
Research Reports

Gender Differences in Initiation of Negotiation: Does the Gender of the Negotiation Counterpart Matter?

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In this study, we investigated if and how gender differences in the propensity to initiate a negotiation are affected by the gender of the counterpart in the negotiation. We enlisted 204 Swedish students to take part in an experiment in which they had to decide whether to initiate a negotiation for higher compensation. In line with previous research, we found that men were more likely than women to initiate a negotiation: 42 percent of the male and 28 percent of the female participants initiated a negotiation.

The gender difference, however, was only large and statistically significant when the negotiation counterpart was a woman. With a female negotiation counterpart, women were less likely than men to initiate a negotiation by 24 percentage points, while with a male negotiation counterpart, the gender difference was only 5 percentage points and not statistically significant. This result suggests that the gender of the negotiation counterpart should be taken into consideration when analyzing gender differences in initiation of negotiation.

Key words: negotiation, gender, experiment, dyad composition, wages and compensation.

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Introduction

Women earn less than men all over the world. Even when observed differences in job and worker characteristics are controlled for, a significant unexplained gender wage gap remains (Weichselbaumer and Winter-Ebmer 2005). Previous research has shown that men are more likely than women to initiate a negotiation for higher compensation (Babcock et al. 2003; Babcock et al. 2006; Small et al. 2007). If employees who negotiate for a higher wage earn more than their colleagues who accept the employer's initial offer and men are indeed more likely to initiate such a negotiation, then the gender difference in the propensity to initiate such a negotiation may account for part of the unexplained gender wage gap.

Recent studies have also shown that the nature and intensity of gender differences in negotiation behavior can depend on the context of the negotiation (Kray and Thompson 2005; Bohnet and Bowles 2008; Kolb 2009). One contextual variable that has been largely left out of prior negotiation research is the gender composition of the negotiation dyad (Kray and Thompson 2005; Bowles and Flynn 2010).

The purpose of this article is to fill part of this research gap by investigating how gender differences in the propensity to initiate negotiations are affected by the gender composition of the negotiation dyad. We have done this by conducting a negotiation experiment with 204 Swedish students. We used and modified an experimental design developed by Deborah A. Small and her colleagues (2007) in which participants played a word game in exchange for cash. After the word game, each participant was, regardless of his or her performance in the word game, offered the minimum payment possible. Our dependent variable was whether the participant subsequently initiated a negotiation for higher payment. To investigate the effect of the gender of the negotiation counterpart, we extended Small and her colleagues' (2007) experimental design by employing several experimenters of each gender.

Previous research suggests the existence of gender differences in negotiation outcomes and behavior.¹ Despite the numerous studies on gender and negotiation, relatively few studies have touched upon the *propensity to initiate* negotiations. Previous studies based on surveys have suggested that men are more likely than women to initiate wage negotiations (Babcock et al. 2003; Babcock et al. 2006). When investigating this in an experimental setting, Small and her colleagues (2007) found that men are significantly more likely than women to initiate a negotiation for higher payment. In another study, Hannah Riley Bowles, Linda Babcock, and Lei Lai (2007) conducted a series of experiments to investigate gender differences in initiation of negotiation. They concluded that differential treatment of men and women when they attempt to negotiate can explain the gender difference in initiation of negotiation.

Investigating how gender differences vary according to the gender composition of the negotiation dyad is especially interesting given recent developments within the area of negotiation research. The study of gender differences in negotiation behavior has gradually shifted focus from treating gender as a stable predictor of behavior, toward examining how gender differences depend on the context of the negotiation (Bohnet and Bowles 2008; Kolb 2009). For instance, the size of the gender difference in negotiation behavior has been shown to vary with situational factors such as the uncertainty of the situation (Walters, Stuhlmacher, and Meyer 1998; Bowles, Babcock, and McGinn 2005), whether participants bargain for themselves or on behalf of someone else (Bowles, Babcock, and McGinn 2005), the nature of the negotiation task (Stuhlmacher and Walters 1999), and how explicitly gender stereotypes are activated (Kray, Galinsky, and Thompson 2001).

Regarding gender differences in the *initiation* of negotiation, Small and her colleagues (2007) showed that the framing of the negotiation opportunity is important. They found that male participants were more likely than female participants to initiate a negotiation when participants were informed that there was an opportunity to “negotiate for more.” This gender difference disappeared, however, when participants were instead informed that there was an opportunity to “ask for more.”

The gender composition of the negotiation dyad can be seen as an additional contextual variable that may influence the size and direction of gender differences in negotiation. It seems particularly important to investigate the effect of this contextual variable in negotiation research because in most wage negotiations, the negotiator can be assumed to know the gender of his or her negotiation counterpart. Previous experimental studies show that the gender of the other party can influence gender differences in various types of economic behavior. For instance, in a literature review, Rachel Croson and Uri Gneezy (2009) found that women’s rejection rates in the ultimatum game and their offers in the dictator game were more sensitive to the gender of the opponent than those of men. Furthermore, when conducting a bargaining game similar to the ultimatum game, Matthias Sutter and his colleagues (2009) found that there was more competition and retaliation within same-gender dyads compared to mixed-gender dyads. When it comes to competitive behavior, experimental evidence on the effect of the gender of the opponent is mixed.²

In prior negotiation research, only a few studies have investigated the effect of the gender composition of the negotiation dyad (Kray and Thompson 2005; Bowles and Flynn 2010). For instance, Hannah Riley Bowles and Francis Flynn (2010) found that women persist more in negotiations when negotiating with a man than when negotiating with a woman. Laura J. Kray, Adam Galinsky, and Leigh Thompson (2001) found that when gender stereotypes are implicitly activated by researchers in an experimental setting,

the relative advantage for male negotiators increases in mixed-gender dyads but not in same-gender dyads.

Because the gender difference in various outcomes has been shown to vary with the gender composition of the dyad, it seems relevant to take the gender of the counterpart into account when investigating gender differences in the propensity to initiate negotiations. Small and her colleagues (2007) did not employ multiple experimenters of each gender, so their experiment was not designed to test for gender composition effects.

To our knowledge, the paper by Bowles, Babcock, and Lai (2007) is the only previous study examining how gender differences in the propensity to ask for higher compensation are affected by the gender of the negotiation counterpart. They conducted four experiments to investigate if differential treatment of men and women who attempt to negotiate can explain the gender difference in their tendency to initiate negotiation. They argued that initiation of negotiation is a dominant and assertive act that goes against stereotypes about how women should behave. Consequently, Bowles and colleagues hypothesized that women encounter a higher social cost than men when initiating negotiations and that therefore women will be less likely than men to initiate negotiations. They also hypothesized that the gender difference in social cost, and hence the gender difference in the propensity to initiate a negotiation, would be larger when participants negotiated with a male than with a female counterpart.

In their first two experiments, Bowles, Babcock, and Lai (2007) asked participants to evaluate stories about job candidates who either did or did not initiate a negotiation for higher compensation. They found that both male and female participants penalized female job candidates more than male job candidates for initiating a negotiation. In their third experiment, participants evaluated video recordings of job candidates. In this experiment, male participants still penalized female job candidates more than they penalized male candidates for initiating a negotiation. Female participants, on the other hand, penalized female and male job candidates equally for initiating a negotiation. In their fourth experiment, participants played the role of job candidates. They were provided with a written job interview scenario and asked how likely they would be to ask for higher compensation. In accordance with their hypothesis, the researchers found that men were more likely than women to ask for higher compensation when the counterpart was a man but not when the counterpart was a woman.

Our study builds on the comprehensive work of Bowles, Babcock, and Lai (2007) and of Small and her colleagues (2007). It complements theirs by investigating how gender differences in the initiation of negotiation are affected by the gender of the counterpart, using an incentivized experiment in which we evaluated if participants initiated a negotiation for higher payment when they met their negotiation counterpart face to face and were free to choose their own words. We began our study with two

hypotheses. First, following the results obtained by Small and her colleagues (2007), we hypothesized that men are more likely than women to initiate a negotiation for higher payment. Second, like Bowles, Babcock, and Lai (2007), we hypothesized that this gender difference would be larger when the negotiation counterpart was a man.

We found that men were generally more likely than women to initiate a negotiation, which is in line with our first hypothesis. However, the gender difference that Small and her colleagues found (2007) was three times larger than the gender difference we found. We speculate that this may reflect differences in culture and gender norms between Sweden and the United States.

Also, in contradiction to our second hypothesis and the results reported by Bowles, Babcock, and Lai (2007), we found that with a female negotiation counterpart, women were less likely than men to initiate a negotiation, while with a male negotiation counterpart the gender difference was not statistically significant. The fact that our results differ from those of Bowles, Babcock, and Lai (2007) might reflect differences in experimental design. We conclude that more research is needed regarding the situational factors that can influence how the gender composition of the negotiation dyad affects gender differences in initiation of negotiation.

Our findings support the idea that gender differences in the propensity to initiate negotiations are better understood at the dyadic than at the individual level. This is in line with the stream of negotiation research showing that gender differences are not stable across contexts. Our results indicate that the gender of the negotiation counterpart is a contextual factor that should be considered when interpreting observed gender differences in negotiation behavior.

Experimental Design

We employed an experimental design developed by Small and her colleagues (2007). To test for the effect of the interaction between the gender of the participant and the gender of the experimenter, we modified their design by using several experimenters of each gender.

Participants

A total of 204 students (107 men and ninety-seven women) participated in the experiment in exchange for 30–100 SEK (Swedish krona) (approximately \$3.75–\$12.50). We recruited the participants from three different locations: sixty-one from Stockholm University, sixty-one from Södertörn University, and eighty-two from Studentpalatset (a place for study for students from different universities in Stockholm).³ We approached the participants at public places on the respective campuses and asked if they would like to participate in a study. The age of the participants ranged from eighteen to forty-one, with a mean age of twenty-four.

Experimenters

Twenty experimenters (ten men and ten women) conducted the experiment on approximately ten participants each. The experimenters were either students or recent graduates and were unaware of the purpose of the study. Half of them were randomly assigned to wear business attire and half of them to wear jeans and a t-shirt. The age of the experimenters ranged from twenty to twenty-six, with a mean age of twenty-four. We standardized the behavior of the experimenters by training them to follow a narrow script.

We made sound recordings of all negotiations enabling us to verify that the experimenters had acted according to the instructions. We hid the recording device from the participants because we did not want the recording to influence their behavior. After each experimental session, we e-mailed the participants informing them about the recording.⁴

Procedure

After a student agreed to participate in the experiment, we escorted him or her to a room where an experimenter waited. Participants were randomly assigned to a male or a female experimenter who gave the participant a word puzzle⁵ and instructed him or her to find as many words as possible in three minutes. (For a translation of the instructions, see Appendix One). After three minutes, the experimenter collected the word puzzle and gave the participant the following written instructions: "You have now finished the word puzzle and will be paid between 30 and one-hundred SEK. Wait here while your word puzzle is being scored. When the word puzzle has been scored, you will be paid. The exact payment is negotiable."⁶

The experimenter then left the participant alone for two minutes. When two minutes had passed, the experimenter returned to the room, held out the minimum payment of 30 SEK and said: "Thank you for participating. You will receive 30 SEK in compensation. Is that OK?" If the participant asked for higher payment than 30 SEK, he or she was offered more money up until the maximum payment.⁷ If the participant accepted the offer of 30 SEK, however, he or she was paid only 30 SEK. A participant who asked questions or complained about the size of the payment but never explicitly asked for higher payment was also paid only 30 SEK. The experimenter provided no information regarding the subject's performance on the word puzzle or how the exact payment was determined.

Dependent Variable

We were interested in whether a participant initiated a negotiation by asking for higher payment. Hence, our dependent variable is binary; either the participant asked for higher payment or did not. We retrieved this variable from a questionnaire that the experimenter filled out after each participant.

Additional Variables

Our additional variables arise from two different sources. We retrieved the demographic characteristics of the participants from a questionnaire that participants filled out after they had been paid. In the questionnaire, we also asked participants to rate their own word puzzle performance on a five-point scale (1 = much worse than the average participant, 5 = much better than the average participant), to state what they believed to be the purpose of the study and to declare whether they had heard about the experiment prior to participating. We noted the experimenters' age, the number of words that each participant found in the word puzzle, and the location of each experimental session.

Results

Descriptive Statistics

Out of a total of 204 observations, we dropped two.⁸ The remaining sample thus consists of 202 observations (106 men and 96 women). We present the descriptive statistics in Table One.

We define the variable *participant word puzzle performance* as the number of words a participant found in the word puzzle. On average, male participants found one word less than female participants (16.4 as

Table One
Descriptive Statistics

Variable	All			Men			Women		
	Mean	Std	n	Mean	Std	n	Mean	Std	n
Experimenter age	24.10	1.48	20	24.10	1.29	10	24.10	1.73	10
Participant age	24.11	3.84	202	24.45	4.19	106	23.74	3.39	96
Participant word puzzle performance	16.87	6.25	202	16.38	5.77	106	17.42	6.73	96
Participant perceived performance	2.96	0.82	199	3.06	0.87	103	2.86	0.75	96
Initiation of negotiation	0.356	0.480	202	0.425	0.497	106	0.281	0.452	96

The gender-specific descriptive statistics of "Experimenter age" refer to the gender of the experimenter. All other gender-specific descriptive statistics refer to the gender of the participant.

compared to 17.4 words). However, neither the gender difference in word puzzle performance ($p = 0.239$, double-sided t -test) nor the gender difference in the variance of word puzzle performance ($p = 0.123$, double-sided F -test) is statistically significant.

The variable *participant perceived performance* denotes the participant's own rating of his or her performance on a five-point scale. For male participants, average perceived performance was 3.1, and for female participants it was 2.9. The gender difference in perceived performance is statistically significant at the 10 percent level ($p = 0.096$, double sided t -test), but there is no statistically significant gender difference in the variance ($p = 0.132$, double sided F -test).

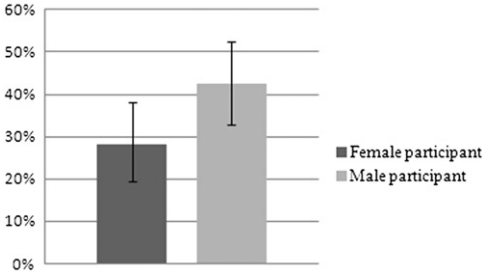
The variable *initiation of negotiation* takes on the value 1 if a participant initiated a negotiation and 0 otherwise. The gender difference in this variable is analyzed in the following sections.

Main Results

In total, just over one third (36 percent) of the participants initiated a negotiation. As shown in Table One and Figure One, 28 percent of the female participants initiated a negotiation, compared to 42 percent of the male participants. The gender difference of 14 percentage points is statistically significant at the 5 percent level ($p = 0.034$, chi-square test, degrees of freedom = 1). We thus conclude that male participants were 1.5 times more likely than female participants to initiate a negotiation.

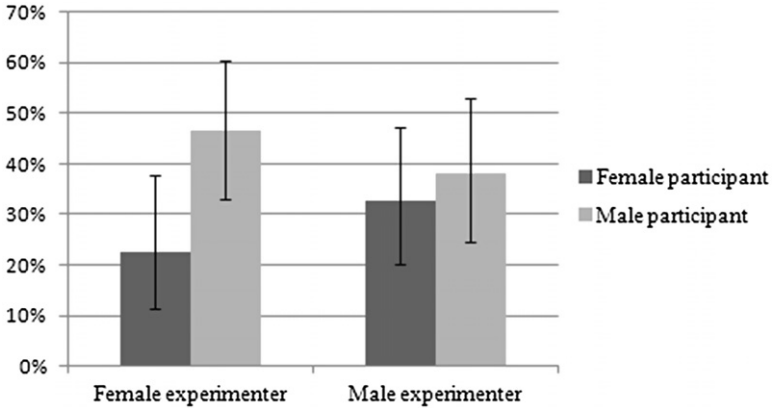
In Figure Two, we present the results by the gender of the experimenter. With a female experimenter, 23 percent of the female participants initiated a negotiation while 46 percent of the male participants did. This gender difference is 24 percentage points and is statistically significant at the 5 percent level ($p = 0.014$, chi-square test, degrees of freedom = 1).

Figure One
Proportion of Participants Initiating Negotiation



The 95 percent confidence intervals are based on the binomial distribution.

Figure Two
Proportion of Participants Initiating Negotiation by the Gender of the Experimenter



The 95 percent confidence intervals are based on the binomial distribution.

With a male experimenter, 33 percent of the female participants and 38 percent of the male participants initiated a negotiation. This gender difference of 5 percentage points is not statistically significant ($p = 0.575$, chi-square test, degrees of freedom = 1). We conclude that with a female experimenter, men were twice as likely as women to initiate a negotiation. With a male experimenter, however, we found no statistically significant difference between genders in their likelihood of initiating a negotiation.

We also analyzed the results for each participant gender separately. Among female participants, 23 percent of those who met a female experimenter, and 33 percent of those who met a male experimenter, initiated a negotiation. Among male participants, 46 percent of those who met a female experimenter, and 38 percent of those who met a male experimenter, initiated a negotiation. Thus, female participants showed a tendency to be more likely to initiate a negotiation with a male than with a female experimenter, and male participants showed a tendency to be more likely to initiate a negotiation with a female than with a male experimenter. However, these differences are not statistically significant, neither for female ($p = 0.279$, chi-square test, degrees of freedom = 1) nor for male ($p = 0.381$, chi-square test, degrees of freedom = 1) participants.

The proportion of participants who initiated a negotiation in the four different dyad compositions is presented in Table Two.

Table Two
Proportion of Participants Initiating Negotiation by the Gender of the Experimenter

	Female Experimenter	Male Experimenter	Total
Female participant	22.7% (10/44)	32.7% (17/52)	28.1% (27/96)
Male participant	46.4% (26/56)	38.0% (19/50)	42.5% (45/106)
Total	36.0% (36/100)	35.3% (36/102)	35.6% (72/202)

The numbers in parentheses indicate the number of initiated negotiations divided by the number of observations.

To investigate whether the observed gender differences remained when we controlled for *participant age*, *participant word puzzle performance*, and the *location* of the experimental session, we estimated ordinary least squares (OLS) regression models. The dependent variable is whether the participant initiated a negotiation or not. We present the results from these regressions in Table Three.⁹

Comparing models 1 and 2, we see that when we controlled for *participant age*, *participant word puzzle performance*, and the *location* of the experimental session, the gender difference in the propensity to initiate a negotiation was still large (14 percentage points) and significant at the 5 percent level ($p = 0.040$). Model 3 differs from model 2 in that we added a dummy for *female experimenter*. The coefficient of *female experimenter* is small and statistically insignificant ($p = 0.915$), indicating that, on average, participants were neither more nor less likely to initiate a negotiation when the experimenter was a woman than when the experimenter was a man. As expected, given the randomization of participants to experimenters, the addition of *female experimenter* did not affect the gender difference in the propensity to initiate a negotiation.

Finally, in model 4, we added an interaction term between *female participant* and *female experimenter*. The inclusion of this interaction term allows us to compare the gender difference in the propensity to initiate a negotiation when the experimenter is a man to the gender difference when the experimenter is a woman. The regression coefficient of *female participant* in model 4 gives us the gender difference in the propensity to initiate a negotiation when the experimenter was a man. The gender difference is 3 percentage points and is statistically insignificant ($p = 0.712$).

To investigate whether the gender difference was statistically significant when the experimenter was a woman, we tested whether the sum of the regression coefficients of *female participant* and the interaction term

Table Three
Ordinary Least Square (OLS) Regression Models for Initiation
of Negotiation

Variable	Model 1	Model 2	Model 3	Model 4
Female participant	-0.143 (0.067)** (0.054)**	-0.136 (0.066)** (0.056)**	-0.136 (0.066)** (0.056)**	-0.034 (0.092) (0.084)
Female experimenter			-0.007 (0.065) (0.039)	0.090 (0.094) (0.062)
Female participant × female experimenter				-0.206 (0.129) (0.096)**
Participant age		0.029 (0.009)*** (0.011)**	0.029 (0.009)*** (0.011)**	0.030 (0.009)*** (0.011)**
Participant word puzzle performance		0.009 (0.005)* (0.004)**	0.009 (0.005)* (0.004)**	0.009 (0.005)* (0.004)*
Constant	0.425 (0.048)*** (0.039)***	-0.475 (0.246)* (0.266)*	-0.472 (0.246)* (0.259)*	-0.544 (0.243)** (0.261)*
Controls for location	No	Yes	Yes	Yes
Observations	202	202	202	202
R-squared	0.022	0.101	0.102	0.113

The dependent variable takes on the value 1 if a participant initiated a negotiation and 0 otherwise. The upper parentheses show robust standard errors, and the lower parentheses show standard errors clustered on experimenters.

*** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$.

between *female participant* and *female experimenter* was statistically significant. This gender difference is 24 percentage points and, as shown by the test in Table Four, significant at the 1 percent level ($p = 0.0097$). Thus, we conclude that when we controlled for *participant age*, *participant word puzzle performance*, and *location*, male participants were still significantly more likely than female participants to initiate a negotiation when the experimenter was a female but not when the experimenter was a male.¹⁰

The coefficient of the interaction term between *female participant* and *female experimenter* shows that the gender difference in the propensity to initiate a negotiation is 21 percentage points higher when the

Table Four
Test of Sums of Coefficients from Model 4

	F-statistic	<i>p</i> -value
Female participant + female participant × female experimenter = 0	F(1,194) = 6.82 F(1,19) = 23.29	0.0097 0.0001
Female experimenter + female participant × female experimenter = 0	F(1,194) = 1.70 F(1,19) = 3.68	0.1942 0.0703

The first and third rows show test results using robust standard errors, while the second and fourth rows show test results using standard errors clustered on experimenters.

experimenter was a female than when the experimenter was a male. When we did not cluster the standard errors on experimenter, the difference in the gender difference between the two conditions (female or male experimenter) was not statistically significant ($p = 0.113$). When we clustered the standard errors, however, the coefficient of the interaction term was significant at the 5 percent level ($p = 0.045$).

We also estimated models 1–4 using a logit specification instead of an OLS specification. Using a logit specification, the coefficient of the interaction term from model 4 was significant at the 10 percent level ($p = 0.054$). The change in the significance level of the interaction term was the only important difference between the results from the OLS model and those from the logit models.

Furthermore, we estimated models 1–4, adding a dummy indicating whether the experimenter was dressed in business attire. The coefficient of this variable was statistically insignificant in all four regression models, indicating that, on average, a participant’s propensity to initiate a negotiation was not affected by whether the experimenter wore business attire.

Robustness Checks

To evaluate the robustness of the results, we reran the regressions omitting groups of cases. First, we excluded four participants for which the sound recordings revealed that the experimenters departed from the instructions.¹¹ Then, we excluded five participants who stated in the participant questionnaire that they had heard about the experiment before participating, suggesting that they might have received useful hints on how to obtain a higher compensation. Finally, we removed five participants who reported in the participant questionnaire that they thought that the purpose of the experiment was related to negotiation and gender. (This was determined with an open-ended question: “What do you think is the purpose of this experiment?”.) The results remained robust both when we excluded the

three groups of observations one by one, and when we removed them simultaneously.¹²

The Influence of Participants' Perceived Performance

To investigate whether gender differences in confidence can explain part of the gender difference in the propensity to initiate a negotiation, we reran

Table Five
Ordinary Least Square (OLS) Regression Models for Initiation of Negotiation

Variable	Model 5	Model 6	Model 7
Female participant	-0.089 (0.063) (0.057)	-0.089 (0.063) (0.057)	0.018 (0.083) (0.074)
Female experimenter		-0.008 (0.061) (0.037)	0.096 (0.090) (0.066)
Female participant × female experimenter			-0.216 (0.121)* (0.098)**
Participant age	0.030 (0.010)*** (0.011)**	0.031 (0.010)*** (0.011)**	0.032 (0.010)*** (0.011)***
Participant word puzzle performance	-0.001 (0.006) (0.005)	-0.001 (0.006) (0.005)	-0.002 (0.006) (0.005)
Participant perceived performance	0.224 (0.037)*** (0.024)***	0.224 (0.037)*** (0.024)***	0.225 (0.037)*** (0.024)***
Constant	-1.022 (0.242)*** (0.249)***	-1.018 (0.244)*** (0.244)***	-1.106 (0.243)*** (0.246)***
Controls for location	Yes	Yes	Yes
Observations	199	199	199
R-squared	0.225	0.225	0.237

The dependent variable takes on the value 1 if a participant initiated a negotiation and 0 otherwise. The upper parentheses show robust standard errors, and the lower parentheses show standard errors clustered on experimenters.

*** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$.

Table Six
Test of Sums of Coefficients from Model 7

	F-statistic	<i>p</i> -value
Female participant + female participant × female experimenter = 0	F(1,190) = 4.81 F(1,19) = 9.57	0.0296 0.0060
Female experimenter + female participant × female experimenter = 0	F(1,190) = 2.22 F(1,19) = 4.55	0.1375 0.0462

The first and third rows show test results using robust standard errors, while the second and fourth rows show test results using standard errors clustered on experimenters.

models 2, 3, and 4 including participants' *perceived* performance as an explanatory variable. We present the results from these OLS regression models in Table Five.¹³

Comparing the results from models 5 and 6 to those from models 2 and 3, we see that the inclusion of *participant perceived performance* reduces the gender difference in the propensity to initiate a negotiation by about a third from 14 to 9 percentage points and renders it statistically insignificant ($p = 0.158$ in model 5 and $p = 0.156$ in model 6). The fact that the male participants rated their word puzzle performance higher than the female participants thus accounts for about one third of the gender difference in the propensity to initiate a negotiation.

The coefficient of *female participant* in model 7 gives us the gender difference in the propensity to initiate a negotiation when the experimenter was a man. As in model 4, this coefficient was small and statistically insignificant ($p = 0.288$). To test whether the gender difference was statistically significant when the experimenter was a woman, we tested whether the sum of the regression coefficients of *female participant* and the interaction term between *female participant* and *female experimenter* was statistically significant. As in model 4, the gender difference was still statistically significant at the 5 percent level ($p = 0.030$, see Table Six), but it was reduced from 24 to 20 percentage points. These results suggest that one partial explanation for the observed gender difference in the propensity to initiate a negotiation is that men rate their own word puzzle performance higher than women do.

Use of the variable *participant perceived performance*, however, may be problematic because we did not ask the participants to rate their performance until *after* they had been paid. If participants believed that the payment reflected their word puzzle performance, we could have a problem of reverse causality. That is, we do not know whether a higher perceived performance increased participants' likelihood to

initiate a negotiation, or if the initiation of negotiation, leading to a higher payment, gave participants reason to report a higher perceived performance.

Discussion

The finding that men were more likely than women to initiate a negotiation supports our first hypothesis and verifies the findings of previous studies. Nevertheless, the gender difference that Small and her colleagues (2007) reported was substantially larger than the one our study found. We found that men were 1.5 times more likely than women to initiate a negotiation, while Small and her colleagues (2007), using the same experimental setting, found that men were 3.5 times more likely than women to initiate a negotiation. One potential explanation for this may be that Sweden is, in some aspects, a more gender-equal country than the United States.¹⁴ Cultural attitudes are complex, however, and the evidence of the effects of culture on gender differences in economic behavior is mixed.¹⁵

Furthermore, our findings suggest that the gender of the negotiation counterpart can be a crucial factor for the gender gap in the propensity to initiate a negotiation. Thus, we argue that gender differences in initiation of negotiation should be analyzed at the dyadic rather than at the individual level. This is clearly in line with recent studies of how gender differences in economic behavior vary across contexts. Previous negotiation research has pointed to the importance of taking situational factors such as the situational ambiguity, the salience of gender stereotypes, and the nature of the negotiation task into consideration. Our results indicate that the gender of the negotiation counterpart is an additional situational factor that should be considered, and it further illustrates the importance of viewing gender differences in negotiations as contextual.

Interestingly, the direction of the effect of the gender of the counterpart *did not* support our second hypothesis. In line with Bowles, Babcock, and Lai (2007), we hypothesized that in comparison to men, women would be more reluctant to initiate a negotiation with a male than with a female counterpart. Our results show a gender composition effect in the opposite direction: women were significantly less likely than men to initiate a negotiation when the negotiation counterpart was a female but not when the negotiation counterpart was a male.

The difference between our results and those of Bowles, Babcock, and Lai (2007) could reflect differences in experimental design. For instance, our experiment was incentivized and used a face-to-face setting. In contrast, Bowles, Babcock, and Lai (2007) gave participants a written job interview scenario and asked them to rate how likely they would be to initiate a negotiation. Also, in our experiment, participants chose their own words, while Bowles, Babcock, and Lai (2007) asked participants to choose

between two specific scripts. Furthermore, in our experiment it was clear to the participants that they would never meet the negotiation counterpart again, while the scenario presented to the participants of Bowles, Babcock, and Lai (2007) did not exclude the possibility of repeated future interactions. Hence, the social cost of initiating a negotiation may have mattered relatively less for the participants in our study.

Our studies also differ in how we manipulated the status difference between the participant and the negotiation counterpart. Bowles, Babcock, and Lai (2007) instructed participants to picture that they were applying for a more qualified position within their organization and that they were about to be interviewed by a senior manager. In our experiment, the instructions did not put any label on the role of participants or on the role of the experimenter. The fact that we did not label the roles and the proximity in age between participants and experimenters may have encouraged our participants to perceive the experimenter as a peer. On the other hand, the experimenters instructed the participants what to do, evaluated them, and controlled their payment. Thus, it is also possible that participants did indeed perceive that they had less power than the experimenter.

To understand gender differences in initiation of negotiation, it seems relevant to take into account not only the gender composition of the negotiation dyad but also other status and power differences within the dyad. Joe Magee, Adam Galinsky, and Deborah Gruenfeld (2007) found that “power priming” can increase an individual’s propensity to initiate a negotiation. They randomly assigned participants either to a high-power or a low-power condition. The participants in the high-power condition were asked to recall and describe a situation in which they had power over another individual, while participants in the low-power condition were asked to recall and describe a situation in which someone else had power over them. In one experiment, participants were asked how likely they would be to negotiate the price of a new car. In another experiment, participants were asked how likely they would be to negotiate with an airline for better compensation for being bumped off their flight. In both these experiments, the researchers found that the participants primed with high power were more likely to state that they would negotiate than the participants primed with low power.

Small and her colleagues (2007) also investigated how power relates to the prospect of negotiating. In one of their experiments, they primed some of the participants with high power using the same priming procedure as Magee, Galinsky, and Gruenfeld (2007). The participants were then asked about their thoughts and feelings about negotiating for things for themselves. The researchers found that among female participants, those primed with high power found the prospect of negotiating less intimidating than those not primed with power. The male participants’ thoughts and feelings

about negotiating were however not affected by the power priming. In future research, it would be interesting to investigate how the gender composition of the negotiation dyad interacts with other status and power differences between negotiators to influence gender differences in the propensity to initiate negotiations.

The female participants in our study showed a tendency (albeit in most specifications not statistically significant) to be more likely to initiate a negotiation with a male than with a female experimenter. Bowles and Flynn (2010) offer a potential explanation for this tendency. They conducted two experiments to investigate how gender differences in persistence in negotiation vary with the gender of the negotiation counterpart and found that women are more persistent with male than with female negotiation counterparts. They argue that this pattern emerges because women expect male and female counterparts to behave differently in the negotiation. Women expect male negotiation counterparts to act competitively and female counterparts to act cooperatively. Therefore, to avoid being exploited, women persist more when facing a male than a female counterpart.

When we added controls for participant age, performance in the word puzzle, and the location of the experimental session, the estimated effect of participant gender was robust. When we also controlled for *perceived* (as opposed to actual) performance in the word puzzle, the estimated gender effect decreased by about one third and was no longer statistically significant. This finding is not in line with the results of Small and her colleagues (2007) who found that the gender difference did not decrease when they controlled for participants' perceptions of their performance. It does, however, support the results of Muriel Niederle and Lise Vesterlund (2007) who found that about one third of the gender gap in competitiveness can be attributed to men being more confident than women. Our finding regarding the effect of perceived performance on gender differences in negotiation should be interpreted with caution because participants assessed their performance on the word puzzle *after* they had been paid, which could have caused a problem of reverse causality. One interesting avenue for future research would thus be to design an experiment to investigate the effect of perceived performance on gender differences in initiation of negotiation and whether performance feedback reduces this effect.

Our results have some theoretical implications to consider when interpreting experimental data and designing new experiments. In particular, our findings suggest that observed gender differences should not necessarily be interpreted as stable behavioral differences between men and women. The gender composition of participants should be considered and when possible compared to similar studies. Furthermore, in experiments with a high level of interaction between experimenter and participant, it

would be advisable to include experimenters of both genders. Otherwise, observed gender differences may be contingent on the gender of the experimenter and only an incomplete picture will emerge.

The practical implications of research on gender differences in the propensity to initiate negotiations will obviously depend on how negotiations are related to wage and promotion. Because of data availability issues, empirical evidence on the link between negotiation and labor market outcomes is scarce. One exception is a study by Jenny Säve-Söderbergh (2007). Using unique data from a survey of Swedish university graduates, she found no gender difference in the propensity to apply for a job requiring individual wage bargaining, but that women submitted lower wage bids and were offered lower wages than men. Another exception is Fiona Greig's (2008) study on whether gender differences in the propensity to initiate negotiations could explain why women are underrepresented in senior positions. Running an experiment at an American investment bank, she found that female employees had a lower propensity to initiate a negotiation than their male colleagues and that the propensity to negotiate was correlated with rate of advancement. More field studies are clearly needed on the link between gender differences in the initiation of negotiation and gender differences in labor market outcomes.

Because we conducted a laboratory experiment, we must be cautious in generalizing our results to other settings. The negotiation situation we created differs from negotiations in the labor market in several ways. For instance, our participants first played the word puzzle and then had an opportunity to negotiate. In contrast, many wage negotiations, especially negotiations over starting salaries, are related to future rather than to past performance. Thus, an interesting avenue for further research would be to see if our results hold when the negotiation is related to compensation for future performance.

Moreover, we standardized the behavior of all experimenters in order to isolate the effect of the gender of the experimenter. Previous research suggests, however, that negotiation behavior differs between men and women (Kray and Thompson 2005) and that male and female leaders employ different leadership styles (Eagly, Johannesen-Schmidt, and van Engen 2003). This implies that the standardized behavior of our experimenters may be inconsistent with behavioral differences between male and female managers in wage negotiations. More field studies investigating gender differences in the behavior of managers and employees in wage negotiations would therefore be of great interest. Field studies could also advance the research on gender differences in initiation of negotiation by studying settings in which the manager and the employee meet regularly, the employees have some insight into their own performance, and the negotiation involves substantial monetary incentives.

NOTES

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1. Men often achieve better economic outcomes than women in negotiation experiments (Stuhlmacher and Walters 1999; Kray and Thompson 2005). Men also tend to negotiate in a more competitive style, set higher goals for themselves, and expect to perform better in negotiations (Walters, Stuhlmacher, and Meyer 1998; Kray and Thompson 2005).

2. Some studies have found that men compete more against men, or that women compete more against women (Gneezy, Niederle, and Rustichini 2003; Datta Gupta, Poulsen, and Villeval 2005). Uri Gneezy and Aldo Rustichini (2004), on the other hand, found that girls perform better when competing against a boy than against another girl while the performance of boys is not affected by the gender of the opponent. Anna Dreber, Emma von Essen, and Eva Ranehill (2011) found that neither the competitiveness of boys nor that of girls is influenced by the gender of the opponent, while Juan-Camilo Cárdenas and his colleagues (2012) found that the effect of the gender of the opponent varies between different countries and tasks.

3. We recruited participants at campuses in which there are both undergraduate and graduate students but did not ask them which they were. Most likely, our sample includes both, although we cannot say in what proportion.

4. We specified in the e-mail that participants could contact us if they wanted us to erase the recording without listening to it. Four participants asked us to do this. Furthermore, fifteen participants did not leave a valid e-mail address. Because we could not inform those participants about the recording, we did not listen to those recordings either. Finally, we lack seven recordings because of technical failures. In total, we thus listened to 178 out of 204 negotiations. Note that, since we retrieved the dependent variable (whether the participant initiated a negotiation) from questionnaires that the experimenters filled out, we did not need to listen to the recordings to obtain our dependent variable. We listened to the recordings to verify that the experimenters had acted in accordance with the script and were correct in assessing whether the participant initiated a negotiation or not. The recordings revealed that in four cases the experimenter did not follow the instructions. We performed a robustness check excluding these observations from our data, but we included them in the main analysis.

5. We employ a slightly different task than Small and her colleagues (2007). They used the word game Boggle, which is less well known in Sweden than in the United States. We chose a word puzzle to use a task as similar as possible to Boggle but familiar to the participants of our study.

6. We choose to employ a framing in which participants are informed that there is an opportunity to *negotiate*, and not an opportunity to *ask*, because we believe that the former term is more frequently used in the context of real wage negotiations.

7. To prevent rumors about how to obtain a high payment, we did not use the same maximum payment for all participants. Instead, the highest possible payment for each participant was randomly assigned to be between 60 and 100 SEK, an amount that was never revealed to the participant.

8. We dropped one observation because the participant misunderstood the instructions, and one because the experimenter and the participant knew each other.

9. In the tables, we report two standard errors for each estimated coefficient: one that is not clustered, and one that is clustered on experimenter to account for potential correlation between observations with the same experimenter. The reason we report both standard errors is that clustering on experimenter may be problematic because we only have 20 experimenters, and cluster-robust standard errors are unreliable when the number of clusters is small (Angrist and Pischke 2009). Unless otherwise stated, the *p*-values and significance levels reported in the text are based on the standard errors that are not clustered on experimenter.

10. The results from model 4 can also be analyzed for each participant gender separately. The difference in the proportion of participants who initiated a negotiation between the two conditions (female or male experimenter) is not statistically significant, neither for female ($p = 0.194$, see test in Table Four) nor for male participants ($p = 0.340$). However, when the standard errors are clustered on experimenter, the difference in the proportion of participants who initiated a

negotiation between the two conditions is statistically significant for female participants ($p = 0.070$, see test in Table Four) but not for male participants ($p = 0.164$).

11. Because we only have access to recordings from 178 out of 202 observations, there may exist undetected experimenter mistakes. However, because the experimenters departed from the instructions in only 4 out of 178 recordings, we have reason to believe that the number of undetected experimenter mistakes was very small.

12. In all robustness checks, the coefficient of *female participant* in models 1, 2, and 3 was statistically significant, and its magnitude was similar to that in Table Three. Also, again we found that the gender difference in the propensity to initiate a negotiation was small and insignificant when the experimenter was a man. When the experimenter was a woman, the gender difference was statistically significant and similar to that presented in Table Three. The only notable difference between the results in Table Three and those of the robustness checks is that the coefficient of the interaction term was statistically significant at the 10 percent level in the robustness checks (except when we excluded only the participants that had heard about the experiment before participating).

13. The results did not change when we ran logit models instead of OLS models.

14. In the Global Gender Gap Report 2010 (Hausmann, Tyson, and Zahidi 2010), Sweden ranked fourth, and the United States nineteenth.

15. See for instance Cárdenas et al. (2012) for a discussion of the mixed evidence on the effect of culture on gender differences in competitiveness and risk preferences among children.

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Appendix One

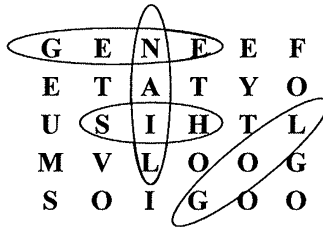
Instructions

Welcome and thank you for participating in this study. The study will take approximately 15 minutes and your task is to find words in a word puzzle.

1) Read the following description of the word puzzle:

The objective is to find as many words as possible. You can form words from adjoining letters in any direction: horizontally, vertically, diagonally, and forwards and backwards. Please circle the words you find and list them below the word puzzle.

Example



WORDS:

gene

nail

his

log

2) A word puzzle is enclosed in this envelope. Once you have understood what to do, open the envelope and start searching for words. You will have 3 minutes to find as many words as possible. Please do not forget to list all the words you find below the word puzzle.