personality and gender (H1), personality and negotiation (H2), and gender and negotiation (H3). We believe that it is critical to establish these associations within our sample before exploring the target questions of gendered personality trait mediation on negotiation (H4) and consequences of these dyadic interactions (H5).

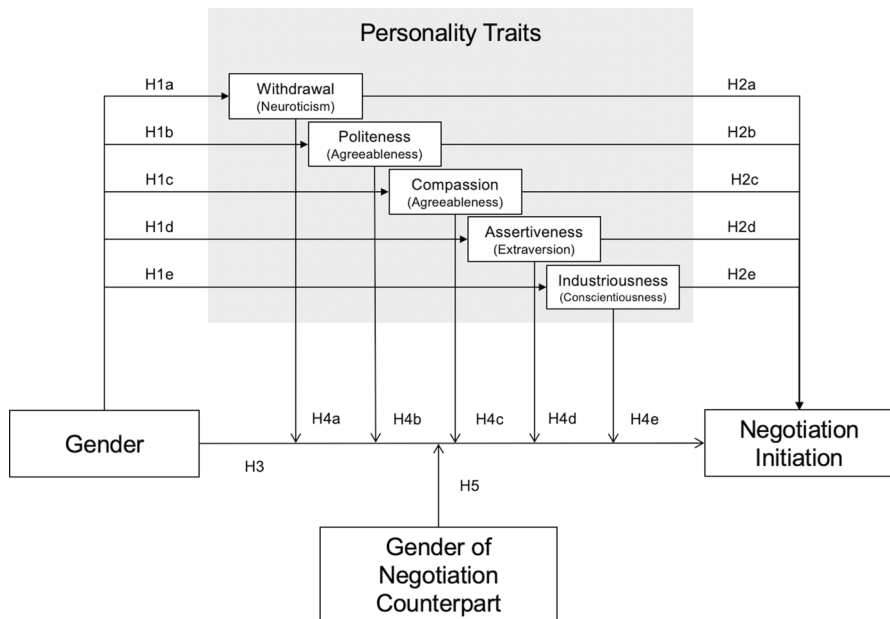


Fig. 1 A framework of study hypotheses

2 Methods

2.1 Participants

Participants were recruited through Qualtrics. In exchange for participation, they received points to redeem for gift cards, SkyMiles, credit for online games, etc. To be considered for participation, the survey respondents had to (1) be at least 18 years of age or older, (2) have a full-time job, and (3) commit to paying attention through the entire survey by responding “Yes” when asked “Do you agree to pay attention and stay engaged for the entire 20–30 min survey?”.

The final sample size was 246 participants, after removing 26 participants in the male boss condition and 37 participants in the female boss condition who were identified as careless responders because they failed the manipulation check or did not correctly respond to the quality check item near the end of the survey (i.e., “Please select ‘strongly disagree’ for this item”) (Meade and Craig 2012). Those who did not pass the manipulation check were exited out of the survey prior to providing any individual differences data. Participants ranged in age from 18 to 68 years old, with a mean age of 40.56 years ($SD = 12.85$). Of the sample, 123 participants were female and 123 were male. 66.3% respondents were White, 13.8% Black or African American, 7.3% Asian, 4.9% Hispanic and 6.9% as other. As for annual income, 11% made less than \$25,000, 26.8% made between \$25,000 and \$50,000, 22% made between \$50,000 and \$75,000, 12.6% made between 75,000 and \$100,000, 13% made between \$100,000 and \$125,000, and 13.8% reported making over \$125,000. As

for highest level of education completed, 4.5% did not complete high school, 17.5% hold a high school degree or the equivalent, 17.9% completed some college, 11.8% hold an Associate's degree, 30.5% hold a Bachelor's degree, 14.6% hold a Master's degree, 2.4% hold a Doctoral degree. Participants represented regions across the United States: 14.2% lived in the West, 21.5% lived in the Midwest, 21.5% lived in the Northeast, and 41.9% lived in the South at the time of completing the survey.

2.2 Procedure

This study was designed to replicate and extend Bowles et al. (2007) by examining whether the gender of the manager interacts with how likely women and men will initiate a negotiation. However, it also considers gender-disposed personality traits. Using a 2 (gender of participant) $\times$ 2 (gender of manager) between-subjects experimental design, participants engaged in a negotiation activity. This study had two parts. In Part 1, participants read through materials and imagined themselves in a position to initiate a negotiation (see "Appendix" for study materials). During Part 2, participants completed an online survey that consisted of demographics and a personality measure.

The scenario used was adapted from Bowles et al. (2007; Experiment 4), which involved a placement interview. First, participants read the background information of the interview preparation scenario. The background information provided the participant with a resume that they were instructed to imagine was their own. It also instructed the participant to imagine that they were preparing for a placement interview to determine their new department for a more senior position within their organization. The job description, requirements, and qualifications for the position were displayed for the participant.

After reading through the background information, they were given notes on their current salary, the management position's salary range, a typical promotion increase, and national average for the position. Depending on the condition, a silhouette of a male or female senior manager appeared, with the name John Davis or Mary Davis, respectively. These names were selected because they both were ranked in the top five names from 1917–1967, which could help prevent confounding results due to socioeconomic status, age, race, or religion (Simonsohn 2015; Social Security Administration 2017). The senior manager prompted the participant with the following question: "After reviewing your credentials, I would like to offer you the position as an Environmental Department Manager with a focus in Wetlands. With this comes a salary raise. We would like to offer you a salary of \$60,000 (11% pay increase). Is there anything else you would like us to keep in mind as we consider your management placement?" Regarding their salary and benefits offer from the organization, they had two response options to choose from (i.e., "No ask" vs. "Ask"). The scripts are both from Bowles et al. (2007) study. Option 1, the "Ask" response, states:

Yes, I received the salary and benefits package. The benefits information was very clear. Geographically, I am totally unconstrained. I am happy to work

anywhere, as long as I have got interesting stuff to do. What was not clear to me, however, was whether that salary represented the top of the pay range. I understand that there is a range in terms of how much junior managers are paid in their first placement. I think I should be paid at the top of that range. This is really important to me; I think I deserve it. I also would like to be eligible for an end-of-year bonus. I know performance bonuses are not standard for junior managers, but I would certainly be more motivated if I could look forward to a performance bonus at the end of the year. I am thinking of something in the 25–50% of salary range. Not doubling my salary or anything. And, listen, I do not care if it's in cash or stocks—and I promise you I'll earn it. So, those are the two things that I am asking with regard to my compensation: one, paying me at the top of the junior manager salary range and, two, providing me with an end of year, 20–50% of salary performance bonus.

Option 2, the “No Ask” response, states:

Yes, I received the salary and benefits package. The benefits information was very clear. Geographically, I am totally unconstrained. I am happy to work anywhere, as long as I have got interesting stuff to do.

2.3 Measures

Personality A self-report of the Big Five Aspect Scales (BFAS; DeYoung et al. 2007) was used in the current study. Each aspect contains ten items. The items were scored on a five-point Likert scale ranging from *very inaccurate* (1) to *very accurate* (5). The aspects measured in the current study were withdrawal, compassion, politeness, assertiveness, and industriousness. Previously, DeYoung et al. 2007 reported $\alpha > 0.73$ and test–retest reliability for all were $r > 0.72$. Internal consistency for the current sample ranged from $\alpha = 0.67$ to 0.84. Sample items for these aspects include “I am filled with doubts about things,” “I sympathize with others’ feelings,” “I respect authority,” “I take charge,” and “I carry out my plans,” respectively.

Demographics Participants disclosed their age, gender, race, relationship status, highest level of education, and annual income.

Dependent Measure Participants answered three items regarding their preference of the whether to use Response Option 1 or 2. On a five-point Likert scale from “*Extremely unlikely*” (1) to “*Extremely likely*” (5), respondents answered “How likely would you respond using Option 1?” “How much more likely would you be willing to respond using Option 1 over Option 2?”. The third item asked respondents to select from “*Extremely uncomfortable*” (1) to “*Extremely comfortable*” on “How comfortable would you be to respond using Option 1?” The average was calculated to determine the propensity to initiate a negotiation, such that a higher score represented a higher propensity to initiate. Internal consistency for these items was $\alpha = 0.95$.

Manipulation Check At the end of the activity, participants were asked the gender of the manager/negotiation counterpart.

3 Results

Descriptive statistics, correlations, and internal consistency of scales based on Cronbach's alpha are displayed in Table 2.

Prior to interpreting results, we checked to see if the data set violated any critical assumptions (Laerd Statistics 2015). There was independence of residuals, as assessed by a Durbin-Watson statistic of 1.79. This statistic can range from 0 to 4, and a value close to 2 indicates that there is no correlation between residuals. All of the Tolerance values were greater than 0.1 (the lowest is 0.43), so the data set did not appear to have a problem with collinearity. Casewise Diagnostics did not detect any standardized residuals greater than ± 3 standard deviations, so no outliers were found. We conducted sensitivity power analyses as followed: G*Power 3.1 was used for t-test analyses, PANGAEA (v0.2) was used for the two-way ANOVA (Westfall 2016), and MedPower was used for the mediation analyses (Kenny 2017). The sensitivity analyses revealed that a sample size of 246 has an 80% power to detect effects as small as $f=0.18$ for ANOVA, $f^2=0.04$ for mediation, and $d=0.32$ for t-tests, which are all moderately small effect sizes. In addition to the external validity and generalizability to work settings by using a sample of full-time employees, the sensitivity power analyses further demonstrate that we provided a substantial sample for our analyses.

To test Hypothesis 1A–E, the relationship between gender and relevant personality subfacets, we ran independent-samples *t*-tests. The results are displayed in Table 3, demonstrating support for Hypotheses 1B (politeness) and 1C (compassion).

Then, we ran a multiple regression to test Hypothesis 2, which predicted initiating a negotiation from the Big Five personality subfacets. R^2 for the overall model was 8.4% with an adjusted R^2 of 6.5%, a small to medium effect size (Cohen 1988). The Big Five personality trait subfacets statistically significantly predicted propensity to initiate a negotiation, $F(5, 240)=4.38$, $p=0.001$. Only one out of the five variables added statistically significantly to the prediction, $p<0.05$. Regression coefficients and standard errors can be found in Table 4. Therefore, Hypotheses 2d

Table 2 Descriptive statistics and correlations

Variable	M	SD	1	2	3	4	5	6	7
1. Negotiation Initiation	3.30	1.32	.94						
2. Gender			-.21**						
3. Withdrawal	2.49	.79	-.05	.07	.80				
4. Politeness	3.82	.64	-.21**	.25**	-.25**	.67			
5. Compassion	3.89	.74	-.11*	.25**	-.24**	.59**	.82		
6. Assertiveness	3.28	.66	.19*	.05	-.30**	-.01	.32**	.79	
7. Industriousness	3.89	.77	-.02	.13*	-.62**	.48**	.46**	.40**	.84

$N=246$. ** $p<0.01$ level (2-tailed). * $p<0.05$ (2-tailed). Bold numbers represent Cronbach's alpha for each measure

Table 3 Relationship between gender and personality traits

Variable	Gender*	Mean	SD	<i>t</i>	<i>p</i>	<i>d</i>
Withdrawal	Male	2.44	.77	-1.10	.271	0.139
	Female	2.55	.81			
Politeness	Male	3.66	.63	-4.01	.000	0.500
	Female	3.97	.61			
Compassion	Male	3.71	.76	-3.92	.000	0.499
	Female	4.07	.68			
Assertiveness	Male	3.26	.63	-.61	.546	0.076
	Female	3.31	.68			
Industriousness	Male	3.80	.78	-1.94	.054	0.248
	Female	3.99	.75			

*Male sample size = 122, Female sample size = 123. Men were coded as 1 and women were coded as 2

(assertiveness) was supported. Hypothesis 2b (politeness) was approaching significance ($B = -0.33$, $p = 0.066$).

Hypothesis 3, which predicted that women will be less likely to initiate a negotiation than men, was supported; $t(233.44) = 3.57$, $p < 0.001$, $d = 0.46$ ($M_{\text{Women}} = 3.01$, $SD = 1.41$; $M_{\text{Men}} = 3.60$, $SD = 1.14$). To conduct a mediation analysis for Hypothesis 4, we used Model 4 from PROCESS Macro for SPSS (Statistical Package for the Social Sciences) (Hayes 2013). In Step 1 of the mediation model, the regression of gender on propensity to initiate a negotiation, ignoring the mediators, was significant, $b = -0.56$, 95% CI $[-0.89, -0.24]$, $t(244) = -3.42$, $p = 0.0007$. Step 2 showed that the regression of gender on the mediators was statistically significant for politeness, $b = 0.32$, 95% CI $[0.16, 0.47]$, $t(244) = 4.05$, $p = 0.0001$, compassion, $b = 0.37$, 95% CI $[0.19, 0.55]$, $t(244) = 3.99$, $p = 0.0001$, and industriousness, $b = 0.19$, 95% CI $[0.001, 0.38]$, $t(244) = 1.98$, $p = 0.049$; the regression of gender on the mediators was not statistically significant for withdrawal, $b = 0.11$, 95% CI $[-0.09, 0.31]$, $t(244) = 1.10$, $p = 0.27$, and assertiveness, $b = 0.06$, 95% CI $[-0.11, 0.22]$, $t(244) = 0.71$, $p = 0.48$. Step 3 of the mediation process showed that the mediator, assertiveness, controlling for gender, was statistically significant, $b = 0.42$, 95% CI $[0.13, 0.70]$,

Table 4 Multiple regression analysis predicting propensity to initiate negotiations

Variable	B	SE B	β	<i>p</i>
Intercept	4.18	.93		
Withdrawal	-.09	.13	-.06	.485
Politeness	-.33	.18	-.16	.066
Compassion	-.16	.15	-.09	.288
Assertiveness	.41	.15	.20	.007
Industriousness	-.02	.16	-.01	.884

B = unstandardized regression coefficient; *SE B* = Standard error of coefficient; β = standardized coefficient

$t(239) = 2.82, p = 0.005$, but the other mediators were not statistically significant. Step 4 of the analysis revealed that controlling for the mediators (withdrawal, politeness, compassion, assertiveness, and industriousness), gender was still a significant predictor of propensity to initiate negotiations, $b = -0.46$, 95% CI $[-0.80, -0.12]$, $t(239) = -2.70, p = 0.008$. The indirect effect sizes, along with the bootstrapped 95% confidence intervals, are as follows: withdrawal = -0.001 $[-0.04, 0.03]$, politeness = -0.07 $[-0.17, 0.02]$, compassion = -0.01 $[-0.09, 0.08]$, assertiveness = 0.01 $[-0.03, 0.07]$, and industriousness = 0.004 $[-0.05, 0.06]$. Each of these confidence intervals included zero, therefore, a mediation effect was not confirmed using this model, providing no support for Hypothesis 4.

Finally, Hypothesis 5 required a two-way analysis of variance. Although the assumption of normality was violated as assessed by Shapiro–Wilk’s test ($p < 0.05$), and the assumption of homogeneity of variances was also violated, as assessed by Levene’s test for equality of variances, $p < 0.001$, we decided to run the test regardless because ANOVAs are fairly robust and the sample size was large with approximately equal number of participants in each group (Jaccard 1998; Maxwell et al. 2017). Because assertiveness predicted propensity to initiate a negotiate but was not found to be a mediator between gender and initiating negotiations, we controlled for this personality trait. There was a statistically significant interaction between the participant’s gender and the boss’s gender on propensity to initiate a negotiation, $F(1, 241) = 4.48, p = 0.035$, partial $\eta^2 = 0.018$. Then, an analysis of simple main effects for the condition was performed receiving a Bonferroni adjustment, which found a statistically significant difference in mean initiating negotiation scores between men and women in the male boss condition, such that men were statistically significantly more likely to initiate a negotiation than women; $F(1, 241) = 16.93, p < 0.001$, partial $\eta^2 = 0.066$ ($M_{\text{Women}} = 2.94, SD = 1.42$; $M_{\text{Men}} = 3.75, SD = 1.08$; 95% CI 0.46 to 1.31). However, this statistically significant difference did not remain in the female boss condition; $F(1, 241) = 0.63, p = 0.43$, partial $\eta^2 = 0.003$ ($M_{\text{Women}} = 3.10, SD = 1.41$; $M_{\text{Men}} = 3.33, SD = 1.23$; 95% CI -0.28 – 0.69). Figure 2 displays the interaction (see below). We ran an additional analysis without the covariate, assertiveness, as suggested by Simmons et al. (2011). Without the covariate, there was not a statistically significant interaction between the participant’s gender and the boss’s gender on propensity to initiate a negotiation, $F(1, 242) = 3.13, p = 0.078$, partial $\eta^2 = 0.013$.

As suggested by an anonymous reviewer, we also conducted the same analysis using Model 1 from PROCESS to safeguard against problems with assumption violations and found that the overall model was statistically significant, $F(4, 241) = 5.18, p < 0.001, R^2 = 0.10$. Gender was a significant predictor of initiating negotiations, $b = -1.58, t(241) = -3.18, p = 0.002$, 95% CI $[-2.55, -0.60]$ and the gender of the negotiation counterpart was statistically significant predictor, $b = -1.15, t(241) = -2.22, p = 0.03$, 95% CI $[-2.16, -0.13]$. The interaction between gender and gender of the negotiation counterpart was also statistically significant, $b = 0.69, t(241) = 2.12, p = 0.04$, 95% CI $[0.05, 1.33]$. This result mirrored the findings from the original analysis.

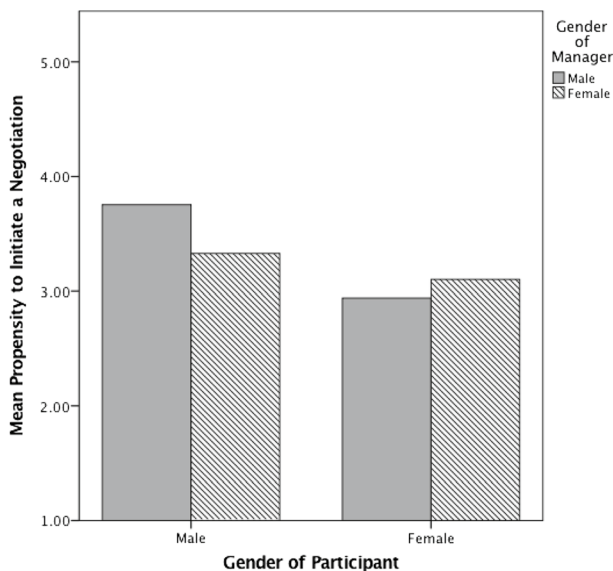


Fig. 2 Gender of participant and negotiation counterpart (i.e., gender of manager) on propensity to initiate a negotiation

4 Discussion

4.1 Theoretical and Practical Implications

In summary, we found that women are higher in politeness (H1b) and compassion (H1c) than men but neither of these personality traits were related to the propensity to initiate a negotiation. Rather, assertiveness was positively related to initiating negotiations (H2d). We also found evidence supporting the hypothesis that women are less likely to initiate a negotiation (H3), but that this gender difference only exists with a male boss (H5). In our study, gender-disposed personality traits did not explain gender differences in initiating negotiations. Below, we elaborate on the importance of these findings.

The current investigation contributes to the largely abandoned literature on individual differences in negotiations (Elfenbein et al. 2009; Lewicki et al. 1994). Support for some of the personality hypotheses further explains who successfully initiates a negotiation. Unsurprisingly, we found that assertiveness is positively related to initiating negotiations. However, we did not find gender differences in this personality trait, which indicates that there must be another underlying issue of why women are less likely to initiate negotiations than men. Rather than gender-disposed personality traits potentially explaining negotiating behaviors, research has shown that gender differences in negotiating can be dependent on the context (Amanatullah and Morris 2010; Bowles et al. 2005). In a study conducted by Amanatullah and Morris (2010), women used fewer competing tactics in self-advocacy contexts;

however, in other-advocacy contexts, they were more likely to engage in hedging and achieve better outcomes.

Second, this research study bolsters the scientific literature because it functions partially as a replication study, in addition to investigating variables beyond prior, similar studies. Scientists have expressed that a lack of replication is concerning and should be more readily produced (Klein et al. 2014; Winerman 2013; Yong 2012). In the current study, we were able to replicate the findings from Bowles et al. (2007; Experiment 4), such that women were significantly less likely to ask for a salary raise than men in the male evaluator condition, but in the female evaluator condition, they were equally as likely to ask for a salary raise. Notably, this research also extends the conversation beyond Bowles et al. (2007)'s study by examining personality traits, in addition to gender and negotiation. This study sought to avoid overly broad views of gender and workplace interactions by also considering the interplay of individual differences and dyadic characteristics. As we describe further in this section, our study looked at potential explanatory mechanisms, rather than solely describing phenomena.

Third, given the controversial wage gap between men and women, this study promotes important discussion on the topic. We found that the gender difference in initiating negotiations (men are more likely to initiate than women) is larger when interacting with a male boss. However, rather than women initiating similar to men when they interacted with a female boss, it actually turned out that men initiated less when interacting with a female boss. In other words, women were unlikely to initiate a negotiation in either condition, but men differed based on the gender of the boss.

These findings may be unexpected. As an anonymous reviewer pointed out, one may assume that men, who are more agentic, perceive women as more cooperative and thus take advantage of female supervisors by negotiating more (rather than less) often. However, there are several dynamics that shed light on our study outcome. One explanation may be that men do not feel comfortable initiating a negotiation with women due to gender "rules." That is, gender stereotypes are prescriptive, dictating how men and women should behave—women should be communal and men should be agentic (Eagly and Karau 2002; Rudman et al. 2012). Due to the agentic nature of negotiating, men might have the perception that women are unfit for this type of interaction (Kugler et al. 2018) and therefore be less likely to initiate negotiations. This gender-based refraining from professional activities reflects a form of benevolent sexism (Glick and Fiske 1996).

It is also possible that female leaders may be perceived as being qualitatively different from other women. For example, Rosette and Tost (2010) found that, under circumstances where leaders were given credit for success, women top leaders were evaluated as both more agentic and communal, as well as more effective, than their male counterparts. These findings complement a body of research that has examined perceptions of women in leadership. Scholars studying the "glass ceiling" within management suggest that, as women progress in their careers, barriers to advancement increase (Cotter et al. 2001). Women who do ascend to the top may be perceived as distinct from the rest of a communal female population. For example, Sheryl Sandberg (2014) led a campaign to ban the use of the word "bossy" to describe female leaders; this term is applied when women aspire to lead and thereby

step outside of their communal and supportive functions. The notion of “queen bee syndrome” further exemplifies the unique place of women in leadership: senior women are expected to support subordinates in ways that men are not; they are perceived negatively when they do not act communally; and, thusly, these women are inherently seen as a discrete group within both management and society (Mavin 2008). Altogether, this research suggests that women leaders may be seen as more agentic than their other female counterparts. This incongruence with gender norms may, in turn, decrease men’s comfort to negotiate with a woman supervisor.

Other research has also identified that there is a gender problem in initiating negotiations, but has yet to fully understand why this difference exists. Most recently, a meta-analysis by Kugler et al. (2018) found support for the overall gender difference in propensity to initiate negotiations. Kugler et al. were able to find that this difference is stronger when there is more situational ambiguity about the appropriateness of negotiating, as well as when the situational cues were more aligned with male gender roles (e.g., distributive negotiations or masculine topics such as dinner payment plans) as opposed to those more associated with female gender roles (e.g., integrative negotiations or feminine topics such as dinner decorations). Our study attempted to point to gender-disposed personality traits and the counterpart’s gender interacting with these traits, but was unable to find a clear answer.

There are also practical implications to be noted. Training specialists can use the findings of the current study to establish a clear vision for training individuals on salary negotiations. It may be useful to focus on increasing assertiveness. Also, organizations can better structure negotiated raises by trying to avoid bias of an individual’s predisposition to negotiate. Significant individual differences in initiating negotiations demonstrate the importance of salary negotiation coaching. The results are beneficial for existing salary negotiation coaches to better cater their training for individuals who struggle with the process of initiating and performing a negotiation. Individuals who identify with these internal barriers can also take it upon themselves to identify the root of their issue and choose to make adjustments that can bolster their performance. The present study focuses on the internal barriers and should serve as a starting point for researchers and practitioners to identify *how* these barriers should be addressed.

4.2 Strengths and Limitations

There were a number of strengths and limitations that should be noted. The workplace sample used in this study has strong external validity for the overall population of individuals who have the opportunity to initiate a negotiation. We screened for employment status to only include those who were full-time employees. We also included a manipulation check to ensure that the participant paid attention to the gender of the boss. Three forms of quality checks were implemented. First, any survey that took less than six minutes to complete was excluded. An attention commitment item was added to the beginning of the survey to exclude any participant who did not agree to pay full attention. Lastly, a quality check item was placed toward

the end of the survey that asked participants for a specific response to eliminate any careless responses.

Another strength was that the main dependent variable, propensity to initiate negotiations, was a three-item measure, so we were able to assess reliability for the measure, unlike the Bowles et al. (2007) study, which only used a one-item dependent measure.

As for limitations, this study was imperfect in its ability to replicate a real-life negotiation encounter. Although we developed the current study to match Bowles et al. (2007), there are still limitations to this approach. First, virtual negotiations have been found to reduce social pressures, limiting their ability to uncover gender differences (Stuhlmacher et al. 2007). Second, participants may not be as inclined to negotiate during an experiment, whereas a real salary negotiation would provide more of an incentive to negotiate. On the other hand, the desired response to select the more elaborate response that initiates a negotiation, would seem to draw more participants to initiate a negotiation. However, given either of these limitations, it is even more telling that women still felt less inclined to initiate a negotiation than men, making the findings more convincing.

The study used a cross-sectional design, limiting the ability to infer causality. We placed the exercise at the beginning, followed by the survey, so that the survey items would not prime the participants to respond in a specific way during the exercise; however, the exercise could have influenced the participants' responses to the survey items.

There are other confounding variables that would have been helpful to include in the current study. For example, confidence and past success can contribute to future confidence in a situation (Elfenbein et al. 2008). Also, Bowles et al. (2007) found that nervousness explained the gender difference in initiating. Due to time constraints and concerns of survey fatigue, we could not incorporate measures in this survey that were not hypothesized as a part of the model.

4.3 Future Research

The current study is part of the growing minority that is focusing on individual differences in negotiations by observing the Big Five personality trait subfacets. Other traits may relate to salary negotiation initiation and performance. As Elfenbein (2015) mentioned, there is a lack of literature on the individual differences in negotiation. Future research should follow suit and identify other individual differences that are related. In addition, as the present investigation accounted for gender differences in the dyad (i.e., the individual initiating a negotiation and the counterpart), future studies can look at other differences between the two parties such as personality, race, and age.

Future research should also focus on other explanations for gender differences in initiating and performing a negotiation. Bowles et al. (2007) emphasize that gendered social contexts could influence how individuals behave and suggest "what if women's relative hesitation about initiating negotiations has less to do with their negotiating ability than with the way they are treated when they attempt to

negotiate?” (p. 85). The current investigation uses a controlled experiment to test negotiation initiation, however, in real world settings, individuals who encounter a possibility for negotiating may be treated differently by their counterpart.

5 Conclusion

Although gender differences exist in initiating a negotiation, individual differences may better explain who negotiates. This paper extends the literature on initiating negotiations by identifying individual differences that are relevant in negotiation scenarios. Specifically, it investigated subfacets of the Big Five personality traits that may be related to initiating negotiations, and found that assertiveness was positively related. Interestingly, we also found that there were gender differences in initiating negotiations when individuals encountered a male boss, but not when they encountered a female boss. This study hopes to promote more conversation of gender related issues in organizations.

Appendix: Study Materials

Participant Resume Material

Resume

502 Main St., Orlando, FL 32,824.

Phone: 407-575-5554 E-Mail: KSmith321@googlemail.com.

Education

University of Miami 2007

Bachelor of Science Degree in Ecology, minor in Business (GPA of 3.6).

Bay High School 2003

Graduated with high honors (GPA of 3.75) and was a member of Alpha Chi National Honors Society and Key Club.

Experience

Environmentl Answers Company (EAC) 2007—Present

Senior Project Ecologist (2014 – Present)

- Project Manager for the Sandy Creek project. This project involved coordinating a multidisciplinary team for GIS landscape analysis as well as field work and documentation of the biodiversity of Sandy Creek watershed of the Bay County region, FL.
- Participated as a team member in other program projects including: vernal pool survey and Department of Transportation natural community re-mapping.
- Coordinated multidisciplinary teams for grant writing and project reports to insure timely submittal of all materials.

Project Ecologist (2011–2014)

- Participated in implementing environmental protection plan for gopher tortoises, nesting bird conservation, and wetland delineations from the Alabama border to central Florida.
- Used knowledge of gopher tortoise burrow construction, bird species identification (by both sight and sound), and wetland versus upland plant species to complete survey projects.
- Worked independently and with colleague teams on multiple projects, showing my abilities to make decisions and execute tasks on my own and take direction from coworkers to complete assigned tasks.

Staff Ecologist (2007–2011)

- Conducted water quality surveys, plant surveys, fish surveys, macroinvertebrate surveys, and soil sampling.
- Prepared field reports, coordinated student volunteers, and managed remote sensing equipment.
- Managed data entry, data analysis, and co-authored technical reports and findings.

Volunteer Service

Environmental Action Team

Environmental Education Volunteer (3 h/week) (2007–2014).

- Taught 1st–4th graders about ecological concepts related to gardening.
- Served as mentor to high school student volunteers.
- Arranged meaningful conservation biology field experiences for students interested in pursuing a career in the natural sciences.

Interview Preparation Material.

Interview Preparation

Job Description

An Environmental Department Manager with a focus in Wetlands, strives to lead both their team and their profits. They have extensive experience both in the field as well as in the office as they handle the “business” side of environmental services. Engineers, scientists, technicians, and project managers look to them for mentoring both technically and in building client relationships. They know how to set the bar high and not only achieve that goal—but bring others along with them. They are extremely hard working and strive to ensure that their team delivers the best quality. They get the “big picture” and want to contribute accordingly.

Requirements

You will be part of a dynamic, growing and energized team—and your role is key to the success of Environmental Awareness Company (EAC). While your job duties may fluctuate day to day, we expect you be proficient in:

- Serving as mentor and leader of Florida’s Ecological Conservation Team
- Ensuring proper training and development of team members
- Conducting and managing wetland and natural resource projects
- Being intimately familiar with Federal and State wetlands regulations and guidelines
- Understanding the regulatory/permitting/mitigation process
- Managing projects, generating proposals, developing new business, and managing client relationships
- Performing endangered species surveys

Qualifications

If you can accomplish the above, your boots are probably ready for walking right into this role. Realistically though, you need the following to be considered:

- BS in Biology, Ecology, Botany, Geology, Environmental Science, or a related field; MS preferred
- 10+ years of natural resources/wetlands delineation/endangered species experience
- Relationships held with regulatory agencies would go a long way

Salary Offer: Male Boss Condition.

"After reviewing your credentials, I would like to offer you the position as an Environmental Department Manager with a focus in Wetlands. With this comes a salary raise. We would like to offer you a salary of \$60,000 (11% pay increase). Is there anything else you would like us to keep in mind as we consider your management placement?"

Notes on Salary:

- The salary for your current position is \$54,000.
- This management position has a salary range between \$55,000-\$72,000.
- **Promotion increases can be expected to be between 10-15%.** From \$54,000, a 10% increase would be \$59,400. A 15% increase would be \$62,100.
- National average for an experienced Ecologist is \$60,567, and this is also the average salary in Orlando based on cost of living.



John Davis, *Senior Manager*

Salary Offer: Female Boss Condition.

"After reviewing your credentials, I would like to offer you the position as an Environmental Department Manager with a focus in Wetlands. With this comes a salary raise. We would like to offer you a salary of \$60,000 (11% pay increase). Is there anything else you would like us to keep in mind as we consider your management placement?"

Notes on Salary:

- The salary for your current position is \$54,000.
- This management position has a salary range between \$55,000–\$72,000.
- **Promotion increases can be expected to be between 10–15%.** From \$54,000, a 10% increase would be \$59,400. A 15% increase would be \$62,100.
- National average for an experienced Ecologist is \$60,567, and this is also the average salary in Orlando based on cost of living.



Mary Davis, Senior Manager

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References

- Amanatullah ET, Morris MW (2010) Negotiating gender roles: gender differences in assertive negotiating are mediated by women's fear of backlash and attenuated when negotiating on behalf of others. *J Pers Soc Psychol* 98(2):256–267
- American Association of University Women (AAUW) (2016) Barriers and bias: the status of women in leadership. http://www.aauw.org/aauw_check/pdf_download/show_pdf.php?file=barriers-and-bias
- Aronoff J, Wilson JP (1985) Personality in the social process. Erlbaum
- Babcock L, Gelfand MJ, Small D, Stayn H (2006) Propensity to initiate negotiations: a new look at gender variation in negotiation behavior. In: Den De Cremer, Zeelenberg M, Murnighan JK (eds) *Social psychology and economics*. Erlbaum, pp 239–262
- Babcock L, Laschever S (2007) *Women don't ask: the high cost of avoiding negotiation—and positive strategies for change*. Bantam
- Bakan D (1966) *The duality of human existence: An essay on psychology and religion*. Rand McNally, Chicago, IL
- Barrick MR, Mount MK (1991) The big five personality dimensions and job performance: a meta-analysis. *Pers Psychol* 44(1):1–26
- Barrick MR, Stewart GL, Piotrowski M (2002) Personality and job performance: test of the mediating effects of motivation among sales representatives. *J Appl Psychol* 87(1):43–51
- Barry B, Friedman RA (1998) Bargainer characteristics in distributive and integrative negotiation. *J Pers Soc Psychol* 74(2):345–359. <https://doi.org/10.1037//0022-3514.74.2.345>
- Bennis W (1989) *On becoming a leader*. Addison-Wesley
- Berger J, Fisek MH, Norman RZ, Zelditch M (1977) *Status characteristics and social interaction: An expected states approach*. Elsevier, New York
- Bowles HR, Babcock L, Lai L (2007) Social incentives for gender differences in the propensity to initiate negotiations: sometimes it does hurt to ask. *Organ Behav Hum Decis Process* 103(1):84–103
- Bowles HR, Babcock L, McGinn KL (2005) Constraints and triggers: situational mechanics of gender in negotiation. *J Pers Soc Psychol* 89(6):951–965

- Bozionelos N (2004) The relationship between disposition and career success: a British study. *J Occup Organ Psychol* 77(3):403–420
- Bussey J (2014) Gender wage gap reflects the ‘ask’ gap. *The Wall Street Journal*
- Butler D, Geis FL (1990) Nonverbal affect responses to male and female leaders: implications for leadership evaluations. *J Personal soc Psychol* 58(1):48–59
- Carli LL (1990) Gender, language, and influence. *J personal soc psychol* 59(5):941–951
- Cohen J (1988) Statistical power analysis for the behavioral sciences. Lawrence Earlbaum Associates 2
- Conway M, Pizzamiglio MT, Mount L (1996) Status, communality, and agency: implications for stereotypes of gender and other groups. *J personal soc psychol* 71(1):25–38
- Costa PT, McCrae RR (1992) NEO PI-R: revised NEO personality INVENTORY and NEO five-factor inventory (NEO-FFI). PAR
- Costa PT, Terracciano A, McCrae RR (2001) Gender differences in personality traits across cultures: robust and surprising findings. *J Pers Soc Psychol* 81(2):322–331
- Cotter DA, Hermsen JM, Ovadia S, Vanneman R (2001) The glass ceiling effect. *Soc Forces* 80(2):655–681. <https://doi.org/10.1353/sof.2001.0091>
- Deaux K, Major B (1987) Putting gender into context: An interactive model of gender-related behavior. *Psychol rev* 94(3):369–389
- Devanna MA (1984) Male/female careers—The first decade: a study of MBAs. Columbia Univ Center for Research
- DeYoung CG, Quilty LC, Peterson JB (2007) Between facets and domains: 10 aspects of the Big Five. *J Pers Soc Psychol* 93(5):880–896
- Doey L, Coplan RJ, Kingsbury M (2014) Bashful boys and coy girls: a review of gender differences in childhood shyness. *Sex Roles* 70(7–8):255–266
- Eagly AH (1987) Reporting sex differences. *Am Psychol* 42(7):756–757
- Eagly AH, Karau SJ (2002) Role congruity theory of prejudice toward female leaders. *Psychol Rev* 109(3):573–598. <https://doi.org/10.1037/0033-295X.109.3.573>
- Eagly AH, Mladinic A (1994) Are people prejudiced against women? Some answers from research on attitudes, gender stereotypes, and judgments of competence. *European rev soc psychol* 5(1):1–35
- Elfenbein HA (2015) Individual differences in negotiation: a nearly abandoned pursuit revived. *Curr Dir Psychol Sci* 24(2):131–136
- Elfenbein HA, Curhan JR, Eisenkraft N, Shirako A, Baccaro L (2008) Are some negotiators better than others? Individual differences in bargaining outcomes. *J Res Pers* 42(6):1463–1475
- Elfenbein HA, Curhan JR, Eisenkraft N, Shirako A, Brown AD (2009) Why are some negotiators better than others? Opening the black box of bargaining behaviors. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1336257
- Elsesser K (2016) Research stating ‘women ask for pay raises as much as men’ is misleading. *Forbes*. <http://www.forbes.com/sites/kimelsesser/2016/09/07/research-stating-women-ask-for-pay-raises-as-much-as-men-is-just-wrong/#412eabe0a1bb>
- Eriksson KH, Sandberg A (2012) Gender differences in initiation of negotiation: Does the gender of the negotiation counterpart matter? *Negot J* 28(4):407–428
- Feingold A (1994) Gender differences in personality: a meta-analysis. *Psychol Bull* 116(3):429–456
- Fiske S, Cuddy AJC, Glick P, Xu J (2002) A model of (often mixed) stereotype content: competence and warmth respectively follow from perceived status and competition. *J personal soc psychol* 82:878–902
- Fractl (2016) Salary negotiations and race. <http://www.fractl/research/salary-negotiations-and-race>
- Gelfand M, Stayn H (2013) Gender differences in the propensity to initiate negotiations. In: De Cremer D, Zeelenberg M, Murnighan (eds) *Social psychology and economics*. Taylor & Francis, pp 239–259
- Gerhart B (1990) Gender differences in current and starting salaries: the role of performance, college major, and job title. *Ind Labor Relat Rev* 43(4):418–433
- Gerhart B, Rynes S (1991) Determinants and consequences of salary negotiations by male and female MBA graduates. *J Appl Psychol* 76(2):256–262
- Glick P, Fiske ST (1996) The ambivalent sexism inventory: differentiating hostile and benevolent sexism. *J Pers Soc Psychol* 70(3):491–512
- Goldberg LR (1992) The development of markers of the Big-Five factor structure. *Psychol Assess* 4(1):26–42
- Graziano WG, Habashi MM, Sheese BE, Tobin RM (2007) Agreeableness, empathy, and helping: a person x situation perspective. *J Pers Soc Psychol* 93(4):583–599

- Graziano WG, Tobin RM (2002) Agreeableness: dimension of personality or social desirability artifact? *J Pers* 70(5):695–728
- Greig F (2008) Propensity to negotiate and career advancement: evidence from an investment bank that women are on a ‘slow elevator.’ *Negot J* 24(4):495–508
- Hall RE, Krueger AB (2008) Wage formation between newly hired workers and employers: survey evidence (No. w14329; National Bureau of Economic Research)
- Heath K (2014) Even when women ask for a raise, they don’t ask for enough. *Harvard Business Review*. <https://hbr.org/2014/07/even-when-women-ask-for-a-raise-they-dont-ask-for-enough>
- Heilman ME, Chen JJ (2005) Same behavior, different consequences: reactions to men’s and women’s altruistic citizenship behavior. *J Appl Psychol* 90(3):431–441
- Heilman ME, Wallen AS, Fuchs D, Tamkins MM (2004) Penalties for success: reactions to women who succeed at male gender-typed tasks. *J Appl Psychol* 89(3):416–427
- Howard A, Bray DW (1988) *Managerial lives in transition*. Guilford
- Jaccard J (1998) *Interaction effects in factorial analysis of variance*. Sage
- Judge TA, Livingston BA, Hurst C (2012) Do nice guys—and gals—really finish last? The joint effects of sex and agreeableness on income. *J Pers Soc Psychol* 102(2):390–407. <https://doi.org/10.1037/a0026021>
- Kenny DA (2017) MedPower: an interactive tool for the estimation of power in tests of mediation [Computer software]. <https://davidakenny.shinyapps.io/MedPower/>
- Klein RA, Ratliff KA, Vianello M, Adams RB, Bahník S Jr, Bernstein MJ (2014) Investigating variation in replicability: a “many labs” replication project. *Soc Psychol* 45(3):142–152
- Kray LJ, Galinsky AD, Thompson L (2002) Reversing the gender gap in negotiations: An exploration of stereotype regeneration. *Organ Behav Hum Decis Process* 87(2):386–410. <https://doi.org/10.1006/obhd.2001.2979>
- Kugler KG, Reif JA, Kaschner T, Brodbeck FC (2018) Gender differences in the initiation of negotiations: A meta-analysis. *Psychol Bull* 144(2):198–222
- Laerd Statistics (2015) Statistical tutorials and software guides. <https://statistics.laerd.com/>
- Leibbrandt A, List JA (2014) Do women avoid salary negotiations? Evidence from a large-scale natural field experiment. *Manage Sci* 61(9):2016–2024
- LePine JA, Van Dyne L (1998) Predicting voice behavior in work groups. *J Appl Psychol* 83(6):853–868
- Lewicki R, Litterer JA, Minton JW, Saunders D (1994) *Negotiation*, 2nd ed. Irwin
- Mavin S (2008) Queen Bees, Wannabees and Afraid to Bees: no more ‘best enemies’ for women in management? *Br J Manag* 19(s1):S75–S84. <https://doi.org/10.1111/j.1467-8551.2008.00573.x>
- Maxwell SE, Delaney HD, Kelley K (2017) *Designing experiments and analyzing data: a model comparison perspective*. Routledge
- McCall MW, Lombardo MM, Morrison AM (1988) *The lessons of experience: How successful executives develop on the job*. Lexington Books
- McCrae RR, John OP (1992) An introduction to the five-factor model and its applications. *J Pers* 60:175–215
- Meade AW, Craig SB (2012) Identifying careless responses in survey data. *Psychol Methods* 17(3):437–455
- Messick D, McClintock C (1968) Motivational bases of choice in experimental games. *J Exp Soc Psychol* 4(1):1–25
- Ng TW, Eby LT, Sorensen KL, Feldman DC (2005) Predictors of objective and subjective career success: a meta-analysis. *Pers Psychol* 58(2):367–408
- Reder MW (1978) An analysis of a small, closely observed labor market: starting salaries for University of Chicago MBAs. *J Bus* 51:263–297
- Ridgeway CL, Berger J (1986) Expectations, legitimation, and dominance behavior in task groups. *American Sociol Rev*. 603–617
- Rigdon ML (2012) An experimental investigation of gender differences in wage negotiations. <https://doi.org/10.2139/ssrn.2165253>
- Ritov I (1996) Anchoring in simulated competitive market negotiation. *Organ Behav Hum Decis Process* 67(1):16–25
- Rode JC, Arthaud-Day ML, Mooney CH, Near JP, Baldwin TT (2008) Ability and personality predictors of salary, perceived job success, and perceived career success in the initial career stage. *Int J Sel Assess* 16(3):292–299

- Rosette AS, Tost LP (2010) Agentic women and communal leadership: How role prescriptions confer advantage to top women leaders. *J Appl Psychol* 95(2):221–235. <https://doi.org/10.1037/a0018204>
- Rubin KH, Brown ID (1975) A life-span look at person perception and its relationship to communicative interaction. *J Gerontol* 30(4):461–468
- Rubin KH, Wojslawowicz JC, Rose-Krasnor L, Booth-LaForce C, Burgess KB (2006) The best friendships of shy/withdrawn children: prevalence, stability, and relationship quality. *J abnormal child psychol* 34(2):139–153
- Rudman LA (1998) Self-promotion as a risk factor for women: the costs and benefits of counterstereotypical impression management. *J Pers Soc Psychol* 74(3):629
- Rudman LA, Goodwin SA (2004) Gender differences in automatic in-group bias: Why do women like women more than men like men? *J personal soc psychol* 87(4):494–509
- Rudman LA, Phelan JE (2008) Backlash effects for disconfirming gender stereotypes in organizations. *Res organizat beh* 28:61–79
- Rudman LA, Moss-Racusin CA, Phelan JE, Nauts S (2012) Status incongruity and backlash effects: defending the gender hierarchy motivates prejudice against female leaders. *J Exp Soc Psychol* 48(1):165–179
- Sandberg S (2014) Sheryl Sandberg and Anna Maria Chávez on 'Bossy,' the Other B-word. *Wall Street Journal* 8
- Sharma S, Bottom WP, Elfenbein HA (2013) On the role of personality, cognitive ability, and emotional intelligence in predicting negotiation outcomes: a meta-analysis. *Organ Psychol Rev* 3(4):293–336. <https://doi.org/10.1177/2041386613505857>
- Simmons JP, Nelson LD, Simonsohn U (2011) False-positive psychology: undisclosed flexibility in data collection and analysis allows presenting anything as significant. *Psychol sci* 22(11):1359–1366
- Simonsohn U (n.d.) How to study discrimination (or anything) with names; If you must. Data Colada. Retrieved December 29, 2017, from <http://datacolada.org/36>
- Small DA, Gelfand M, Babcock L, Gettman H (2007) Who goes to the bargaining table? The influence of gender and framing on the initiation of negotiation. *J Pers Soc Psychol* 93(4):600
- Social Security Administration (2017) Top 5 names in each of the last 100 years. <https://www.ssa.gov/oact/babynames/top5names.html>
- Spurk D, Abele AE (2011) Who earns more and why? A multiple mediation model from personality to salary. *J Bus Psychol* 26(1):87–103
- Strober MH (1982) The MBA: Same passport to success for women and men. In: Wallace P (ed) *Women in the workplace*. Auburn House, pp 25–55
- Stuhlmacher AF, Citera M, Willis T (2007) Gender differences in virtual negotiation: theory and research. *Sex Roles* 57(5–6):329–339
- Thompson L (1990) Negotiation behavior and outcomes: empirical evidence and theoretical issues. *Psychol Bull* 108(3):515–532
- U.S. Department of Labor, Bureau of Labor Statistics (2015) Highlights of women's earnings in 2014 (No. 1058)
- Vroom VH (1964) *Work and motivation*. Wiley
- Walton R, McKersie R (1965) *A behavioral theory of labor negotiations: an analysis of a social interaction system*. Cornell University Press
- Weisberg YJ, DeYoung CG, Hirsh JB (2011) Gender differences in personality across the ten aspects of the Big Five. *Front Psychol* 2. <https://doi.org/10.3389/fpsyg.2011.00178>
- Westfall J (2016a) PANGAEA (v0.2): power analysis for general anova designs. [Shiny App]. <https://jakewestfall.shinyapps.io/pangea/>
- Wilson K, Gallois C (1993) *Assertion and its social context*. Pergamon Press, Elmsford, NY
- Winerman L (2013) Interesting results: Can they be replicated. *Monit Psychol* 44(2):38–41
- Wood W, Eagly AH (2012) Biosocial construction of sex differences and similarities in behavior. In *Advances in experimental social psychology* (vol 46, pp 55–123). Elsevier
- Yong E (2012) Bad copy. *Nature* 485(7398):298–300