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# Gender and Negotiation in the Small: Are Women (Perceived to Be) More Cooperative than Men?

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*We surveyed research by experimental economists that examines gender differences in negotiation in the context of two simple, two-player games. Our purpose is to uncover empirical regularities in the results that might be useful to teachers or practitioners of negotiation. In the dictator game, one player unilaterally determines the division of a fixed amount of money. In the ultimatum game, one player offers a division and the other must accept or reject that offer; if rejected, both players receive a zero payoff. The results have shown that, on balance, women tend to be more egalitarian than men, to expect and ask for less in the negotiation. Women also seem to be more responsive to the context of a negotiation and are less likely to fail to reach an agreement than men. These differences are small, however, in comparison with differences in expectations about what women and men will do. We conclude that stereotyping is alive and well in negotiations and that this can help or hinder negotiation outcomes, depending on the context.*

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## Introduction

Real negotiations take place in complex environments, and gender may interact with many elements of the environment, making it difficult to disentangle the effect of gender differences on negotiation behavior and outcomes. Our strategy in this article has been to examine two of the simplest possible negotiation environments in an attempt to isolate ways in which gender may affect negotiations. We surveyed research from experimental economics using the dictator game (DG) and the ultimatum game (UG), two very simple bilateral bargaining games. Our purpose has not been to test or support any particular theories about why women and men might differ in negotiation. Rather, we have sought to uncover empirical regularities in these experiments that might be helpful or insightful for teachers or practitioners of negotiation. Constructing simple negotiation games in the laboratory allows individual elements of a negotiation to be isolated and lets us study gender differences in negotiation without many of the confounding factors that are present in naturally occurring negotiations (see, e.g., Bowles and McGinn 2008 on gender in job negotiations in this issue). In other words, in this article, we are exploring *negotiation in the small*. While a more complex environment may reveal additional gender differences, the results that are found in these types of settings are also likely to have relevance for negotiations taking place in more complex, real-world settings.

Do women negotiate differently from men? Gender is an important topic in the study of negotiation, and the field has produced a wide variety of evidence on the subject (Kray, Thompson, and Galinsky 2001; Kray, Galinsky, and Thompson 2002; Babcock and Laschever 2003 and 2008; Kray and Thompson 2005). Gender may affect negotiation in at least two ways. First, women may be different from men in ways that affect their behavior and performance in a negotiation; for example, consistent with gender stereotypes, women may be more cooperative or altruistic. Second, women and men may be perceived differently based on stereotypes and so may be treated differently, especially in a setting where there are few women. Regardless of whether there are underlying differences in the behavior of women and men, expectations about such differences could have an important impact on negotiation. To preview our results, we find more support for the second source of differences than for the first.

The research we survey here has been conducted by experimental economists, whose methods differ somewhat from the experimental

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methods of psychologists, which are more frequently adapted to negotiation contexts. Because most economics experiments are designed to test economic theories, the norm is to use neutral language (i.e., “first mover,” “second mover,” “counterpart” instead of “dictator,” “victim,” and “partner”) to avoid experimenter demand.<sup>1</sup> In addition, hypothetical decisions are ruled out: the subjects are paid what they earn based on their actual decisions in the experiment. Finally, no deception of any kind is used.

We have surveyed studies that examine gender differences using two simple games described below, focusing on differences in behavior and differences in perceptions. After introducing the games and main results, we will discuss the elements that are most relevant for women and men negotiators.<sup>2</sup>

## The Games

To make the settings as simple as possible, we use games that isolate one element of decision making. Even games that appear to be very straightforward can involve more than one element. To illustrate, think of the familiar two-person prisoner's dilemma, one of the first games used to examine gender differences. In this game, two players must simultaneously and independently decide which of two actions to take: “cooperate” or “defect.” If both choose cooperate, the total payoff is maximized; if both choose defect, the individual payoffs are smaller. If one should choose cooperate while the other chooses defect, the cooperator's payoff is minimized while the defector's payoff is maximized. Catherine Eckel and Philip Grossman (1998) have pointed out that these games confound two possible elements affecting decision making: altruism and risk aversion. Players who want to be nice will choose the cooperative strategy in the game, foregoing a chance at the highest payoff for themselves. But the nice person also risks exploitation by a more aggressive, defecting counterpart. The cooperative strategy in these games is also the risky alternative: cooperation risks a very low payoff. If women are both more cooperative and more risk averse, then any gender difference would depend on the trade-offs implicit in the particular parameters of the game. An observer would not be able to sort out whether a gender difference in the game was due to underlying differences in altruism or in risk aversion.

The DG was developed to examine one aspect of negotiation, a concern for the other party's payoff, or *altruism*. It has the added benefit of removing any element of either financial risk (in the form of lower payoffs) or social risk (in the form of embarrassment, say, for putting oneself in the position to be exploited). The DG is the simplest possible two-person bargaining situation: one person decides how to divide a fixed pie with another person. In DG experiments, an amount of money (say \$10) is given to the “first mover.” She then must decide how much (if any) to give to the “second mover.” The second mover does not actually have the opportunity

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to move but rather is a passive recipient of whatever the first mover decides to give him.

The DG is typically designed as a one-shot game between randomly assigned, anonymous subjects, reflecting its initial development as a way to test aspects of game theory. Sometimes the game is implemented in a multiperiod setting. In this setting, pairings (and possibly roles) are reshuffled after each period (or round), no two subjects are paired together more than once, and no feedback is provided until all periods are completed. This minimizes the role of reputation and relationships and any complicating effects they might have.

This game is relevant because it captures an important aspect of negotiation. Negotiation often involves trade-offs between two competing parties, and this game models the simplest environment that can capture participants' willingness to make concessions to their counterparts. While conceding too much can be bad for a negotiation outcome, a negotiator who is willing to make concessions and who can identify situations in which concessions are important is likely to be an important member of a negotiation team.

Another way to think about these games is to imagine them as the final stage of a negotiation. The DG is representative of a situation in which the second mover could not respond and therefore had to accept the agreement. The UG is representative of a situation in which the second mover's only response is to either accept or reject a final offer. In this situation, the second mover would compare her best alternative to a negotiated agreement (BATNA) to the offer and then decide to accept the offer if it is better than her BATNA and reject the offer if it is worse than her BATNA.

Research on gender differences has tended to focus on the assertion that women tend to be more cooperative than men.<sup>3</sup> Researchers have observed greater cooperation among young girls, for example, while they have seen boys as more competitive. If this is true, then we should observe women giving more in the DG. In addition, women and men may be treated differently by male and female dictators (first movers), illustrating that not only the gender of the decision maker but also the gender pairing may affect negotiations. These hypotheses are examined in studies described below.

The UG is more strategic. In this game, an amount of money is provisionally allocated to a pair (the first mover and the second mover). The first mover's task is to offer a division of the amount to the second mover. If the second mover agrees, the money is divided as planned; if the offer is rejected, the money reverts to the experimenter and both players earn zero. Like the DG, the UG is typically designed as a one-shot game between randomly assigned, anonymous subjects. In multiperiod games, pairings (and possibly roles) are reshuffled after each period, and no two subjects are paired together more than once.

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This game resembles the final stage in many negotiations — the final offer is made and is accepted or rejected by the counterpart. If women are indeed more cooperative, then we would expect them to offer more in the UG. But like the prisoner's dilemma game, offering more in the ultimatum game cannot be interpreted only as a result of altruism. A first mover may offer more because she cares about the recipient, but she may also do so because she fears rejection, and a higher offer is less likely to be rejected.

More generous offers need to be interpreted carefully. The accept/reject stage of the UG adds further interest. Women may be more likely to accept an offer, again showing greater cooperation. Men who reject an offer may be more sensitive to unequal divisions, showing greater competitiveness. The value of looking at this game is in its similarity to the final stage of a negotiation. A final offer is determined by weighing the possibility of a higher payoff against the possibility of rejection. Someone who is competitive and sensitive to unfair payoffs may reject an offer at this stage, and the negotiation will be more likely to fail.

Experiments conducted in North America and Western Europe have shown little cultural variation — at least in the West — in proposer behavior in the UG; in most places people have a strong tendency to offer a division that gives the proposer just a little more than half the pie, and those offers are accepted (Oosterbeek, Sloof, and van de Kuilen 2004).<sup>4</sup> However, there are systematic differences in behavior for second movers. This indicates that the most promising place to look for differences between men and women in the UG may be in the second mover's behavior.

Stereotypical behavior by women and men would produce greater giving in the DG, and higher offers and lower rejection rates for given offers by women in the UG. Early research on the DG tended to support the norm, with women giving more than men.

The results of UG research, however, have been more mixed. Later research has confirmed that the picture is more complex. Quite often, studies have found little or no difference in the bargaining behavior of men and women in these games. When there is a difference, it often can be explained by a factor in the experiment that might arguably have triggered the "good girl" social norm (see White 1995).<sup>5</sup> With this in mind, we will now go on to describe the findings relevant to negotiators that can be drawn from this literature. We will first review the literature that examines similarities or differences in behavior, looking first at situations in which men and women behave in a similar manner, leaving to the next section situations in which men and women negotiate differently. Then, we will discuss the evidence on whether the perceptions of and beliefs about women's and men's behavior are gender based.

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## The Evidence on Behavior: Are Women More Generous than Men?

### *When Do Men and Women Behave the Same?*

The evidence from the DG and the UG studies does not always support the notion of gender stereotype conformity. We look at these cases first and return to studies that find such conformity below. Studies of children provide a good place to start. In a study of children in grades two, four, five, and nine, William Harbaugh and his colleagues (2003) found no difference in offers or rejections in the UG among younger children. Boys were less generous than girls in the DG, but this difference diminished substantially after controlling for height. It turns out that short girls were the most generous; boys and tall girls were less generous than their shorter female classmates. Once researchers adjusted for height, the remaining difference was smaller, and no longer statistically significant, indicating that height differences might have driven the observed gender difference. (The researchers offered no formal theory to explain this.) As children age, however, differences emerge, and boys and girls begin to exhibit behavior that appears to fit more stereotypical sex roles. Research results indicate that girls become more generous than boys as they get older, an indication of socialization into more traditional behaviors.

Moving on to the later teen years, in a recent study of 440 Houston ninth- and eleventh-grade high school students in Houston, Eckel and her colleagues (2008a) have found no gender difference in generosity in a DG with \$40 at stake. The high school students show a strong fifty/fifty social norm, with almost half of the subjects (both boys and girls) offering an even division. Further, for the UG (Eckel et al. 2008b), we found no difference in the amount offered, though girls were less likely to reject an unequal offer (described below). It is interesting to contrast these students with a sample of university students confronted with the same DG protocol. Those students were much more likely than their younger counterparts to keep all the money: 40 to 60 percent of university subjects did so, compared to only 15 percent of high school students (Eckel et al. 2008b). We found no significant gender difference in either sample.

Kurtis Swope and his colleagues (2008) found no differences between men and women in the amount of money that they sent to second movers in either the DG or the UG, once personality characteristics had been controlled for. (They did not report whether they found gender differences without controlling for personality characteristics. Further, they did not report whether or not they found differences between the men and women in their personality scales.) Their results do not preclude the possibility that women may hold some personality characteristics more frequently than men. But they do provide preliminary evidence that a man

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and a woman with similar personality characteristics would also behave similarly in this (albeit simplified) negotiation setting.

The games we have described in this section were, for the most part, conducted in an entirely gender-neutral manner. The groups were mixed gender, roles were randomly assigned, and pairings of first and second movers were randomly determined. Subjects knew that they had been randomly paired with another subject, but they did not know the identity of that specific subject. Gender was not discussed, nor was it highlighted in any aspect of the experimental design. (In addition to the papers discussed above, similar experiments with null results can be found in Bolton and Katok 1995; Solnick and Schweitzer 1999; Carpenter, Burks, and Verhoogen 2004; Whitt and Wilson 2007; Bellemare, Kröger, and van Soest 2008).

Differences emerge, however, in studies in which gender is more salient. As more contextual variables are added to these simple bargaining games, gender differences begin to surface: observing even small differences in behavior at this negotiation stage can easily compound to substantial differences in a complicated, multistage negotiation. But, as we will see, despite women's greater generosity, these differences are not always detrimental for women in negotiation. In fact, they may actually help the situation when bargaining involves a sensitive issue.

### ***When Do Men and Women Behave Differently? And Is This a Good Thing for Negotiation?***

The first study of gender differences in the generic DG was conducted by Eckel and Grossman (1998). In this study, we recruited first and second movers to different rooms, and the first movers were either always male or always female, and this was visible to the participants. The sessions were "double blind," meaning that neither the experimenter nor the second mover could identify how much any particular individual sent to the recipient. We found that women were both more likely to allocate something to the second mover and significantly more generous than men, giving twice as much (\$1.60 versus eighty-two cents out of ten dollars).

Martin Dufwenberg and Astri Muren (2006b) conducted DGs in which audiences of varying sizes observed the transaction. They found that whether or not the transaction between the first and second movers was observed seemed to trigger behavioral differences. Using economics majors as subjects, they found that both women and men gave less when their transaction took place on stage in front of a large group of economics students. In their study, women and men gave about the same on average when the transaction was private, but women gave more than men when it was public.

Research results indicate that men, however, can be more sensitive to social monitoring. Mary Rigdon and her colleagues (2008) conducted a double-blind DG in which subjects prior to making their decisions viewed three dots that had been configured as either a face or a triangle. They



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found that women gave a high amount no matter what, but that men gave a low amount when the dots were configured as a triangle and an amount similar to that of women when the dots were configured as a face.

In an earlier experiment (Eckel and Grossman 1996), we gave subjects a dichotomous choice: they were asked to choose between splitting a larger amount with a selfish second mover (known to have been ungenerous as a first mover in an earlier game), or a smaller amount with a generous second mover (known to have been generous as a first mover in a previous game). In this study, women were more likely to choose to play the smaller stakes game, thereby rewarding the “good” second mover. Likewise, in variations of the DG in which a person decides how much money to give to a charity (as opposed to another anonymous student) women were substantially more generous than men (see, e.g., Eckel and Grossman 2003; Eckel, Grossman, and Milano 2007; and Li et al. 2008).

Recent studies suggest that information about the second mover also matters. These studies have explored the effect of the gender pairing and the characteristics of recipients. Dufwenberg and Muren (2006b), for example, found that both men and women gave more money to female than to male second movers. First movers have preferences about whom they send the money to. Similarly, Hakan Holm and Peter Engfeld (2005) found that individuals preferred to give money to women, especially to women who were identified as low income, even though there were no aggregate differences in the amount given by men and women.<sup>6</sup> Public officials in the first mover role were also more likely to give money to poor female than poor male second movers (Cardenas and Sethi 2008).

There could be several explanations for this tendency to give more money (and with greater frequency) to women. It could be that women engender greater altruistic feelings than do men, or perhaps women are perceived as being more deserving of or in need of aid. For example, subjects may perceive that women are more responsible with money, or are more likely to share the money with their families, or are less responsible for being poor than men are.

While most studies find greater generosity by and to women, some studies have shown contradictory results. Avner Ben-Ner and his colleagues (2004) found that women gave less overall, and less to women in particular. In their study, men gave slightly more to women than to men, confirming previous studies.

While, as described above, offers in the ultimatum game rarely differed by gender, Eckel and Grossman (2001) and Sara Solnick (2001) found that, when women knew the gender of their counterparts, they made higher offers to male than to female second movers. These studies also found differences in the pattern of rejections. Eckel and Grossman found that women were less likely to reject an offer of a given size and were less likely to have their offers rejected by both men and women.



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Solnick, however, found the opposite, with both men and women more likely to reject an offer from a woman.

While Solnick's (2001) results supported the growing body of work demonstrating a backlash against women who ask for more in a negotiation (Bowles, Babcock, and Lai 2007), Eckel and Grossman's (2001) results contradicted it. Differences in methodology might explain the differences in results. In Eckel and Grossman's experiment, groups of four first movers faced groups of four second movers across a room with decisions made sequentially (i.e., first movers make their offers, second movers then accept or reject).<sup>7</sup> Solnick's subjects never observed the other subjects they were paired with, and gender was signaled by gender-identifying first names. Solnick's subjects also made their decisions simultaneously — the second movers indicated their minimum acceptable offers (MAO) knowing their counterpart would be male or female. If all subjects expected women's offers to be more generous, their MAOs might have been higher, leading them to reject more of the women's offers. When decisions were made sequentially, on the other hand, accept/reject decisions were made on the basis of actual rather than expected offers, theoretically leading to fewer rejections. Ann Leon-Mejia and Luis Miller (2007) have also attributed differences across studies to subtle differences in design and have made a case for greater sensitivity by women to the design details. Clearly more study is needed to understand these results.

A potential negotiation problem for women is illustrated by women's greater propensity to accept any given offer in the UG (Eckel and Grossman 2001). Within the context of the UG, accepting *any* positive offer is strategically wise; you end up with something as opposed to nothing. In real-world negotiations, however, the best strategy may be to be seen as someone willing to reject unfavorable deals. Linda Babcock and Sara Laschever (2003) also found this in the field; they noted that women graduates have been more likely to accept an initial salary offer, while men have been more likely to negotiate for a higher salary. This tendency may place women in a weaker bargaining position from the start. (See Bowles and McGinn 2008 elsewhere in this issue.)

Being more likely to accept an offer in the final stage of a negotiation may not always be a bad thing, however. Consider, for example, a very delicate negotiation in which it is more important to reach a profitable agreement and maintain the relationship than it is to play hardball and risk losing the account. In these types of situations, being able to place a priority on reaching an agreement can increase the likelihood of reaching that agreement and thus the effectiveness of the negotiation team.

Further, some men may be more sensitive to fairness and/or to status than others in these negotiation settings and will react with hostility to low offers. Terence Burnham (2007) conducted a study that examined how men reacted when they received a low offer in the UG. He found that men who

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had higher levels of testosterone were significantly more likely to reject these offers than men with lower levels. His results indicate that men with high testosterone levels (the same men who are so often viewed as the alpha males in negotiation settings) are also most likely to burn bridges in the final stage of the negotiation. An aggressive stance in a negotiation can be effective when used to prompt the opposing party to increase the offer to avoid rejection. But when negotiations are more fragile, or when the negotiation team begins in the weaker bargaining position, this behavior can increase the chances that the two sides will fail to reach an agreement, even if agreement could have been profitable for both.

This aggressiveness in men can also be easily manipulated by the other bargaining party. For example, Bram Van den Bergh and Siegfried Dewitte (2006) found that men (even those with high testosterone levels) who had been exposed to pictures of attractive women dramatically decreased the frequency with which they rejected low offers in the UG. Though the exact reason for this shift in behavior is unknown, it is almost as if just seeing beautiful women puts the men in a better mood and they become less hostile to negative offers. (The women pictured were not their bargaining partners.)

Daniel Houser and Daniel Schunk (2008) investigated the importance of competition in negotiation by conducting a study of elementary school children.<sup>8</sup> In their study, each child was matched with another at a different school, and given the opportunity to share twenty M&M candies with their counterparts. In some scenarios, competition was introduced by rewarding the child who retained the most candies. Initially, girls gave away more, and both girls and boys gave more when matched with a boy. With the introduction of competition, boys substantially reduced giving, while girls did not. In this case, boys became more selfish when a competition was introduced, and girls did not alter their behavior.

Because men and women behave similarly in the UG, and women tend to be more generous in the DG, we can infer that men also alter their behavior more between the context of the two games. A study by Marco Castillo and Philip Cross (forthcoming) has compared subjects' behavior directly in the two games. They found that men increased the amount they sent in the UG over the amount they sent in the DG significantly more than women did. They found no gender differences in the change in behavior of the subjects who behaved more selfishly in the DG — both men and women increased the amount sent significantly in the UG, reflecting their very low offers in the DG — but they found a large difference between women and men in the change in behavior of the individuals who behaved more altruistically in DG. Men who were classified as more altruistic increased the amount they sent to the second mover far more than did women in the face of a threat of rejection.

What about the cost of concessions? In another study, James Andreoni and Lise Vesterlund (2001) examined giving in a set of DGs with differences

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in the cost of giving. They found that men responded much more to the changes in the cost of concessions, giving away more when giving was less costly and keeping more when giving was more costly. Women, on the other hand, adjusted their giving in a way that resulted in final distributions that were closer to equality, even when the more equal division was costly to themselves. The men appeared to value efficiency more, while the women placed a higher value on an equitable outcome. James Cox and Cary Deck (2006) found that women were more sensitive to social distance and to the stakes level, and adjusted their behavior more than men when these factors changed. Lowering the social distance between negotiators — situations in which negotiators know each other, for example — can make hard bargaining more socially costly. Women have responded to reductions in social distance by making greater concessions.

### ***How Do Women and Men Behave in Bargaining Teams?***

Finally, an important aspect of behavior in these games is the impact that gender mixes have on the bargaining behavior of teams. Timothy Cason and Vai-Lam Mui (1997) found no aggregate differences between the behavior of men and women in making an individual decision about how much to allocate in the DG. But when two-person bargaining teams were formed, an interesting dynamic occurred. Teams made up of members who were “selfish” in their individual decisions became more “generous” when making a team decision. The team offers shifted toward the offer of the most generous team member; the only significant demographic variable that explains this shift was gender. In mixed-gender teams, the preference of the female dominated the offer. For teams comprising individuals who made either neutral or generous individual decisions, researchers observed little or no change between the individual and team decisions for groups.

Linda Kamas and her colleagues (2008) found that, when bargaining pairs are making a DG allocation in which the recipient is a charity, the woman’s preference dominated. They found that women were more generous when making an individual decision. When making a joint decision, however, male–female pairs gave most to charity, with female–female pairs coming in second and male–male pairs giving the least. Both men and women adjusted their offers when put into teams, moving toward the preferences of their teammate. In mixed teams in particular, women became less generous and men became more so, but men adjusted up more than women adjusted down. This is similar to what Rigdon and her colleagues (2008) found in an individual decision-making context. Because women are already very generous, they argued, they adjusted less to social cues or monitoring; men, who behaved less generously to begin with, adjusted their behavior to look more like that of women when social cues were present.

Extending the game to three-person teams, Dufwenberg and Muren (2006a) found that female-majority teams donated significantly more to the

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recipient than did male-majority teams. When they looked at the impact of adding one more female to the bargaining group, the researchers found that adding a woman to the team increased the generosity of the group when it changed the team's makeup from one to two women or from two to three women, but not when one woman was added to a group of men. This indicates that women need to be more than a "token" to have a significant influence on the generosity of a team's bargaining outcome. Further, the most generous group composition, offering the equal division, was two women and one man; all-female groups were actually less generous, offering the equal split about 62 percent of the time.

### **The Evidence on Perceptions and Beliefs: Are Women Expected to Be More Generous?**

Unfortunately, stereotyping is still alive and well in the workplace. No matter what differences do or do not exist between the behavior of men and women, what frequently matters in the workplace is the *perceived* difference between the genders. For example, women often have their ability discounted relative to that of men. Unconscious biases can have a large impact on how men and women are evaluated. As Claudia Goldin and Cecilia Rouse (2000) found in a study of symphony orchestra auditions, allowing women to be evaluated on the quality of their performance and not on their gender greatly improved their chances of being selected (for more examples, see Valian 1998).

Stereotypes regarding differences in ability are not the only stereotypes that can affect women in negotiation. As Babcock and Laschever (2008) summarized in their discussion of the "power of subconscious biases," these stereotypes can apply to ability, generosity, or many of the other factors that influence the effectiveness of women negotiators. Even when people honestly believe that they hold no gender stereotypes, they view similar leaders differently. In some studies, women leaders have been viewed as bossy and male leaders as skillful (Butler and Geis 1990). In another study, department heads rated a woman's resumé lower than the same resumé with a man's name in place (Valian 1998). Virginia Valian (1998) provided overwhelming evidence that gender schemas — stereotype-based ideas about women and men — can play a major role in the development of expectations about women and in evaluating the behavior and performance of women.<sup>9</sup>

Even though men and women frequently behave similarly in DGs and UGs, people expect women to be more generous. Fernando Aguiar and his colleagues (forthcoming) found that when a person was given a choice between receiving an allocation from a woman or from a man in the DG, they preferred the woman's envelope. The researchers displayed envelopes containing allocations from both men and women in separate boxes that were clearly marked with the gender of the dictator. When second movers were given the option of choosing an envelope from the

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“male” box or the “female” box, two-thirds of all second movers (73 percent of women and 51 percent of men) chose the “female” box. Further, most people said that they chose the “female” box because they thought they would get more money from a woman.

Research indicates that men and women also have different expectations of other people’s generosity. For example, Eckel and her colleagues (2008a) found that subjects guessed the actions of others, with university men expecting others to give less than women would. (There were no differences in expectations in the high school sample, however.)

## Conclusion

In this article, we have surveyed research from two simple games — the dictator game and the ultimatum game — conducted in the laboratory by experimental economists. While the advantage of the lab is the degree of control it gives over the decision context and incentives, the contexts explored are much simpler than those of real-world negotiations. This is the advantage of the lab — that a single element of the negotiation can be isolated and examined — but also its limitation. Using a decision-based lens through which to examine gender differences in behavior does not address the underlying feelings or attitudes that might motivate women’s greater generosity and willingness to accept less. It is important to recognize that many explanations are possible. Women may accept less because they feel they deserve less, for example, or because it is the “norm” for women to receive a lower share and not because they are more caring about others *per se*. In this case, we can only say that behavior in the lab provides one window through which to examine gender differences in negotiation.

That said, there are regularities in the results that we believe can be consequential for negotiation:

1. The balance of evidence supports the notion that women tend to be more egalitarian than men. Women in laboratory settings have been more likely to choose more equal distributions and to stick with those preferences even when the cost of doing so increases. This indicates that women may be more sensitive than men to issues of overall fairness in negotiations, but the difference is negligible in many settings. On the other hand, the evidence of a perception that women are fairer is robust, and care should be taken in negotiations where fairness is an important issue. Because women are expected to be fairer, a woman who plays hardball in settings in which perceptions of fairness are important may be particularly unsuccessful.
2. Research indicates that women are more sensitive to the context of the negotiation, particularly to context involving relationships. This pattern of results is fairly strong and implies that women may be more successful in delicate negotiations in which long-term relationships trump

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short-term gains. Men appear to be more responsive to pecuniary costs and benefits, however, and to social pressure.

3. Women tend to ask for less, and to accept less in a negotiation. Willingness to accept less can hurt women's final negotiation outcome, and this tendency suggests that a woman should more carefully research ahead of time what is reasonable for the negotiation setting that she is going into. An awareness of this tendency can help women avoid it by systematically increasing their expectations about their share in the outcome by a notch or two.
4. While differences in the behavior of women and men tend to be small, and vary with context, stereotyping is alive and well and much more likely than real, underlying differences in behavior to cause trouble in negotiations. This suggests that an awareness of the important role that stereotyping plays in forming expectations can lead to more accurate prenegotiation assessments of motives, behavior, and outcomes. Unconscious gender schemas and stereotypes can undermine an otherwise successful negotiation.

On the whole, we view the messages that come out of these very simple games as more promising than discouraging. Though stereotyping (by both men and women) is still alive and well, it is often unfounded. As we as negotiators begin to recognize these subconscious biases that are brought to the bargaining table, we will be able to negotiate better outcomes for ourselves and the parties we represent. Men and women most often behave in similar manners. In the instances in which they behave differently, women behave in a manner that would help build long-term relationships and that would help teams reach agreements in delicate situations. Men, on the other hand, behave in a manner that would result in a better starting position but potentially hinder the ability of the negotiators to reach an agreement. This highlights the importance of incorporating the "stereotypical strengths" of both sexes into negotiation strategies.

## NOTES

1. Experimenter demand refers to an experimental artifact in which subjects unconsciously change their behavior to conform to what they believe the experimenter is seeking. Nonneutral language may unconsciously signal the experimenter's wishes, worsening experimenter demand.

2. For more comprehensive surveys of gender differences in economics experiments, see Croson and Gneezy (2007), Eckel (2008a and 2008b), Eckel and Grossman (forthcoming(a) and forthcoming(b)).

3. The underlying explanations for gender differences in cooperation may be biological (Buss 2008) and/or social (Eagly 1987).

4. In other types of societies variation has been observed. For example, the small-scale societies studied by Henrich et al. (2004: 10) included "three foraging societies, six that practice slash-and-burn horticulture, four nomadic herding groups, and two sedentary, small-scale agricultural societies" (2004:10). They found significant differences in behavior related to differences across the societies in economic and political structure.



5. The “good girl” norm is not well defined in the literature. Roughly defined, it is the internal and social pressure for women to be nicer and more compliant/less argumentative than men. This differs slightly from the expectation that women *are* nicer than men in that some sort of pressure (internal or external) induces women to move away from what would otherwise be their preferred point/option to one that better fits stereotypical behavior.

6. Second-mover subjects in the experiment were classified as high income if their annual income exceeded 300,000 Swedish krona and as low income if their annual income was less than 100,000 Swedish krona. The second-mover high-income subjects were faculty, while low-income subjects were students from the same university.

7. The groups were either all male, all female, or two males and two females. So a subject knew that the other subject he or she was paired with was male, female, or unknown.

8. In pay-for-performance environments it has been shown that men respond more than women do to competitive environments (see Niederle and Vesterlund 2008; in this issue and Gneezy, Niederle, and Rustichini 2003).

9. Research on gender stereotyping and leadership can be found in Eagly and Carli (2007).

## REFERENCES

- Aguiar, F., P. Brañas-Garza, R. Cobo-Reyes, N. Jiménez, and L. Miller. Forthcoming. Are women expected to be more generous? *Experimental Economics*.
- Andreoni, J. and L. Vesterlund. 2001. Which is the fair sex? Gender differences in altruism. *Quarterly Journal of Economics* 116(1): 293–312.
- Babcock, L. and S. Laschever. 2003. *Women don't ask: Negotiation and the gender divide*. Princeton, NJ: Princeton University Press.
- — — and — — —. 2008. *Ask for it: How women can use the power of negotiation to get what they really want*. New York: Bantam.
- Bellemare, C., S. Kröger, and A. van Soest. 2008. Measuring inequality aversion in a heterogeneous population using experimental decisions and subjective probabilities. *Econometrica* 76(4): 815–839.
- Ben-Ner, A., F. Kong, and L. Putterman. 2004. Share and share alike? Gender-pairing, personality, and cognitive ability as determinants of giving. *Journal of Economic Psychology* 25(5): 581–589.
- Bolton, G. and E. Katok. 1995. An experimental test for gender differences in beneficent behavior. *Economics Letters* 48(3–4): 287–292.
- Bowles, H. R., L. Babcock, and L. Lai. 2007. Social incentives for gender differences in the propensity to initiate negotiation: Sometimes it does hurt to ask. *Organizational Behavior and Human Decision Processes* 103: 84–103.
- Bowles, H. R. and K. L. McGinn. 2008. Gender in job negotiations: A two-level game. *Negotiation Journal* 24(4): 393–410.
- Burnham, T. 2007. High-testosterone men reject low ultimatum game offers. *Proceedings of the Royal Society B* 274(1623): 2327–2330.
- Buss, D. M. 2008. *Evolutionary psychology: The new science of the mind*, 3rd edn. Boston, MA: Allyn and Bacon.
- Butler, D. and F. Geis. 1990. Nonverbal affect responses to male and female leaders: Implications for leadership evaluations. *Journal of Personality and Social Psychology* 58(1): 48–59.
- Cardenas, J. and R. Sethi. 2008. *Resource allocation in public agencies: Evidence from a field experiment*. Working Paper.
- Carpenter, J., S. Burks, and E. Verhoogen. 2004. Comparing students to workers: The effects of social framing on behavior in distribution games. In *Field experiments in economics*: Vol. 10. *Research in experimental economics*, edited by J. Carpenter, G. W. Harrison, and J. A. List. Cason, T. and V. Mui. 1997. A laboratory study of group polarisation in the team dictator game. *Economic Journal* 107(444): 1465–1483.
- Castillo, M. E. and P. J. Cross. Forthcoming. Of mice and men: Within gender variation in strategic behavior. *Games and Economic Behavior*.
- Cox, J. and C. Deck. 2006. When are women more generous than men? *Economic Inquiry* 44(4): 587–598.
- Croson, R. and U. Gneezy. 2007. *Gender differences in preferences*. Unpublished manuscript, University of California, San Diego.



- 
- Dufwenberg, M. and A. Muren. 2006a. Gender composition in teams. *Journal of Economic Behavior and Organization* 61(1): 50–54.
- — — and — — —. 2006b. Generosity, anonymity, gender. *Journal of Economic Behavior & Organization* 61(1): 42–49.
- Eagly, A. H. 1987. *Sex differences in social behavior: A social-role interpretation*. Hillsdale, NJ: Erlbaum.
- Eagly, A. H. and L. L. Carli. 2007. *Through the labyrinth: The truth about how women become leaders*. Cambridge, MA: Harvard Business School Press.
- Eckel, C. 2008a. Experiments on gender differences. In *The new Palgrave dictionary of economics*, 2nd edn, edited by S. Durlauf and L. Blume. Basingstoke & New York: Palgrave Macmillan.
- — —. 2008b. The gender gap: Using the lab as a window on the market. In *Frontiers in the economics of gender*, edited by F. Bettio and A. Verashchagina. London: Routledge.
- Eckel, C. and P. J. Grossman. 1996. The relative price of fairness: Gender differences in a punishment game. *Journal of Economic Behavior and Organization* 30(2): 143–158.
- — — and — — —. 1998. Are women less selfish than men? Evidence from dictator experiments. *Economic Journal* 108(448): 726–735.
- — — and — — —. 2001. Chivalry and solidarity in ultimatum games. *Economic Inquiry* 39(2): 171–188.
- — — and — — —. 2003. Rebates versus matching: Does how we subsidize charitable contributions matter? *Journal of Public Economics* 87(3–4): 681–701.
- — — and — — —. Forthcoming(a). Men, women and risk aversion: Experimental evidence. In *Handbook of experimental economics results*, edited by C. Plott and V. Smith. New York: Elsevier.
- — — and — — —. Forthcoming(b). Differences in the economic decisions of men and women: Experimental evidence. In *Handbook of experimental economics results*, edited by C. Plott and V. Smith. New York: Elsevier.
- Eckel, C., P. J. Grossman, A. de Oliveira, C. A. Johnson, C. Rojas, and R. K. Wilson. 2008a. *Social norms of sharing in high school: Teen student giving in the dictator game*. CBEES Working Paper, University of Texas at Dallas.
- — —. 2008b. *What's fair in high school? Teen behavior in a high-stakes ultimatum game*. CBEES Working Paper, University of Texas at Dallas.
- Eckel, C., P. J. Grossman, and A. Milano. 2007. Is more information always better? An experimental study of charitable giving and Hurricane Katrina. *Southern Economic Journal* 74(2): 388–411.
- Gneezy, U., M. Niederle, and A. Rustichini. 2003. Performance in competitive environments: Gender differences. *Quarterly Journal of Economics* 118(3): 1049–1074.
- Goldin, C. and C. Rouse. 2000. Orchestrating impartiality: The impact of “blind” auditions on female musicians. *American Economic Review* 90(4): 715–741.
- Harbaugh, W., K. Krause, and S. Liday Jr. 2003. *Bargaining by children*. Working Paper, Department of Economics, University of Oregon.
- Henrich, J., R. Boyd, S. Bowles, C. Camerer, E. Fehr, and H. Gintis (eds). 2004. *Foundations of human sociality: Economic experiments and ethnographic evidence from fifteen small-scale societies*. New York: Oxford University Press.
- Holm, H. and P. Engsel. 2005. Choosing bargaining partners — An experimental study on the impact of information about income, status and gender. *Experimental Economics* 8(3): 183–216.
- Houser, D. and D. Schunk. 2008. *Fairness, competition and gender: Evidence from German schoolchildren*. Working Paper.
- Kamas, L., A. Preston, and S. Baum. 2008. Altruism in individual and joint-giving decisions: What's gender got to do with it? *Feminist Economics* 14(3): 23–50.
- Kray, L., A. Galinsky, and L. Thompson. 2002. Reversing the gender gap in negotiations: An exploration of stereotype regeneration. *Organizational Behavior and Human Decision Processes* 87(2): 386–409.
- Kray, L. and L. Thompson. 2005. Gender stereotypes and negotiation performance: An examination of theory and research. In *Research in organizational behavior series*, Vol. 26, edited by B. Staw and R. Kramer. Oxford, UK: Elsevier.
- Kray, L., L. Thompson, and A. Galinsky. 2001. Battle of the sexes: Gender stereotype confirmation and reactance in negotiations. *Journal of Personality and Social Psychology* 80(6): 942–958.

- 
- Leon-Mejia, A. and L. Miller. 2007. "The devil is in the details" — Sex differences in simple bargaining games. *Jena Economic Research Papers*, No. 2007-069.
- Li, X., C. Eckel, P. J. Grossman, and T. Larsen. 2008. *Giving to government*. CBEES Working Paper, University of Texas at Dallas.
- Niederle, M. and L. Vesterlund. 2008. Gender differences in competition. *Negotiation Journal* 24(4): 447–463.
- Oosterbeek, H., R. Sloof, and G. van de Kuilen. 2004. Cultural differences in ultimatum game experiments: Evidence from a meta-analysis. *Experimental Economics* 7(2): 171–188.
- Rigdon, M., K. Ishii, M. Watabe, and S. Kitayama. 2008. *Minimal social cues in the dictator game*. Working Paper, University of Michigan.
- Solnick, S. 2001. Gender differences in the ultimatum game. *Economic Inquiry* 39(2): 189–200.
- Solnick, S. and M. Schweitzer. 1999. The influence of physical attractiveness and gender on ultimatum game decisions. *Organizational Behavior and Human Decision Processes* 79(3): 199–215.
- Swope, K., J. Cadigan, P. Schmitt, and R. Shupp. (2008). Personality preferences in laboratory economics experiments. *Journal of Socio-Economics* 37(3): 998–1009.
- Valian, V. 1998. *Why so slow?* Cambridge: MIT Press.
- Van den Bergh, B. and S. Dewitte. 2006. Digit ratio (2D:4D) moderates the impact of sexual cues on men's decisions in ultimatum games. *Proceedings of the Royal Society B: Biological Sciences* 273(1597): 2091–2095.
- White, B. 1995. The career development of successful women. *Women in Management Review* 10(3): 4–15.
- Whitt, S. and R. Wilson. 2007. Fairness and ethnicity in the aftermath of ethnic conflict: The dictator game in Bosnia-Herzegovina. *American Journal of Political Science* 51(3): 655–668.