Feeling competitiveness or empathy towards negotiation counterparts mitigates sex differences in lying

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Abstract:

Men typically express more willingness than women to perpetrate fraudulent acts like lying in negotiations. However, women express just as much willingness in some cases. We develop and test a theory to explain these mixed findings. Specifically, we hypothesize that situational cues that bring about competitive or empathic feelings mitigate sex differences in lying to negotiation counterparts. Results from four experiments confirm our hypotheses. Experiment 1 showed that men and women express equal willingness to lie when negotiating with counterparts toward whom they felt either great competitiveness or empathy. Experiment 2 extended these results by confirming that men only express more willingness to lie absent competitive or empathic feelings towards a counterpart. Experiments 3 and 4 demonstrated that inducing competitive or empathic feelings toward a counterpart eliminated sex differences in lying by leading women to lie more and men to lie less, respectively. Overall, our results suggest that the extent to which negotiators experience competitive or empathic feelings play important roles in whether sex differences in lying in negotiations emerge.

Keywords: lying | negotiation | sex differences | competitiveness | empathy

Article:

> Every violation of truth is not only a sort of suicide in the liar, but is a stab at the health of human society.
>
> –Ralph Waldo Emerson.

Negotiations are mixed-motive situations requiring cooperation and competition (Lax & Sebenius, 1986; Raiffa, 1982; Thompson, 2015). The competitive aspect of negotiations often motivates lying (Schweitzer et al., 2005) and other deceptive tactics (Cramton & Dees, 1993; Lewicki & Robinson, 1998). Though some forms of deception are considered acceptable by serving prosocial ends and engendering trust in some contexts (Levine & Schweitzer, 2015), the global community widely regards lying about material facts for self-serving purposes as unethical (Donaldson & Dunfee, 1994). Moreover, doing it in business negotiations legally constitutes fraud in many societies (Shell, 1991). Hence, negotiators who lie not only wrongly impose financial and transaction costs on their targets (see Barry & Rehel, 2013 for a review),

but also risk criminal sanctions and damaged reputations if caught (Fulmer et al., 2009). The popular press regular provides high-profile examples of such consequences. For instance, business luminaries, Bill Gates, Mark Zuckerberg, and Elizabeth Holmes each faced intense criticism in the news and Hollywood films for lying to business partners when launching their respective businesses (Microsoft, Facebook, and Theranos; Carlson, 2012; Lee, 2016; Trenholm, 2015). Despite these risks, dishonest dealing like lying in negotiations remains common resulting in presumably billions if not trillions of dollars of losses around the world each year (cf. Association of Certified Fraud Examiners, 2018).

Given these tremendous costs, scholars of business and negotiation ethics have endeavored for decades to better understand why and when negotiators lie (Gunia, 2019). Among potential factors, one of the most considered by business ethics researchers is biological sex (i.e., being a man or woman; Borna & White, 2003; McCabe et al., 2006; Suar & Gochhayat, 2016). On balance, men express more willingness to lie and use other unethical negotiation tactics than women (e.g., Lewicki & Robinson, 1998; Ma & Parks, 2012; Perry & Nixon, 2005; Robinson et al., 2000). Though the approximate ratio of male to female liars observed in controlled research (e.g., Pierce & Thompson, 2018) closely matches the 2-to-1 ratio of fraud perpetrators reported by Association of Certified Fraud Examiners (2018), this finding in sex differences is less than universal. Researchers also often find women just as willing to lie (e.g., Childs, 2012; Schweitzer & Croson, 1999) or even more so (e.g., Vesely, 2014). We conducted the present research to explain these mixed findings.

Both converging theory and emerging evidence provide a strong foundation for our research. The converging theory we draw on identifies psychological gender—dispositional traits (e.g., agreeableness, agency, communion) associated with the sexes—as mediating the relation between sex and ethicality (Pierce & Thompson, 2018). The emerging evidence points to the mitigating role of situational cues in that relation (e.g., Kennedy et al., 2017; Kray & Haselhuhn, 2012). Integrating the two, we propose that situational cues which induce either competitive or empathic feelings towards counterparts mitigate differences in sex differences in lying in negotiations. Findings from four experiments confirm our explanation.

The Mediating Role of Gender

McCabe et al. (2006) theorized and provided preliminary evidence that psychological gender mediates the relation between biological sex and ethicality. Pierce and Thompson (2018) further qualified this mediating role of gender. More specifically, they proposed and confirmed hypotheses that two factors associated with psychological gender—competitiveness (expressed more strongly by men) and empathy (expressed more strongly by women)—provide a parsimonious explanation for men's greater willingness to stretch ethical boundaries in negotiations. We review the logic and evidence they integrated to develop their hypotheses here as a backdrop for developing our own regarding the mitigating role of situational cues.

Distinguishing Sex from Gender

In common parlance, the terms "gender" and "sex" are often used interchangeably when differentiating men (or boys) from women (or girls). This usage carries over to behavioral

research in which participants report their "sex" or "gender" as either "female" or "male." Though still widely accepted in the behavioral sciences, Borna and White (2003) as well as McCabe et al. (2006) directly challenged this common practice, arguing that it precludes insight into why and how men and women differ ethically. The latter developed this argument based on the principles from gender-identity theory that sex refers to a binary physical trait determined by chromosomes whereas gender refers to a "complex social-psychological construct" (102) that subsumes both dispositional and normative differences (Bem, 1981; Spence, 1993). Then they empirically confirmed the need to distinguish biological sex from psychological gender by showing that instrumental traits expressed more by men and expressiveness traits expressed more by women (Spence et al., 1975) explained variance in ethicality beyond biological sex.

The Theoretical Connection Between Gender and Ethics

Spence and Helmreich (1978) equated the instrumental and expressive dimensions of gender with Bakan's (1966) two modes of human existence: (1) *agency*—"a focus on or orientation toward the self"—and *communion*— "a focus on or orientation toward others" (Helgeson, 1994b, p. 413). They and other psychologists have regarded these modes as dimensions or facets of gender due to repeated findings that, on average, men express *relatively* more agency and less communion than women do (Helgeson, 1994a). These facets of gender also play a central role in ethicality. As summarized by Cohen and Morse (2014), ethicality "is not about subjugating personal self-interest, but rather about balancing self-interest with the interests of other people" (p. 44). This conceptualization implies that more agentic (i.e., self-focused) and less communal (i.e., other-focused) people (more often men) tend to express more unethical attitudes and behaviors than less agentic and more communal people (more often women) as numerous ethics researchers have found (Franke et al., 1997; Jaffee & Hyde, 2000; Robinson et al., 2000).

Competitiveness as a Gendered Mediator

Agentic concerns with achievement, status, and power fuel competitiveness (Helgeson, 1994b; Trapnell & Paulhus, 2011): beliefs that one's well-being and the outcomes of comparable others are negatively correlated (Johnson et al., 1981). Men, being more agentic on average, thus also tend to be more competitive than women (Lynn, 1993; Pellegrini & Archer, 2005; Van Vugt et al., 2007), especially when negotiating (Kray & Haselhuhn, 2012; Walters et al., 1998). Converging evidence suggests that this difference partially explains why men express greater willingness to negotiate dishonestly. For instance, Kray and Haselhuhn (2012) and Lee et al. (2017), despite basing their hypothesis on distinct theoretical perspectives—motivated cognition and evolutionary theory, respectively—both reported results suggesting that competitiveness explains men's willingness to lie and stretch other ethical bounds in negotiations. Pierce and Thompson (2018) directly tested this proposition and confirmed that competitiveness partly mediates this sex difference.

Empathy as a Gendered Mediator

Communal concerns with equality, harmony, and loyalty fuel empathy for others (Helgeson, 1994b; Trapnell & Paulhus, 2011): "the extent to which people treat [or experience] another's needs or concerns as their own" (Pierce & Thompson, 2018, p. 282). Women being more

communal than men, also tend to be more empathic. Converging evidence suggests that this difference partially explains why women express less willingness to negotiate dishonestly. For example, Kennedy et al. (2017) and Ward and King (2018) developed and confirmed hypotheses explaining women's lower willingness to commit unethical transgressions in negotiations. Both sets of authors concluded that empathic concern more prevalent among women explains why they transgress less. Pierce and Thompson (2018) also extended these findings by simultaneously testing competitiveness and empathy as mediators in the relation between sex and unethical negotiation tactics. They findings confirmed that empathy also partly mediates unique variance in the relation between sex and willingness to lie over and above competitiveness.

The Mitigating Role of Situational Cues

Differences in competitiveness and empathy explain why men often express more willingness to transgress ethically. However, they leave repeated findings of women showing equal or even greater willingness to commit ethical transgressions (see McCabe et al., 2006; Suar & Gochhayat, 2016 for reviews), like lying in negotiations (e.g., Holm & Kawagoe, 2010; Vesely, 2014), unexplained. Rather, these historically mixed findings suggest the influence of one or more mitigating factors (Kennedy et al., 2017). We propose that such mitigation occurs due to situational cues. First, we highlight evidence from recent studies that situational cues can mitigate sex differences in ethicality by eliciting differential responses from men and women. Then we offer theoretical explanations for why and when these differential responses occur.

Emerging Evidence of Differential Responses to Situational Cues

Some situational cues seem to significantly reduce lying by men but not women whereas other cues do the opposite, that is, significantly increase lying among women but not men. For instance, Kray and Haselhuhn (2012) found that inducing buyers to identify with sellers in a negotiation significantly reduced dishonesty only among men, making them as honest as women. Conversely, Kennedy et al. (2017) found in two studies that introducing performance incentives led to a dramatic increase in lying among women but not men. Ward and King (2018) found that women's but not men's intentions to engage dishonestly significantly increased when asked "to adopt a detached and unemotional perspective" (p. 658). Taken together, these findings suggest that situational cues can mitigate sex differences in lying by either (a) calling for more agentic (i.e., self-focused) ways of being (e.g., with competitive contexts, performance incentives, thinking in utilitarian ways more characteristic of men; Conway & Gawronski, 2013), which leads to larger increases in lying among women or (b) calling for more communal (i.e., other-focused) ways of being (e.g., empathizing with counterparts), which leads to larger decreases in lying among men.

Why Situational Cues Can Elicit Differential Responses

A distinction between two levels of individual differences—(1) *basic tendencies* and (2) *characteristic adaptations* (McAdams & Pals, 2006; McCrae & Costa, 2008)—elucidates why differential responses to situational cues occur. Basic tendencies refer to relatively enduring, biologically based traits that predispose people to experience consistent affective responses (e.g., competitive or empathic feelings) to similar situations. These tendencies fall into a hierarchy

with the dimensions of the five-factor model (Extraversion, Conscientiousness, Agreeableness, Openness to Experience, and Neuroticism) forming the second highest level, under Agency and Communion (Abele & Wojciszke, 2007). Consistent with the foregoing discussion, people with more agentic traits show more willingness to commit ethical transgressions whereas people with more communal traits show less (Cohen & Morse, 2014; Cohen et al., 2014).

The second level, characteristic adaptations, refer to moderately stable patterns of motivations that emerge from an interaction between traits and the dynamic demands of life (i.e., conflicting goals). These motivations are "characteristic because they reflect the enduring psychological core of the individual, and … adaptations because they help the individual fit into the ever-changing social environment" (McCrae & Costa, 2008, pp. 163–164). Whereas traits account for default emotional responses to situations, characteristic adaptations account for goal-contingent responses. Differential responses occur when goal-relevant cues activate characteristic adaptations that override default responses. Thus, situational cues that call for more competition or cooperation elicit behavioral changes from people with the opposite basic tendency. For instance, increases in competitive behavior observed when negotiators perceive counterparts as competitive are mostly if not entirely due to changes among people whose basic tendency is to cooperate; people whose default response is to compete will tend to do so regardless (Graziano et al., 1997).

When Situational Cues Can Elicit Differential Responses

Extant evidence suggests situational cues elicit differential responses under two conditions. First, given that people can disregard weak or trivial cues and follow their default responses (Mischel, 1977), situational cues must have sufficiently strong counteracting effects to override default responses to elicit differential responses. Second, situational cues must be consistent and few in number to elicit differential responses. Competing or overwhelming cues will push people back to their default responses. Consider how Graziano et al. (2007) demonstrated both these conditions. They first showed that strong cues elicited an *increase* in empathy and altruism only among participants low in agreeableness. Then, they demonstrated that imposing additional burdens (high costs of helping) inverted the effect such that altruism *decreased* among participants low in agreeableness. Given this pattern, we propose that sufficiently strong and simple situational cues that induce competitiveness or empathy will eliminate sex differences in willingness to lie in negotiations by inducing differential responses in women (who tend to be less competitive) and men (who tend to be less empathic), respectively.

Hypotheses and Overview of Present Research

The foregoing discussion provides an explanation for why women sometimes express as much willingness to lie as men in negotiations. To summarize, we propose that situational cues can override the default responses men and women have to counterparts in negotiations. Whereas previous research has confirmed that men's more agentic and less communal basic tendencies making them more willing to lie and use other unethical negotiation tactics due to more competitive and less empathic default responses, emerging theory and evidence suggests that situational cues can override each of these default responses. This reasoning leads us to the following two more specific hypotheses:

Hypothesis 1. Experiencing competitive feelings towards counterparts mitigates sex differences in lying in negotiations by having a stronger positive effect on women's willingness to lie.

Hypothesis 2. Experiencing empathic feelings towards counterparts mitigates sex differences in lying negotiations by having a stronger negative effect on men's willingness to lie.

We tested these hypotheses with four experiments.

In Experiment 1, we explored whether typical differences in lying between men and women would disappear when they felt either great competitiveness or great empathy towards negotiation counterparts. In Experiment 2, we examined whether competitive and empathic feelings toward an unknown negotiation counterpart would differentially influence men and women's intentions to lie. In Experiment 3, we reconfirmed women's stronger response to cues provoking feelings of competitiveness in a simulated negotiation context with real stakes. Finally, in Experiment 4, we reconfirmed men's stronger response to cues provoking feelings of empathy using the same simulated context as we used in Experiment 3.

The findings from our experiments inform ongoing discussions and debates regarding sex differences in negotiation (Babcock & Laschever, 2009; Bear & Babcock, 2012; Bowles, 2012) and ethics (Franke et al., 1997; Kish-Gephart et al., 2010; McCabe et al., 2006), as well as in general (Croson & Gneezy, 2009; Hyde, 2005). Specifically, they provide the first explicit, validated explanation as to why researchers often find that women express similar willingness to lie or stretch other ethical boundaries as men. Showing that situational cues can eliminate significant sex differences in lying extends current theories regarding the role of gender in sex differences in negotiation ethics as well as ethicality more broadly. As a secondary contribution, our findings also offer resolution to conflicting arguments regarding sex differences in responsiveness to situational cues. Whereas some scholars claim that psychological research demonstrates that women's social preferences "are more sensitive to social cues" (Croson & Gneezy, 2009, p. 455), other scholars claim the opposite that men "adjust … on the basis of situational characteristics … more so than [women]" (Kray & Haselhuhn, 2012, p. 1124). We establish that either can occur depending on the type of situational cue.

Experiment 1

We conducted Experiment 1 as a preliminary test of whether feeling competitiveness or empathy towards counterparts suppresses sex differences in willingness to lie in negotiations. We followed a precedent established by moral behaviorists (e.g., Kennedy et al., 2017; Kray & Haselhuhn, 2012; Lee et al., 2017; Pierce & Thompson, 2018) who commonly conduct initial tests of their hypotheses using responses to the Self-Reported Inappropriate Negotiation Strategy (SINS) scale (Robinson et al., 2000) as a proxy for unethical behavior. Specifically, we used variants of this approach and protocols developed by Galinsky and his colleagues (Galinsky et al., 2003; Pierce et al., 2013) as an initial test of our hypotheses.

Method

One hundred nine US adults (54.13% men/45.87% women) were recruited via Amazon's Mechanical Turk (MTurk) to participate in Experiment 1. The participants had an average age of 34.61 years (SD = 9.44) and educations that varied from high school diplomas (14.00%) to doctorate (0.92%), with the largest portion having completed a 4-year university degree (43.12%). Participants were assigned to one of two experimental conditions.

Participants in the *competitiveness* condition were instructed to "tell us about someone with whom you feel a great deal of competitiveness." Participants in the empathy condition were instructed to "tell us about someone for whom you feel a great deal of empathy" (see Appendix 1 for full prompts). In both conditions, participants then reported how competitive and empathic they felt towards the person they described. We solicited these feelings with a prompt that read, "Before we continue, would you tell us to what degree you feel the following toward, [the name of the person they described], the person you just described," followed by a Likert scale (1 = Not at all, 7 = Extremely) adopted from Pierce and Thompson (2018). The scale lists four feeling terms in randomized order: "Competitive" plus three synonyms of empathy (Thesaurus.com, 2020)—"Compassionate," "Sympathetic," and "Warm" ($\alpha = 0.96$). Next, participants were asked to imagine that they were negotiating with the person they described and to report the likelihood they would use eight aggressive negotiation tactics adapted from the SINS Scale and presented in random order (1 = Definitely would not, 5 = Definitely would). One of these, "Intentionally misrepresent factual information in order to support your negotiating arguments or position" (i.e., lie), served as our dependent variable (see Appendix 1 for all 8 items).

Results

We checked the validity of participant responses and found that six included invalid descriptions of other people, including irrelevant, repetitive, or meaningless phrases. We report the remainder of our results with these records excluded, even though including them had no substantive impact on any of our findings.

We report descriptive statistics and zero-order correlations in Table 1. The pattern of correlations fit with our expectations. Participants in the competitive condition reported feeling more competitive with ($M = 5.89$, SD = 1.27, 95% CI [5.49, 6.30]) and less empathy ($M = 2.75$, SD = 1.54, 95% CI [2.40, 3.11]) for the people they described than participants in the empathy condition (M's = 2.04 and 6.27, SD's = 1.47 and 0.89, 95% CI's = [1.67, 2.40] and [5.95, 6.60]; F's(1, 101) = 197.60 and 209.23, p's < 0.001, η_p^2's = 0.66 and 0.67, respectively). Participants in the competitive condition also expressed more willingness to lie ($M = 2.09$, SD = 1.21, 95% CI [1.79, 2.38]) while negotiating with the person they described than those in the empathy condition ($M = 1.38$, SD = 0.84, 95% CI's = [1.10, 1.65]; $F(1, 101) = 12.19$, $p < 0.001$, $\eta_p^2 = 0.11$). In contrast to previous research in which scholars have reliably found significant differences in willingness to lie between men and women (e.g., Pierce & Thompson, 2018; Robinson et al., 2000), no such difference emerged in either condition in this experiment.

As illustrated in Fig. 1, men expressed statistically as low willingness to lie ($M = 1.41$, $SD = 0.87$, 95% CI [1.04, 1.77]) in the empathy condition as women ($M = 1.33$, $SD = 0.82$, 95% CI [0.92, 1.75]) and women expressed statistically as much willingness to lie ($M = 1.91$, $SD = 1.12$, 95% CI [1.49, 2.34]) in the competitive condition as men ($M = 2.25$, $SD = 1.29$, 95% CI [1.83, 2.67]; *F's*(1, 101) = 0.07 and 1.25, *p's* = 0.79 and 0.27, respectively).

Table 1. Correlations and descriptive statistics for experiment 1

Measure	***M***	***SD***	**1**	**2**	**3**	**4**	**5**	**6**
1. Sex (male = 1)	0.54	0.50	–					
2. Age	34.61	9.44	− 0.08	–				
condition (empathy = 1)	0.54	0.50	0.04	0.00	–			
3. Competitive	3.74	2.38	0.05	− 0.04	− 0.80	–		
4. Empathy scale	4.69	2.11	0.07	− 0.03	0.79	− 0.60	0.96	
5. Lying	1.74	1.12	0.07	− 0.03	− 0.34	0.33	− 0.23	–

Values along the diagonal reflect internal reliabilities where applicable. Correlations with absolute values greater than 0.2 and 0.3 were significant at the 0.01 and 0.001 levels, respectively. All other correlations were not significant

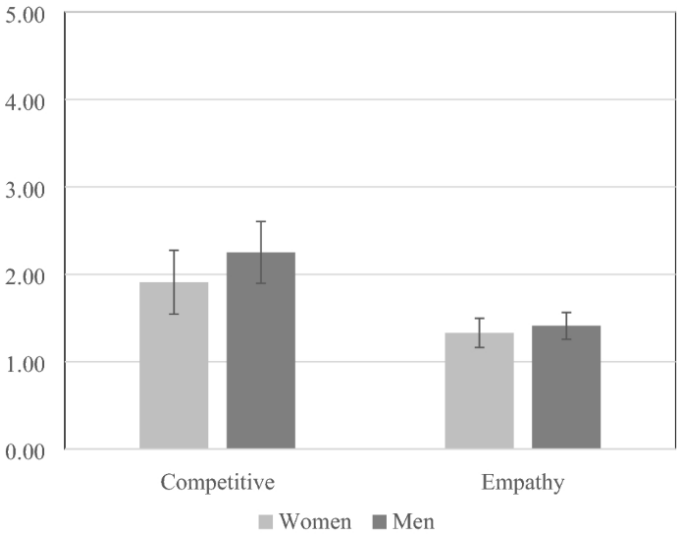

Fig. 1. Self-reported likelihood of lying to counterpart in a negotiation

Discussion

Our results provide indirect, initial support for both our hypotheses. We say "indirect" because we are inferring this support from the absence of the significant difference in willingness to lie that typically appears between men and women. Though participants expressed significantly more willingness to lie to negotiation counterparts towards whom they felt competitive than to those toward whom they felt empathy, men and women expressed the equivalent willingness to lie in both conditions. These outcomes suggest differential effects because men typically express more willingness to lie to negotiation counterparts than women absent such cues (e.g., Pierce & Thompson, 2018). Methodological limitations, however, compel us to interpret these results with caution.

Specifically, Experiment 1 did not contain a control condition which would provide a baseline for lying (in neutral contexts). In addition, asking participants how likely they would be to lie to others towards who they felt great competitiveness or empathy towards introduces concerns with demand characteristics, socially desirable responding, and inconsistencies in the types of negotiation counterparts participants imagined. We designed Experiment 2 to conceptually replicate our findings and overcome all these methodological limitations, except socially desirable responding. Findings that social desirability impacts women's self-reports of unethical behaviors and intentions more than men's (Dalton & Ortegren, 2011) compelled us to use a separate strategy to overcome it which we implemented in Experiments 3 and 4.

Experiment 2

In Experiment 2, we presented participants with a hypothetical scenario that included an implicit opportunity to lie. This scenario allowed for a control condition which provided a baseline for assessing the relative effects of competitiveness and empathy manipulations. We based the former manipulation on findings that the prospect of engaging with a competitive person induces competitiveness (Pierce et al., 2013) and the latter on the well-established connection between empathy and altruism (Batson & Moran, 1999; Batson et al., 1991).

Method

Experiment 2 had three conditions: control, competitiveness-inducing, and empathy-inducing. Based on the results published by Pierce and Thompson (2018), we estimated that 100 participants per condition would yield power of between 80 and 85% for identifying differences in lying between the sexes. We met this target by recruiting 313 adults (49.52% men/50.48% women) from the United States via Amazon's Mechanical Turk (MTurk) and randomly assigning them to one of three experimental conditions. The participants had an average age of 35.88 years (SD = 11.69) and educations that varied from short of a high school diploma (1.28%) to doctorate (1.28%), with the largest portion having completed a four-year university degree (35.14%).

Experimental Manipulation

Participants in all three conditions read a hypothetical scenario adapted from Pierce and Thompson's (2018) Study 2 (see Appendix 2 for the full text). This scenario put them in the role of the owner and manager of jewelry shop who operates a side business as a broker of rare coins. They were informed that they had just received an email inquiry from Terry, a client, who had found an old dime and wanted to sell it. Participants were given different background information about the client which served as the manipulation.

All participants were told they had never interacted nor transacted business with Terry before, followed by qualifying comments which varied between conditions. Participants in the *control* condition read that they felt "neutral" toward the client, given that they did not have a previous relationship. Participants in the *competitive* condition read that they felt "very competitive towards" the client due to Terry's reputation as "the owner and operator of the largest and most profitable jewelry shop in town …" who "…brags about winning customers from you and other

jewelers and dreams of putting you all out of business." Participants in the *empathy* condition read that they felt "a great deal of empathy toward Terry" due to this client's reputation "as a well-respected senior citizen in your community …" who "…often sells off personal belongings to purchase gifts for underprivileged children" (see Appendix 2 for the full manipulations). We assessed the impact of our manipulations by asking participants to report to what extent they felt competitive and empathic towards Terry using the same scale ($\alpha_{\text{empathy}} = 0.95$) we used in Experiment 1.

Intention to Lie to Terry

Our key dependent measure was participants' intention to lie. All participants were told that another buyer was willing to pay $150.00 for the coin. Following Pierce and Thompson (2018), participants completed a two-part proposal. Part 1 of the proposal involved informing Terry (the client) about the other offer: "I have a buyer who is willing to pay $_____ for your dime." Part 2 involved completing a statement to inform Terry client how much the net proceeds would be less the amount the participant would keep as commission: "I offer you $_____ of the sale price. I will keep the rest as my commission."

We coded participants' intention to lie according to the amount they said they would report to Terry in Part 1. Thus, participants who indicated they would tell the client that they had an offer for $150 (the actual amount) were coded as honest (intention to lie = 0). Participants who understated the offer were coded as intending to lie (intention to lie = 1). Moreover, we included a comprehension check in the experimental protocol to ensure that participants were aware of their own lie. We excluded data from 27 participants who failed to recall the correct amount ($150) from our analysis and 22 others who failed to understand that they would get $0 (zero) if the client rejected their offer. Excluding these results had no substantive impact on our results. The full script and prompts are included in Appendix 2.

Results

Manipulation Check

The manipulations of competitiveness and empathy were successful. Specifically, participants in the competitive condition reported feeling more competitive toward the client ($M = 5.62$, $SD = 1.38$, 95% CI [5.31, 5.93]) than participants in the control condition ($M = 2.20$, $SD = 1.49$, 95% CI [1.90, 2.48]; $F(1, 172) = 246.08$, $p < 0.001$, $\eta_p^2 = 0.59$), who, in turn, reported feeling more competitive toward Terry than participants in the empathy condition ($M = 1.70$ $SD = 1.39$, 95% CI [1.40, 1.99]; $F(1, 180) = 5.36$, $p = 0.02$, $\eta_p^2 = 0.03$). Conversely, participants in the empathy condition reported feeling more empathy toward the client ($M = 5.38$, $SD = 1.47$, 95% CI [5.11, 5.66]) than participants in the control condition ($M = 3.02$, $SD = 1.43$, 95% CI [2.76, 3.30]; $F(1, 180) = 119.67$, $p < 0.001$, $\eta_p^2 = 0.40$), who, in turn, reported feeling more empathy toward the client than participants in the competitive condition ($M = 1.61$, $SD = 1.01$, 95% CI [1.32, 1.89]; $F(1, 172) = 56.19$, $p < 0.001$, $\eta_p^2 = 0.25$).

Main Effects

Our three experimental conditions yielded main effects consistent with previous established theory regarding the effects competition and empathy have on lying. More participants expressed intentions to lie in the competitive condition (30.49%; 95% CI [20.52%, 40.45%]) than participants in the control condition (18.48%; 95% CI [10.55%, 26.41%]; $\chi^2(1) = 3.41$, $p = 0.065$), more of whom, in turn, expressed an intention to lie than participants in the empathy condition (5.56%; 95% CI [00.08%, 10.29%]; $\chi^2(1) = 7.14$, $p = 0.008$). Our manipulations also had differential effects on men and women as we hypothesized.

Differential Effects

As illustrated in Fig. 2, significant sex differences in lying only emerged in the control condition with men and women expressing statistically equal intentions to lie to the client in the competitive and empathy conditions. More specifically, more than a quarter of men (28.21%; 95% CI [14.08%, 42.33%]) in the control condition expressed intentions to lie as compared to fewer than an eighth of women (11.32%; 95% CI [2.79%, 19.85%]; $\chi^2(1) = 4.25$, $p = 0.039$). This gap became non-significant in both the competitive ($\chi^2(1) = 1.44$, $p = 0.230$) and empathy ($\chi^2(1) = 0.66$, $p = 0.797$) conditions despite substantial increases and decreases in the rates of intentions to lie among both sexes in each. In the competitive condition, the rate among men (36.59%; 95% CI [21.84%, 51.33%]) increased by almost a third (+ 8.38%) relative to the control condition whereas it more than doubled among women (+ 13.07%; 24.39%; 95% CI [11.25%, 37.54%]). In the empathy condition, conversely, the rate among women (4.88%; 95% CI [0.00%, 11.47%]) decreased by just over half (− 6.44%) whereas the rate among men decreased by more than three quarters (− 22.09%; 6.12%; 95% CI [0.00%, 12.84%]) nearly eliminating the sex difference altogether.

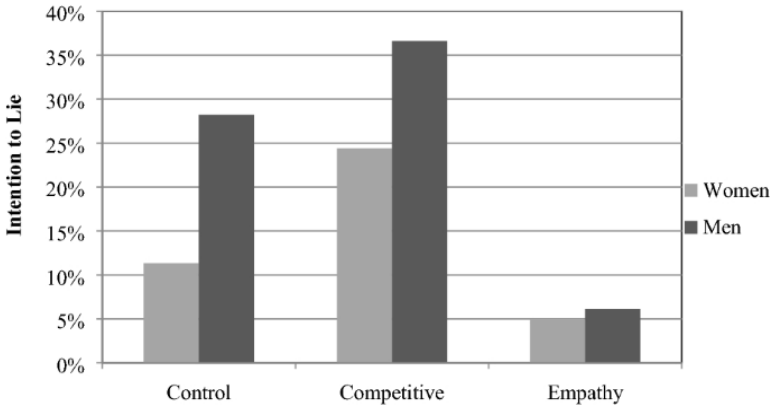

Fig. 2. Percentage of participants expressing intention to lie by condition and sex

The differential rates of intention to lie among men and women across the experimental conditions suggest interactions between our experimental condition and the sex of our participants. Whereas the number of men in the competitive condition who expressed an intention to lie to the client (36.59%; 95% CI [21.84%, 51.33%]) was statistically equal to that of men in the control condition (28.21%; 95% CI [14.08%, 42.33%]; $\chi^2(1) = 0.64$, $p = 0.424$), the number of women in the competitive condition who expressed intention to lie to the client (24.39%; 95% CI [11.25%, 37.54%]) was significantly, albeit marginally, greater than that of women in the control condition (11.32%; 95% CI [2.79%, 19.85%]; $\chi^2(1) = 2.80$, $p = 0.095$). Conversely, the number of women in the empathy condition who expressed an intention to lie to

the client (4.88%; 95% CI [0.00%, 11.47%]) was statistically equal that of women in the control condition (11.32%; 95% CI [2.79%, 19.85%]; $\chi^2(1) = 1.23$, $p = 0.267$) whereas the number of men in the empathy condition who expressed an intention to lie to the client (6.12%; 95% CI [0.00%, 12.84%]) was significantly lower than that of men in the control condition (28.21%; 95% CI [14.08%, 42.33%]; $\chi^2(1) = 7.92$, $p = 0.005$).

Discussion

These results further demonstrate the differential effects of competitive and empathic feelings on lying by men and women. As opposed to control condition (feeling neutral towards the counterpart), negotiating with a counterpart towards whom participants felt competitive led to a greater increase in lying among women than men; whereas negotiating with a counterpart towards who participants felt empathy led to a greater *decrease* in lying among men than women. Nevertheless, we must interpret these results with caution for four reasons.

First, we explicitly informed participants whether they felt competitive, empathy or neutral toward their negotiation counterpart, which diminishes mundane realism and introduces the potential for demand characteristics. Second, our dependent variable involved a hypothetical behavior (lying). Third, the self-reported dependent variable leaves the same potential for sex differences in socially desirable responding (Dalton & Ortegren, 2011) to distort our results as it did in Experiment 1. Fourth, though not reported above, we also unexpectedly found that that the empathy condition induced a larger increase in empathy expressed by women rather than by men contrary to what our theory would predict. We conducted Experiments 3 and 4 to replicate our findings in ways that address these concerns.

Experiment 3

We implemented Experiment 3 to replicate the differential effect of competitive cues on lying by men and women in a more realistic context. We induced competitive feelings with a subtle experimental manipulation and observed actual behavior with real money at stake. Given that aggressive and threatened feelings in competitive contexts tend to differ between men and women as well as predict ethically dubious behaviors (Cohen et al., 2011; Pierce et al., 2013), we also tested for them as alternative explanatory factors.

Method

As in Experiment 2, we set a target of 100 participants per condition to achieve power of between 80 and 85% for identifying differences in lying between the sexes. We recruited 230 (49.57% men/50.43% women) adult US residents ($M_{age} = 33.81$, SD = 10.55) via Amazon Mechanical Turk in anticipation of 15% of unusable observations. Participants were randomly assigned to one of two conditions: *control* and *competitiveness-inducing*. In both conditions, participants completed the incomplete-information ultimatum game (Mitzkewitz & Nagel, 1993), which provided them both an opportunity and an incentive to lie to a counterpart for monetary gain.

Lying

Like the standard ultimatum game, the incomplete-information variant simulates the final-offer phase in negotiations (Pillutla & Murnighan, 1995). In the standard version, two parties—a proposer and a responder—decide how to split a resource (the pie), often a sum of money. The former proposes how to divide the resource (e.g., 50–50%, 60–40%, etc.) leaving the latter to either accept or reject the proposal. If accepted, each receives the amounts proposed, otherwise each gets nothing. In the incomplete-information version, proposers rather than experimenters inform responders about the size of the pie. The inability of responders to confirm the actual amount gives proposers the opportunity and temptation to lie without risk of detection.

The temptation to lie emerges due to typical interpretations of the ultimatum game. Contrary to rational choice theory, almost all "subjects placed in a symmetric bargaining setting in which they are instructed to divide [a fixed sum] with another party will believe that … an even split is fair" (Babcock & Loewenstein, 1997, p. 120). In the incomplete-information version, consequently, proposers who wish to obtain more than 50% of the pie almost always lie about its size rather than offer less than 50% of it to the responder. For example, proposers seeking to keep $10 of a $15 pie typically do so by claiming an endowment of $10 and offering half of that ($5) rather than reporting the actual amount ($15) and offering one-third ($5) to the responder. This tactic generally succeeds because responders are more likely to accept offers of $5 out of $10 than $5 out of $15 (see Straub & Murnighan, 1995).

We assigned all participants to the proposer role and simulated responders by computer. We ensured participants understood the procedure by way of a comprehension check. After passing the check, participants learned they had 15 points (equal to $1.50) to split and completed the following two messages to send to their counterparts:

1) I have been given ____ points to split with you.
2) I offer you ____ points. I will keep the rest.

We permitted participants to enter an amount between 8 and 15 (the range specified in the instructions given to them) for the first value and an amount between 0 and 15 for the second.

Experimental Manipulation

We introduced our experimental manipulation through the instructions and comprehension checks for the incomplete-information ultimatum game. In the control condition, we referred to the game as a "two-person decision-making exercise" and to the responder as "counterpart." In the competitive condition, we changed "two-person decision-making exercise" and "counterpart" to "bargaining game" and "your opponent," respectively. We also added a general statement about the outcome at the end of the instructions. The statement for the competitiveness-inducing condition read, "The winner is the participant who finishes the bargaining game with the most points" whereas the statement for the control condition read, "The value of the points is the same for each participant." Finally, we added a comprehension-check item asking participants whether these same statements were true or false.

Manipulation Checks

We asked participants to report how competitive and empathic ($\alpha = 0.91$) they felt toward their counterparts as we did in Experiments 1 and 2. These items served as our manipulation check. In addition, we added two additional terms to the scale—"Aggressive" and "Threatened"—to evaluate as potential alternative explanatory factors.

Response Validation

We confirmed that any participants who lied to their counterparts did so intentionally. We did so by asking them to recall their actual allocations and to indicate the number of points they would receive if their offers were accepted. Given that responders were simulated, we also probed for suspicion at the end of the session. We excluded data from 35 participants who failed to recall the correct amount or who expressed suspicion about the existence of the counterpart. The pattern of results remained unchanged with data from all participants included.

Results

Manipulation Check

Participants in the competitive condition expressed feeling more competitive ($M = 4.25$, SD = 1.74, 95% CI [3.92, 4.57]) than participants in the control condition ($M = 2.92$, SD = 1.74, 95% CI [2.55, 3.29]; $F(1, 193) = 28.00$, $p < 0.001$, $\eta_p^2 = 0.13$) confirming that our manipulation succeeded. In line with our expectations, the manipulation had a stronger effect on women than men. Though our manipulation induced greater feelings of competitiveness among both men ($F(1, 96) = 9.91$, $p = 0.002$) and women ($F(1, 95) = 21.88$, $p < 0.001$), the statistical effect size was roughly twice as large among women ($\eta_p^2 = 0.187$) as among men ($\eta_p^2 = 0.094$). No such differential effect manifested with respect to feelings of aggression, threat, or empathy. Rather our manipulation led to undifferentiated increases and decreases in feelings of threat and empathy, respectively, and, unexpectedly, a greater increase in feelings of aggression among men ($\eta_p^2 = 0.126$) than women ($\eta_p^2 = 0.039$).

Main Effects

More participants lied to their counterparts in the competitive condition (60.00%, 95% CI [50.22%, 69.22%]) than in the control condition (40.00%, 95% CI [28.44%, 50.01%]; $\chi^2(1) = 8.60$, $p = 0.003$). Overall, men and women lied at statistically equivalent rates ($\chi^2(1) = 0.13$, $p = 0.721$): across both conditions, women lied to their counterparts (49.48%, 95% CI [39.17%, 59.83%]) with statistically equivalent frequency as men (52.04%, 95% CI [41.71%, 62.24%]). We did, however, find significant differential effects.

Differential Effects

As shown in Fig. 3, more men lied (48.98%, 95% CI [34.42%, 62.98%]) than women (25.00%, 95% CI [12.12%, 42.20%]; $\chi^2(1) = 5.02$, $p = 0.025$) in the control condition whereas more, albeit not significantly more, women lied (63.93%, 95% CI [50.63%, 75.84%]) than men (55.10%,

95% CI [40.23%, 69.33%]; $\chi^2(1) = 0.88$, $p = 0.35$) in the competitive condition. This finding suggests that the manipulation moderated the degree of the relation between participant sex and lying. Indeed, the increase was greater among women (+ 38.93%) than among men (+ 6.12; $Z_{one\text{-}tailed} = 3.08$, $p = 0.002$). Women in the competitive condition lied more frequently (63.93%, 95% CI [50.63%, 75.84%]) than women in the control condition (25.00%, 95% CI [12.12%, 42.20%]; $\chi^2(1) = 13.73$, $p < 0.001$) whereas men lied at statistically equivalent rates between the competitive (55.10%, 95% CI [40.23%, 69.33%]) and control conditions (48.98%, 95% CI [34.42%, 62.98%]; $\chi^2(1) = 0.37$, $p = 0.544$).

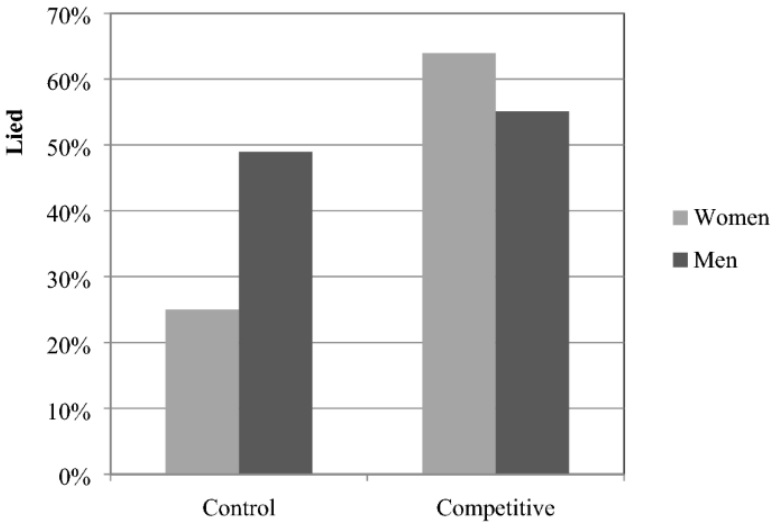

Fig. 3. Percentage of participants who lied to counterparts by condition and sex

Discussion

The results of Experiment 3 provide more definitive evidence that situational cues that call for competitiveness mitigate sex differences in lying. Consistent with Experiments 1 and 2, the overall pattern of findings suggests that inducing competitive feelings towards counterparts has a larger effect on women's willingness to lie in negotiations than men's. Given strong correlations between competitiveness and empathy in the first two experiments, a key question remains concerning whether manipulating empathic feelings will also yield a differential effect on lying. We designed and implemented Experiment 4 to answer this question.

Experiment 4

We implemented Experiment 4 to replicate the differential effect of cues for empathy on lying by men and women in a more realistic context than Experiments 1 and 2. We used the same general protocol as Experiment 3 with manipulations based on an established paradigm.

Method

Targeting 100 observations per condition and anticipating about 15% unusable observations, as in Experiment 3, led us to recruit 233 (50.02% men / 49.98% women) adults residing in the US via Amazon Mechanical Turk. The participants had an average age of 33.95 years (SD 11.85)

and completed the same general procedure as the control condition used in Experiment 3 with two differences: all participants (1) stated their reason for being an MTurk worker at the beginning of the study and (2) read their counterparts' ostensible reasons after being matched prior to completing the incomplete-information ultimatum game. These modifications facilitated our manipulation of empathy for the counterpart.

Experimental Manipulation

We based our manipulation of empathy on Batson et al.'s (2007) theory that empathic concern has two origins: (1) valuing the welfare of another and (2) affective perspective taking (i.e., imagining how the other feels). Hence, we varied cues for both using an adapted version of Batson et al.'s two-part protocol. First, we varied cues for valuing the welfare of the counterpart through the ostensible reason the counterpart gave for being an MTurk worker. Participants in the high-empathy condition read, "I do MTurk so I can buy some small gifts and treats *for my young grandkids*. I was *forced* to retire early and living off my retirement savings leaves me just enough to get by," whereas participants in the low-empathy condition read, "I do MTurk so I can buy some small gifts and treats for *myself*. I *want* to retire early and building my retirement savings leaves me just enough to get by" (emphases added here to highlight between-condition differences). Second, we manipulated affective perspective taking by instructing participants in the high-empathy condition to "put yourself in the other person's shoes and imagine how that reason has affected his or her life and how he or she feels as a result." Conversely, we instructed participants in the low-empathy condition to "try not to get caught up in how the other person feels; just remain objective and detached."

Manipulation Checks

We measured empathy using the same three items we used in the previous three experiments: compassionate, sympathetic, and warm ($\alpha = 0.94$). We randomly presented these items among the four others (aggressive, competitive, and threatened) included in Experiment 3. As manipulation checks, we also asked participants to report how much they took the perspective of as well as how objective they attempted to remain regarding their counterpart (1 = Not at all, 5 = Very much).

Response Validation

In addition to the response validation items we used in Experiment 3, we also asked participants to recall their counterparts' ostensible reasons for using MTurk. We excluded data from 5 participants who failed our attention check, 3 who failed to recall their counterparts' reason for using MTurk, and 28 who expressed suspicion about the existence of their counterpart resulting in a final sample of 197. Including all observations did not change the overall pattern of results.

Results

Manipulation Checks

Participants in the high-empathy condition expressed more feelings of empathy ($M = 4.91$, SD = 1.54, 95% CI [4.61, 5.21]), more perspective taking ($M = 4.21$, SD = 0.94, 95% CI's = [4.01, 4.41]), and less objectivity ($M = 3.83$, SD = 1.06, 95% CI's [3.63, 4.04]) than those in the low-empathy condition (M's = 4.02, 3.58, and 4.12, SD's = 1.55, 1.11, and 1.03, 95% CI's [3.71, 4.34], [3.37, 3.79], and [3.90, 4.33]; $F(1, 195)$'s = 16.00, 18.55 and 3.60, p's < 0.001, < 0.001 and = 0.059, η_p^2's = 0.08, 0.09, and 0.02, respectively). As in Experiment 3, we checked for differential effects on men than women and only found one meaningful one. Our manipulation had a more than 50% greater effect on self-reported perspective taking among men ($\eta_p^2 = 0.119$) than among women ($\eta_p^2 = 0.074$). Though it also had a slightly larger effect on men ($\eta_p^2 = 0.087$) than women ($\eta_p^2 = 0.082$) with respect to feelings of empathy towards the counterpart, the difference was minimal. It also bears noting that our manipulation had no significant effects on expressed feelings of competitiveness, aggression, or threat with respect to the counterpart ($F(1, 195)$'s = 0.07, 1.27, and 0.01, p's > 0.26).

Main Effects

More participants lied to their counterparts in the low-empathy condition (39.36%, 95% CI [29.44%, 49.98%]) than in the high-empathy condition (21.36%, 95% CI [13.90%, 30.53%]; $\chi^2(1) = 7.59$, $p = 0.006$). Overall, women lied at lower rates than men. That is, across both conditions, fewer women lied (24.27%, 95% CI [16.36%, 33.71%]) than men) than men (36.17%, 95% CI [26.51%, 46.73%]; $\chi^2(1) = 3.31$, $p = 0.069$). As in Experiment 3, we found that significant differential effects qualified these outcomes.

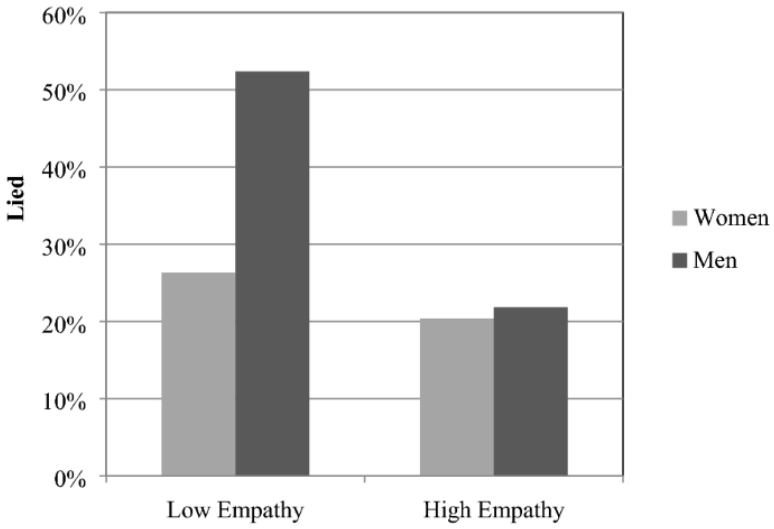

Fig. 4. Percentages of participants who lied to counterparts by condition and sex

Differential Effects

As illustrated in Fig. 4, significantly fewer women lied (28.30%, 95% CI [16.79%, 42.35%]) than men (53.66%, 95% CI [%38.39, 68.92%]; $\chi^2(1) = 6.23$, $p = 0.013$) in the low-empathy condition whereas statistically as few men lied (22.64%, 95% CI [12.28%, 36.21%]) as women (20.00%, 95% CI [10.03%, 33.72%]; $\chi^2(1) = 0.11$, $p = 0.744$) in the high-empathy condition. This finding suggests that the manipulation moderated the degree of the relation between participant

sex and lying. Indeed, the reduction in lying among men (− 31.02%) was almost four times as much as that among women (-8.30%; $Z = 2.26$, $p = 0.024$). Men lied less frequently (22.64%, 95% CI [12.28%, 36.21%]) in the high-empathy condition than they did in the low-empathy condition (53.66%, 95% CI [%38.39, 68.92%]; $\chi^2(1) = 9.63$, $p = 0.002$) whereas women lied at statistically equivalent rates in the high- (20.00%, 95% CI [10.03%, 33.72%]) and low-empathy conditions (28.30%, 95% CI [16.79%, 42.35%]; $\chi^2(1) = 0.96$, $p = 0.326$).

Discussion

The results of Experiment 4 confirm and extend those of first three experiments. As in Experiment 2, experiencing feeling more rather than less empathy towards a counterpart had a led to a significant decrease in the rate of lying by men but not by women. This outcome further illustrates how differential responses to situational cues can determine whether sex differences in lying emerge or not.

General Discussion

We conducted the present research to develop and test an explanation for why women sometimes, but not always, express as much willingness to lie in negotiations as men. Across four experiments, we consistently observed men and women lie at comparable rates when situational cues induced competitive or empathic feelings. This pattern emerged across distinct experimental protocols and manipulations. In Experiment 1, men and women expressed equivalent willingness to lie in hypothetical negotiations with real counterparts towards whom they felt highly competitive or highly empathic. Experiment 2 included a control condition to demonstrate that such competitive and empathic feelings have differential effects whereby competitive feelings had a larger effect on women, making them more dishonest whereas empathic feelings had a larger effect on men, making them more honest. Experiments 3 and 4 replicated these differential effects with more realistic manipulations and real stakes. These results have multiple theoretical and practical implications as well as limitations that leave opportunities for future research.

Theoretical Implications

Our research advances understanding of how the most studied predictor of ethical decision making—sex (Suar & Gochhayat, 2016)—relates to the prototypical form of unethical behavior—lying about material facts in negotiations (Aquino et al., 2009). In addition to having important theoretical implications for sex differences in ethical decision making, it also has important implications for ethical decision making more broadly as well as sex differences more specifically.

Regarding Sex Differences in Ethical Decision Making

Our collective findings suggest that differential responses to situational cues explain why women sometimes show as much willingness to lie in negotiations as men. More specifically, they imply the following regarding sex differences in lying in negotiations: (1) in neutral settings, men are generally more likely to lie; (2) however base rates of lying among men and women are

dramatically influenced by feelings of competitiveness and empathy; (3) cues inducing competitiveness, considered an agentic or "masculine" motivation, have a larger effect on women, such that they lie as often as men whereas (4) cues inducing empathy, considered a communal or "feminine" motivation, have a larger effect on men, making them as honest as women.

Regarding Ethical Decision Making

Taking together with extant findings (e.g., Kennedy et al., 2017; Pierce & Thompson, 2018; Ward & King, 2018), our findings point to three types of ethical decision makers independent of sex: (1) the good, (2) the bad, and (3) the situational. The "good" includes the largest and approximately equal proportion of men and women (roughly 40 to 50% of each) who will always or almost always negotiate honestly (i.e., not lie) even when it is not in their financial interest to do so. The "bad" includes an also approximately equal albeit smaller proportion of men and women (roughly 20 to 25% of each) who will always or almost always negotiate dishonestly when it serves their interests. The "situational," as shown explicitly in our work, includes the remaining also equal proportions of men and women rely on situational cues to decide whether to negotiate honestly or not. This pattern implies that the relative influence of dispositional and situational factors on ethical decision making varies between negotiators.

Regarding Sex Differences

The differential effects we obtained demonstrate that situational cues override gendered psychological (i.e., agentic and communal) traits independent of men and women's default modes of operation as well as independent of social norms and expectations. This implies the possibility that differential responses to situational cues may explain or eliminate sex differences in ethically acceptable negotiation tactics (e.g., initiating negotiations; Bowles et al., 2007) as well as a wide range of other behaviors other than negotiation, such as in decision making, leadership, and aggression (cf., Bear & Babcock, 2012). Moreover, it raises new questions regarding the range of types of situational cues that induce differential effects between men and women (cf. Bowles et al., 2005). Cues with respect to power, for instance, demand consideration given that behavioral differences between men and women often follow the same patterns as those between people who have and lack power (Galinsky & Schweitzer, 2015). Whether lacking power increases honesty among men more than women by inducing more perspective taking among them as we observed (Galinsky et al., 2006)) or having power will increase dishonesty among women more than women (Carney, 2010) remain unanswered empirical questions.

Practical Implications

The present research has practical implications for organizations and individuals with respect to mitigating the tremendous personal and social costs of the lying in negotiations (Association of Certified Fraud Examiners, 2018). For organizations, our findings suggest a qualification for the growing consensus that increased representation by women in leadership corresponds to better governance and reduced corruption (e.g., Cumming et al., 2015; Dollar et al., 2001). Though the ratio of women to men in leadership roles may influence ethical climate, our results suggest that ethical climates themselves may depend more on whether organizational cultures encourage

competition or compassion. Similarly for individuals conducting business, our results discourage quick presumptions that women are more trustworthy than men (Buchan et al., 2008). Rather, they suggest that negotiators who want their counterparts to engage honestly would do better to promote empathy by taking and sharing perspective instead of pressuring them to get the best instrumental outcome.

Limitations and Future Directions

The present research includes limitations which provide starting points for potentially fruitful avenues of future research with respect to pertinent questions we left unaddressed as well as improving the generalizability of our findings.

Unaddressed Questions

Our research left three questions unaddressed for future researchers to consider: (1) where gender's sociological side (i.e., social norms and expectations) comes into play with respect to sex differences in lying in negotiations, (2) whether and how the types of situational cues we identified will affect other behaviors related to lying, and (3) what dispositional differences make negotiators more or less sensitive to situational cues. First, we focused on the psychological to the exclusion of the sociological side of gender. The extent to which social expectations and norms, including those fueled by self-stereotyping, impact sex differences in lying remains to be determined (cf. Dalton & Ortegren, 2011). Second, we focused on a very specific behavior: lying about material facts. Consequently, we left unaddressed how competitiveness- and empathy-inducing cues would impact sex differences in related behaviors, including other unethical negotiating tactics as well as prosocial forms of deception. In this vein, it would also be informative to examine whether inducing empathy equalizes sex differences in lying for relational rather than instrumental ends as reported in other investigations (e.g., DePaulo et al., 1996). Third, our research leaves the equal proportions of men and women who either negotiate honestly or dishonestly regardless of situational cues unexplained. Understanding what differentiates negotiators whose willingness to lie varies across situations from those whose willingness remains constant across situations would provide further insight into the factors which determine ethical decision making.

Generalizability

We ran our experiments exclusively using on-line surveys with participants recruited through Amazon Mechanical Turk. Doing so introduced two limitations for Experiments 3 and 4 in that (1) participants engaged in an exercise that simulated the final phase of a negotiation rather than an actual negotiation and (2) did so without directly interacting with counterparts. Though the increasing use of on-line surveys with participants recruited through Amazon Mechanical Turk in recent years has raised concerns with the generalizability of findings to broader populations and face-to-face contexts, parallel findings obtained with other methods and population in the research we extend alleviates such concerns in our case. For instance, Kennedy et al. (2017) showed how the introduction of a competitive incentive led to a significantly larger increase in lying among women but not men in an in-person negotiation exercise. As another example, Kray and Haselhuhn (2012) found that using an in-person roleplay to manipulate emotional

identification (i.e., empathizing) with counterparts led to a significant reduction in dishonesty among men but not women. Nevertheless, the generalizability of the effects we identified stands to be further demonstrated by future research involving other contexts and populations (e.g., field experiments).

Conclusion

The present research allows us to generally conclude that sex differences in negotiation, at least when it comes to lying, depend on situational cues. This context dependence challenges competing theoretical perspectives that sex differences are either biologically hard-wired or socially constructed. Rather, it suggests they are situationally constructed (Mischel, 1977; Mischel & Shoda, 1995). Consequently, those who desire honesty from men and women should consider how they frame their negotiation contexts as well as present themselves as counterparts.

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Conflict of interest

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Appendix 1: Prompts Used in Experiment 1

Experimental Manipulation for Competitiveness-Inducing (Empathy-Inducing) Conditions.

Please tell us about someone* with whom you feel a great deal of competitiveness (empathy). By competitiveness (empathy), we mean that, in all situations, you view their wins as your losses (wins) and their losses as your wins (losses). As far as you are concerned, what is good for them is bad for you and what is bad for them is good for you (their joy is your joy and their pain is your pain).

Describe this person and why it is that you feel so *competitive* towards (so much empathy towards) them.

* You need not have a direct relationship with the other person (i.e., this could be a familiar stranger or a public figure).

Aggressive Negotiation Tactics Adapted from SINS Scale

1. Make an opening demand that is far greater than what you really hope to settle for.
2. Try to lead the other person to believe that they can only get what they want by negotiating with you, when in fact they could go elsewhere to get what they want cheaper or faster.
3. Try to gain information about the other person's negotiating position through their social network (e.g., associates, family, friends, and so on).
4. Exaggerate the attractiveness of your alternatives to making a deal with this person so it appears that you have more bargaining power than you actually do.
5. Hide your real bottom line.
6. Promise things that you know you cannot or will not deliver.
7. Threaten to do something that would harm the other person if they do not give you what you want, even if you know you will never follow through on the threat.
8. Intentionally misrepresent factual information in order to support your negotiating arguments or position.

Appendix 2: Prompts Used in Experiment 2

The Scenario

You own and manage a jewelry shop in your town. Like most jewelers, you make money by selling new and used jewelry items, including rings, necklaces, bracelets, and earrings. Unlike most jewelers, you have a side business helping people buy and sell rare coins. You started your rare coin business because you find them interesting and it provided you another way to put your expertise in precious metals to good use.

People who want to buy or sell rare coins often send you emails or text messages with pictures of and background information about them. Thanks to the high resolution of modern digital cameras, these pictures usually give you enough information to evaluate the coins with a high degree of confidence.

The Inquiry from Terry

Hi,

I recently found an old dime (10-cent coin) in the attic of my house. I have no idea if the dime is even legit let alone of any value, but heard it is probably worth between $50 and $200. Just in case, here’re pictures of both sides.

If you find a buyer, please let me know what you would get for it and how much you would take as your commission.

Also, I don’t like to haggle so please just give me a first-and-final offer.

Thanks,

Terry

[image of coin omitted]

The Client [Control/Competitiveness-Inducing/Empathy-Inducing]

Because your town is neither very large nor very small, you do business with about the same number of people you **don't** know as you **do** know. In this case, you do not know Terry personally (and know nothing of Terry's reputation/ but know of Terry's reputation as the **owner** and **operator** of the largest and **most profitable** jewelry shop in town/ but know of Terry's reputation as a **well-respected senior citizen** in your community). Indeed, you have (**never** heard from or of nor transacted business with Terry before and may never do so again/ heard how Terry brags about winning customers from you and other jewelers and dreams of putting you all out of business / heard heart-warming stories about how Terry often sells off personal belongings to purchase gifts for underprivileged children). For this reason, (your feelings about Terry are **neutral/**you feel very **competitive** toward Terry/ you feel a great deal of **empathy** toward Terry).

The Decision

As luck would have it, you already have a buyer looking for a dime like Terry's to complete a set of early nineteenth century U.S. coins. The buyer has reviewed the pictures and offered you $150.00 for the dime.

It is time to decide how you would respond to the client's inquiry. As you make your decision, keep three things in mind:

1. The client knows nothing about the buyer's offer, but expects an amount between $50 and $200.
2. Because the client is unwilling to negotiate, you will lose the deal and both of you will get no money if your offer is rejected.
3. There are no formal standards, but many people believe an even split (each gets half) of the sale price is fair in this situation.

Now please complete the following two messages to send to the client as you would if you were actually in this situation. Again, all your responses are anonymous and cannot be linked back to you personally so please indicate how you would complete the following two parts of the proposal:

1. I have a buyer who is willing to pay $_____ for your dime.
2. I offer you $____ of the sale price. I will keep the rest as my commission.

Comprehension Check

Please confirm that you understood the instructions for the exercise you just completed by entering the correct responses below.

1. What was the actual amount your buyer was willing to pay for the dime?
2. If your client **rejects** your proposal, how much profit would you have received?