



University of Pennsylvania  
**ScholarlyCommons**

---

Operations, Information and Decisions Papers

Wharton Faculty Research

---


5-1999

## Gender and Culture: International Experimental Evidence From Trust Games

Rachel Croson  
*University of Pennsylvania*

Nancy Buchan

Follow this and additional works at: [https://repository.upenn.edu/oid\\_papers](https://repository.upenn.edu/oid_papers)

 Part of the [Education Economics Commons](#), [Income Distribution Commons](#), and the [Other Education Commons](#)

---

### Recommended Citation

Croson, R., & Buchan, N. (1999). Gender and Culture: International Experimental Evidence From Trust Games. *American Economic Review*, 89 (2), 386-391. <http://dx.doi.org/10.1257/aer.89.2.386>

This paper is posted at ScholarlyCommons. [https://repository.upenn.edu/oid\\_papers/292](https://repository.upenn.edu/oid_papers/292)  
For more information, please contact [repository@pobox.upenn.edu](mailto:repository@pobox.upenn.edu).

---

# Gender and Culture: International Experimental Evidence From Trust Games

## Disciplines

Education Economics | Income Distribution | Other Education

# Gender and Culture: International Experimental Evidence from Trust Games

By RACHEL CROSON AND NANCY BUCHAN\*

Gender is rarely included as a factor in economics models. However, recent work in experimental economics, as well as in psychology and political science, suggests that gender is an important determinant of economic and strategic behavior.

We examine gender differences in bargaining using the “trust game” introduced by Joyce Berg et al. (1995).<sup>1</sup> In this two-person game, the “proposer” is given a choice of sending some, all, or none of his or her \$10 experimental payment to an anonymous partner, the “responder.” The experimenter triples any money sent. The responder then chooses how much of his or her total wealth (his or her \$10 experimental payment plus the tripled money) to return to the proposer. Any money the responder does not return may be kept (thus the responder is playing a dictator game with his or her endowment plus three times the amount the proposer sent). The unique subgame-perfect Nash equilibrium is for the proposer to send no money and for the responder to return none.

For U.S. subjects, Berg et al. found that 30 of 32 proposers deviated from this economic equilibrium and sent some money to their partners (the average amount sent was \$5.16). In

sending money, proposers are trusting that their partners will return some money to them. In addition, 24 out of 32 of responders who received money returned some (the average amount returned was \$4.66). In returning money, responders are reciprocating the proposer’s actions.

In this paper we look for gender differences in this game. We use data previously collected from four countries (the United States, China, Japan, and Korea) and report gender differences in proposer (trusting) behavior and responder (reciprocating) behavior. We find no significant effect of gender on amount sent by proposers (trust behavior). However, we find that women return (reciprocate) significantly more of their wealth than men, both in the United States and internationally.

## I. The Impact of Gender in Previous Experiments

Catherine Eckel and Philip Grossman (1999) review a budding literature on gender in experimental economics. For purposes of this paper, we focus on their discussion of differences in bargaining.

In ultimatum games in the laboratory, gender has been observed to influence a variety of decisions.<sup>2</sup> Eckel and Grossman (1998b) demonstrate *chivalry* (men accept lower offers from women than from men) and *solidarity* (women accept lower offers from women than from men). Sara Solnick (1998) finds, in contrast, that players of both sexes demand more

\* Operations and Information Management Department, The Wharton School, University of Pennsylvania, Philadelphia, PA 19104-6366, and School of Business, University of Wisconsin, Madison, WI 53706-0394, respectively. Data in this paper were originally collected for a cross-cultural experimental study, reported in Buchan et al. (1998). The authors thank Eric Johnson for his help and support, as well as Bingfu Chen, Wujin Chu, and Hotatka Katahira, and their research assistants, for their help in collecting the data for this research.

<sup>1</sup> This game is similar to the trust game in David Kreps (1990) and the peasant–dictator game in John Van Huyck et al. (1995). All have the same prediction that play should end immediately, even though strict Pareto improvements to payoffs can be found in later stages. For a detailed comparison of the games see Berg et al. (1995).

<sup>2</sup> In the ultimatum game, one player (the proposer) makes an offer to another (the responder) of how to divide a fixed amount of money. The responder can accept or reject the proposer’s offer. If the offer is accepted, the money is divided as proposed; if the offer is rejected, both players earn zero. The unique subgame-perfect equilibrium of this game is for the proposer to offer the responder  $\epsilon$  and for the responder to accept.

from women than from men. Both studies found that offers were lower to women than to men, and that offers from women and men were not significantly different.

Other researchers have investigated gender effects in the dictator game.<sup>3</sup> Eckel and Grossman (1998a) found that women give more than men in these games, while Gary Bolton and Elena Katok (1995) found no significant difference. James Andreoni and Lise Vesterlund (1998) compared gender behavior in dictator games as the monetary value of the tokens being divided was varied among players. They found that women gave more overall and were more likely to divide tokens evenly despite different monetary values, while men became less generous as the value of their tokens increased relative to the value of the responder's tokens. Finally, Eckel and Grossman (1996) examined gender differences in a punishment game, where subjects could choose to divide evenly a \$10 (or \$12) pie with someone who had previously been ungenerous with another subject, or an \$8 pie with someone who had previously been generous. They found that women were at least as likely as men to punish ungenerous counterparts by choosing to divide the \$8 pie.

As Eckel and Grossman (1999) have observed, the findings regarding gender seem to be conditional on the level of risk present in the experiment. In decisions where risk is involved, such as for the proposer in ultimatum games, there appear to be no systematic differences in behavior across genders. However, for decisions involving no risk, such as for dictators or "punishers," women tend to be more generous and socially oriented in their behavior. In this paper, we examine behavior in an experiment involving both risky and riskless decisions. Proposers take a risk by sending money to the responder. Responders face no risk when deciding how much money, if any, to return. Our results are consistent with Eckel and Grossman's distinction. We find a signif-

icant gender difference in the riskless reciprocity decisions and no difference in the risky trusting decisions.

## II. Experimental Design and Procedure

The experimental design used in this study involves an examination of culture, communication, and the social distance between players. For purposes of this study, these factors are treated as nuisance variables, and are controlled for in the analysis. A complete discussion of the experimental design and procedures can be found in Buchan et al. (1998); here we present a shortened version. Experimental instructions are available from the authors upon request.

Subjects are randomly assigned to the roles of proposer or responder and are directed to separate rooms. There they receive instructions for the trust game and are paid their endowment in local currency. Proposers are instructed to place any money they wish to send to their partner in an envelope. Monitors collect the envelopes and take them to the experimenter, in a different room, who records the amount of money sent. She then triples the amounts sent by proposers, places the tripled money into envelopes, and sends these envelopes into the respondents' room via another monitor. The respondents receive their envelopes, and decide how much of their own experimental fee plus any tripled money received to return to their partners. Monitors collect the envelopes from the responders and give them to the experimenter. The experimenter records any amounts returned, places the money back into the proposers' original envelopes, and sends them back to the proposers' room for distribution. The experiment is then concluded; subjects turn in a post-experimental questionnaire and leave with their earnings.

This procedure, though elaborate, ensures a double-blind experiment. Throughout the experiment, subjects remain unaware of their partners' identities (and thus their genders), and the experimenter who is recording amounts sent and returned is also unaware of the subjects' identities. The anonymity afforded by this procedure helps to reduce inclinations on part of subjects to "please the experimenter" (i.e., to behave in what they

<sup>3</sup> In the dictator game, one player, the allocator, is given a fixed amount of money to divide between himself and another player, the recipient. The allocator chooses a division, and the money is divided as proposed. This is not a game in the formal sense, but rather an individual decision problem.

believe is the manner expected by the experimenter). Thus a double-blind experiment provides an environment in which self-interested behavior is as uninhibited as possible within a controlled setting (Elizabeth Hoffman et al., 1994). It also likely reduces “face-saving” behavior on the part of subjects—behaviors that might be especially prevalent in East Asian countries (Michael Bond and Kwang-Kuo Hwang, 1996). Any deviations from the self-interested equilibrium that appear in this environment are strong indicators of real tendencies on the part of the subjects to be trusting and cooperative, rather than impression-management techniques.

A total of 186 subjects participated in this experiment: 48 students from Nankai University in China, 50 students from Seoul National University in Korea, 44 students from Tokyo University in Japan, and 44 students from the University of Pennsylvania in the United States. Subjects were randomly recruited sophomore or junior economics or business students, who completed the experiment for course credit and for actual monetary earnings.<sup>4</sup>

### III. Experimental Results

#### A. Description of the Data

For purposes of analysis, monetary amounts across the four countries have been standardized on a scale from 0 to 1,000 units. Our dependent variables are the amounts sent by proposers and the proportions returned by responders. We calculate the proportion returned as the amount responders returned divided by their total wealth (three times the amount the proposer sent plus the endowment). Across all countries and cultures, the mean amount sent by proposers was 671.91 units (out of 1,000 units), and only three of the 92 proposers sent nothing to their partners.<sup>5</sup> Ten responders re-

<sup>4</sup> To ensure equivalence in experimental conditions and procedures across the four countries studied, we employed a number of cross-cultural experimental controls suggested by Alvin Roth et al. (1991). These are discussed in depth in Buchan et al. (1998).

<sup>5</sup> The mean amount sent in the Berg et al. (1995) trust game was \$5.16 (out of \$10.00). The mean amount sent

TABLE 1—GENDER BY ROLE AND COUNTRY

| Role and gender | Number of subjects |       |       |               | Total |
|-----------------|--------------------|-------|-------|---------------|-------|
|                 | China              | Japan | Korea | United States |       |
| Proposers       |                    |       |       |               |       |
| Male            | 18                 | 20    | 25    | 7             | 70    |
| Female          | 6                  | 2     | 0     | 15            | 23    |
| Responders      |                    |       |       |               |       |
| Male            | 16                 | 18    | 23    | 9             | 66    |
| Female          | 8                  | 4     | 2     | 13            | 27    |

turned zero (three of whom had received zero). The average proportion returned was 31.2 percent. Seventy-eight responders out of 92 (85 percent) returned at least as much as had been sent, while the remaining 15 percent returned less than had been sent.

Of the four countries, women had the highest representation among the U.S. subjects. The numbers of women and men in each role of the experiment are detailed in Table 1.

#### B. Analysis of Gender

There are two main results of this experiment. First, there is no significant gender-related difference in the amounts sent by proposers. Second, women responders return significantly more than male responders, even controlling for the amount received. These results are described in Table 2.

We first analyze the amounts sent (out of 1,000 units) by women and men in all four countries. The average amount sent by women is 630.4, and the average amount sent by men is 696.4. A Wilcoxon test finds no significant difference between these two samples, nor does a *t* test. Regressions of amount sent on gender, either alone or in combination with controls for the different treatments in the experiment and either with and without indicator variables for the countries, indicate no significant effect of gender. One collected measure from the post-experimental questionnaire that does have a significant and positive effect on

by the American subjects in our experiment was slightly higher, at \$6.47 (out of \$10.00). The difference is likely due to the added communication treatment in our experiment.

TABLE 2—AVERAGE AMOUNTS SENT AND RETURNED, BY GENDER

| Gender | Amount sent <sup>a</sup> | Amount returned    | Proportion returned <sup>b</sup> |
|--------|--------------------------|--------------------|----------------------------------|
| Men    | 696.4<br>(286.1)         | 928.0<br>(688.7)   | 28.6<br>(17.8)                   |
| Women  | 630.4<br>(260.6)         | 1,215.1<br>(603.1) | 37.4<br>(13.8)                   |
| Total  | 680.1<br>(280.1)         | 1,013.5<br>(674.2) | 31.2<br>(17.1)                   |

Notes: Amounts sent are out of 1,000 units; the proportions returned are reported as percentages. Numbers in parentheses are standard deviations.

<sup>a</sup> The gender-related difference in amounts sent is not statistically significant.

<sup>b</sup> The gender-related difference in the proportion returned is statistically significant ( $p = 0.0183$ ).

the amount proposers send is the amount they expect to have returned to them (proposers completed these questionnaires after they sent their money but before receiving anything from the respondents). However, there are no differences between men’s and women’s expectations in this setting.<sup>6</sup>

We next turn to our analysis of the proportion returned by responders. The average proportion returned by women is 37.4 percent, and the corresponding proportion for men 28.6 percent. A Wilcoxon test finds that women return a significantly higher percentage than men ( $p = 0.0183$ ) as does a  $t$  test.

Table 3 presents results for a number of regressions of proportion returned on gender and other control variables. In all these regressions, gender has a significant impact on the proportion that responders return; specifically, women return a significantly higher proportion than men. Regressions (i)–(iv) control for the treatment responders were in, the country they were from, and the amount that was sent to them. Notice that women return a significantly higher proportion, even in this last regression, which controls for the amount they received.

<sup>6</sup> One concern is that there are extremely few women in the samples from Japan and Korea; however, similar analyses using only data from the United States and China yield the same results.

TABLE 3—REGRESSIONS OF PROPORTION RETURNED ON GENDER AND OTHER CONTROL VARIABLES

| Independent variable      | Regression |          |          |                      |                     |
|---------------------------|------------|----------|----------|----------------------|---------------------|
|                           | (i)        | (ii)     | (iii)    | (iv)                 | (v)                 |
| Intercept                 | 0.3299**   | 0.3307** | 0.3352** | 0.1294**             | 0.1004 <sup>†</sup> |
| Gender <sup>a</sup>       | 0.0443*    | 0.0469*  | 0.0603** | 0.0523**             | 0.0726**            |
| Social distance           |            | 0.0124   | 0.0147   | 0.0147               | -0.0098             |
| Discussion                |            | -0.0106  | -0.0117  | -0.0281 <sup>†</sup> | -0.0172             |
| China                     |            |          | 0.0272   | 0.0136               | 0.0367 <sup>†</sup> |
| Japan                     |            |          | 0.0311   | 0.0260               |                     |
| Korea                     |            |          | 0.0072   | 0.0132               |                     |
| Amount sent               |            |          |          | 0.0003**             | 0.0003**            |
| Adjusted R <sup>2</sup> : | 0.0464     | 0.0345   | 0.0484   | 0.2852               | 0.4481              |
| Number of observations:   | 93         | 93       | 93       | 93                   | 46                  |

Notes: Regressions (i)–(iv) were run on the entire sample of responders in all four countries; regression (v) uses only the data from China and the United States.

<sup>a</sup> Female = 1.

<sup>†</sup> Statistically significant at the 10-percent level.

\* Statistically significant at the 5-percent level.

\*\* Statistically significant at the 1-percent level.

Interestingly there is a significant effect of the amount sent (out of 1,000) on the proportion returned. As proposers send more to responders, responders reciprocate by returning not just more absolutely, but by returning a higher proportion. This suggests that responders are not simply using a rule that says, for example, “reimburse the proposer by returning the amount sent,” but instead are rewarding proposers for their trust. The final regression, (v), uses only the data from China and the United States (since there were relatively few women in the experiments run in Japan and Korea) with similar results.<sup>7</sup>

What might be causing female responders to return more than male responders? Two explanations come to mind. First, it might be that women are simply more altruistic than men. Second, it might be that women are more likely to reciprocate than men. The next section discusses these two explanations and suggests evidence for each.

#### IV. Summary and Discussion

Two main results emerge from this experiment. The amount of trust exhibited in this game (the amount sent) is not significantly

<sup>7</sup> Regressions run for each country individually also yielded similar results.

different between men and women. However, women exhibit significantly more reciprocity in this game (by returning a higher proportion of their wealth).

There are two possible explanations for this latter result. First, it may simply be that women are more altruistic than men (i.e., women care more about their partner's consumption than men do), and thus they return a higher proportion of their earnings. Some experimental evidence suggests that this might be the case (e.g., Eckel and Grossman, 1998a). However, if this were so we would expect to see a significant gender effect in both amounts sent and proportion returned—not only in the latter. Alternatively, as Andreoni and Vesterlund (1998) suggest, it may be that women are more altruistic when the costs and benefits of giving are symmetric, but men may be more altruistic when the benefit of giving is higher than the costs. Specifically, Andreoni and Vesterlund find that, while women give significantly more when costs and benefits are symmetric ( $t = 2.26$  and  $t = 1.42$  for their budget 4 and 8), when the value of giving is three times the cost of giving (as in our proposer's situation), men give significantly more than women ( $t = 1.96$  for their budget 1). However, the data in our experiment do not demonstrate this pattern. While women are more altruistic than men in the second stage, in the first stage (where the money sent is tripled), men's contributions are the same as those of women's.

However, our experiment is different in an important respect from this previous work in that subjects were not simply playing a series of dictator games. Instead, they were linked in an important way: the amount the responder returned went back to the proposer who had created the pie to be divided in the first place. Our results suggest that a different motive, reciprocity, could be driving the differences between male and female behavior in this setting.<sup>8</sup> This explanation involves women being more likely to reciprocate than males,

rather than being simply more altruistic. This is consistent with results from Eckel and Grossman (1996), who showed that women were as likely as men, or more likely, to reciprocally punish (reward) unfair (fair) behavior in others.<sup>9</sup>

Some evidence in favor of reciprocity is provided by the post-experimental questionnaires. While waiting to receive money from the proposers, responders were asked how obligated they felt to return at least as much to the proposer as the proposer sent to them. Women felt significantly more obligated than men to do so ( $X^2 = 12.65$ ,  $p = 0.049$ ), with 57 percent of women saying they felt "extremely obligated," compared with only 24 percent of men. This supports the explanation of women being more likely to reciprocate than men, independent of their altruistic leanings.

Finally, our findings are consistent with the relationship suggested by Eckel and Grossman (1999) between risk and gender. In our experiment, proposers, who were facing substantial risk in sending money to the responders, did not exhibit gender-related differences in their behavior. In contrast, when making a riskless decision, female responders returned significantly more than their male counterparts.

While economic models have previously been gender-blind, evidence presented in this and other research suggests that the models should be expanded to incorporate systematic effects of characteristics such as gender in settings like bargaining, where issues of trust and reciprocity are likely to have an impact.

## REFERENCES

**Andreoni, James and Vesterlund, Lise.** "Which Is the Fair Sex? Gender Differences in Al-

<sup>9</sup> Recent work in other fields also suggests that women might be more likely to reciprocate than men. In linguistics, Deborah Tannen (1990) suggests that women tend to engage in reciprocal discussion (e.g., you tell your story, then I'll tell mine) while men tend to engage in hierarchical discussion. Experiments in sociology suggest that, for an equal fixed wage offered by an experimenter, female subjects do more work than male subjects (Denise Bielby and William Bielby, 1988). We thank Sara Solnick for bringing this latter result to our attention.

<sup>8</sup> Recent models of reciprocity include Bolton (1991), Matthew Rabin (1993), Bolton and Axel Ockenfels (1998), and Ernst Fehr and Klaus Schmidt (1998). None includes gender as a variable in the analysis.

- truism." Working paper, University of Wisconsin, 1998.
- Berg, Joyce; Dickhaut, John and McCabe, Kevin.** "Trust, Reciprocity, and Social History." *Games and Economic Behavior*, July 1995, 10(1), pp. 122–42.
- Bielby, Denise and Bielby, William.** "She Works Hard for the Money: Household Responsibilities and the Allocation of Work Effort." *American Journal of Sociology*, March 1988, 93(5), pp. 1031–59.
- Bolton, Gary E.** "A Comparative Model of Bargaining: Theory and Evidence." *American Economic Review*, December 1991, 81(5), pp. 1096–1136.
- Bolton, Gary and Katok, Elena.** "An Experimental Test for Gender Differences in Beneficent Behavior." *Economics Letters*, June 1995, 48(3–4), pp. 287–92.
- Bolton, Gary and Ockenfels, Axel.** "ERC: A Theory of Equity, Reciprocity, and Competition." Working paper, Penn State University, 1998.
- Bond, Michael and Hwang, Kwang-Kuo.** "The Social Psychology of the Chinese People," in Michael Bond, ed., *The psychology of the Chinese people*. New York: Oxford University Press, 1996, pp. 213–66.
- Buchan, Nancy; Croson, Rachel and Johnson, Eric.** "Country, Culture, and Communication: Extra-Economic Incentives Toward Economic Cooperation." University of Pennsylvania Working Paper No. 98-03-05, 1998.
- Eckel, Catherine and Grossman, Philip.** "The Relative Price of Fairness: Gender Differences in a Punishment Game." *Journal of Economic Behavior and Organization*, August 1996, 30(2), pp. 143–58.
- \_\_\_\_\_. "Are Women Less Selfish than Men: Evidence from Dictator Experiments." *Economic Journal*, May 1998a, 108(448), pp. 726–35.
- \_\_\_\_\_. "Chivalry and Solidarity in Ultimatum Games." Working paper, Virginia Polytechnic Institute and State University, 1998b.
- \_\_\_\_\_. "Differences in the Economic Decisions of Men and Women: Experimental Evidence," in C. Plott and V. Smith, eds., *Handbook of experimental results*. Amsterdam: Elsevier, 1999 (forthcoming).
- Fehr, Ernst and Schmidt, Klaus.** "A Theory of Fairness, Competition and Cooperation." Working paper, University of Zurich, 1998.
- Hoffman, Elizabeth; McCabe, Kevin; Shachat, Keith and Smith, Vernon.** "Preferences, Property Rights, and Anonymity in Bargaining Games." *Games and Economic Behavior*, November 1994, 7(3), pp. 346–80.
- Kreps, David.** "Corporate Culture and Economic Theory," in J. Alt and K. Shepsle, eds., *Perspectives on positive political economy*. Cambridge, U.K.: Cambridge University Press, 1990, pp. 90–143.
- Rabin, Matthew.** "Incorporating Fairness into Game Theory and Economics." *American Economic Review*, December 1993, 86(5), pp. 1281–1302.
- Roth, Alvin; Prasnikar, Vesna; Okuno-Fujiwara, Masahiro and Zamir, Shmuel.** "Bargaining and Market Behavior in Jerusalem, Ljubljana, Pittsburgh, and Tokyo: An Experimental Study." *American Economic Review*, December 1991, 81(5), pp. 1068–95.
- Solnick, Sara.** "Gender Differences in the Ultimatum Game." Working paper, University of Miami, 1998.
- Tannen, Deborah.** *You just don't understand: Women and men in conversation*. New York: Ballantine, 1990.
- Van Huyck, John; Battalio, Raymond and Walters, Mary.** "Commitment versus Discretion in the Peasant–Dictator Game." *Games and Economic Behavior*, July 1995, 10(1), pp. 143–70.



**This article has been cited by:**

1. David Hugh-Jones. 2016. Honesty, beliefs about honesty, and economic growth in 15 countries. *Journal of Economic Behavior & Organization* **127**, 99-114. [[CrossRef](#)]
2. Bryan C. McCannon, Colleen Tokar Asaad, Mark Wilson. 2016. Financial competence, overconfidence, and trusting investments: Results from an experiment. *Journal of Economics and Finance* **40:3**, 590-606. [[CrossRef](#)]
3. Tiziana Zalla, Marco Sperduti, Giovanna Girardi, Chiara Chelini, Marion Leboyer, Sacha Bourgeois-Gironde. 2016. Reduced social coordination in Autism Spectrum Disorders. *Research in Autism Spectrum Disorders* **26**, 71-79. [[CrossRef](#)]
4. Guangrong Wang, Jianbiao Li, Xile Yin, Shuaiqi Li, Mengxing Wei. 2016. Modulating activity in the orbitofrontal cortex changes trustees' cooperation: A transcranial direct current stimulation study. *Behavioural Brain Research* **303**, 71-75. [[CrossRef](#)]
5. Swee Hoon Chuah, Simon Gächter, Robert Hoffmann, Jonathan H.W. Tan. 2016. Religion, discrimination and trust across three cultures. *European Economic Review* . [[CrossRef](#)]
6. Dejun Tony Kong. 2016. A gene-dependent climatoeconomic model of generalized trust. *Journal of World Business* **51**, 226-236. [[CrossRef](#)]
7. Salih Zeki Ozdemir, Peter Moran, Xing Zhong, Martin J. Bliemel. 2016. Reaching and Acquiring Valuable Resources: The Entrepreneur's Use of Brokerage, Cohesion, and Embeddedness. *Entrepreneurship Theory and Practice* **40:10.1111/etap.2016.40.issue-1**, 49-79. [[CrossRef](#)]
8. Israel Waichman, Ch'ng Siang, Till Requate, Aric Shafran, Eva Camacho-Cuena, Yoshio Iida, Shosh Shahrabani. 2015. Reciprocity in Labor Market Relationships: Evidence from an Experiment across High-Income OECD Countries. *Games* **6**, 473-494. [[CrossRef](#)]
9. Shuyuan Mary Ho, Merrill Warkentin. 2015. Leader's dilemma game: An experimental design for cyber insider threat research. *Information Systems Frontiers* . [[CrossRef](#)]
10. Justine Burns, Malcolm Keswell. 2015. Diversity and the provision of public goods: Experimental evidence from South Africa. *Journal of Economic Behavior & Organization* **118**, 110-122. [[CrossRef](#)]
11. Margit I. Ruissen, Ellen R.A. de Bruijn. 2015. Is it me or is it you? Behavioral and electrophysiological effects of oxytocin administration on self-other integration during joint task performance. *Cortex* **70**, 146-154. [[CrossRef](#)]
12. Marcus Dittrich. 2015. Gender differences in trust and reciprocity: evidence from a large-scale experiment with heterogeneous subjects. *Applied Economics* 1-14. [[CrossRef](#)]
13. Philip J. Grossman, Mana Komai, James E. Jensen. 2015. Leadership and gender in groups: An experiment. *Canadian Journal of Economics/Revue canadienne d'économique* **48:10.1111/caje.2015.48.issue-1**, 368-388. [[CrossRef](#)]
14. Yoshio Iida. 2015. Task-based income inequalities and redistribution preferences: A comparison of China and Japan. *Journal of Behavioral and Experimental Economics* . [[CrossRef](#)]
15. Dung V. Vu. 2015. Germany versus China: How does social distance influence public good behavior?. *Mind & Society* . [[CrossRef](#)]
16. Michael P. Haselhuhn, Jessica A. Kennedy, Laura J. Kray, Alex B. Van Zant, Maurice E. Schweitzer. 2015. Gender differences in trust dynamics: Women trust more than men following a trust violation. *Journal of Experimental Social Psychology* **56**, 104-109. [[CrossRef](#)]
17. Vivian Lei, David Masclat, Filip Vesely. 2014. Competition vs. communication: An experimental study on restoring trust. *Journal of Economic Behavior & Organization* **108**, 94-107. [[CrossRef](#)]

18. P. M. Gromann, S. S. Shergill, L. de Haan, D. G. J. Meewis, A.-K. J. Fett, N. Korver-Nieberg, L. Krabbendam. 2014. Reduced brain reward response during cooperation in first-degree relatives of patients with psychosis: an fMRI study. *Psychological Medicine* **44**, 3445-3454. [[CrossRef](#)]
19. Allan B. de Guzman, Jose Amadeo B. Imperial, Danelen Mae V. Ilagan, Hazel Anne D. Imus, Khayla Marie C. Ignacio, Kristienne Faith C. Ignacio. 2014. Utilizing Conjoint Analysis to Explicate Nurse–Patient Interaction Among Geriatric Incarcerated Individuals. *Educational Gerontology* **40**, 861-880. [[CrossRef](#)]
20. Jeffrey Derks, Nikki C. Lee, Lydia Krabbendam. 2014. Adolescent trust and trustworthiness: Role of gender and social value orientation. *Journal of Adolescence* **37**, 1379-1386. [[CrossRef](#)]
21. I. Babenko, R. Sen. 2014. Money Left on the Table: An Analysis of Participation in Employee Stock Purchase Plans. *Review of Financial Studies* **27**, 3658-3698. [[CrossRef](#)]
22. David A. Fleming, Alberto Chong, Hernán D. Bejarano. 2014. Trust and Reciprocity in the Aftermath of Natural Disasters. *The Journal of Development Studies* **50**, 1482-1493. [[CrossRef](#)]
23. Giuseppe Albanese, Guido de Blasio. 2014. Who trusts others more? A cross-European study. *Empirica* **41**, 803-820. [[CrossRef](#)]
24. Ghazala Azmat, Barbara Petrongolo. 2014. Gender and the labor market: What have we learned from field and lab experiments?. *Labour Economics* **30**, 32-40. [[CrossRef](#)]
25. Özalp Özer, Yanchong Zheng, Yufei Ren. 2014. Trust, Trustworthiness, and Information Sharing in Supply Chains Bridging China and the United States. *Management Science* **60**. [[CrossRef](#)]
26. Leonardo Christov-Moore, Elizabeth A. Simpson, Gino Coudé, Kristina Grigaityte, Marco Iacoboni, Pier Francesco Ferrari. 2014. Empathy: Gender effects in brain and behavior. *Neuroscience & Biobehavioral Reviews*. [[CrossRef](#)]
27. İrge Şener, Abubakar Balarabe Karaye. 2014. Board Composition and Gender Diversity: Comparison of Turkish and Nigerian Listed Companies. *Procedia - Social and Behavioral Sciences* **150**, 1002-1011. [[CrossRef](#)]
28. BRYAN C. MCCANNON. 2014. Trust, reciprocity, and a preference for economic freedom: experimental evidence. *Journal of Institutional Economics* 1-20. [[CrossRef](#)]
29. Menandro S. Abanes, Peer L.H. Scheepers, Carl Sterkens. 2014. Ethno-religious groups, identification, trust and social distance in the ethno-religiously stratified Philippines. *Research in Social Stratification and Mobility*. [[CrossRef](#)]
30. E. M. Heemskerck, M. Fennema. 2014. Women on Board: Female Board Membership as a Form of Elite Democratization. *Enterprise and Society*. [[CrossRef](#)]
31. Fabrice Clément, Paul Harris, Stéphane Bernard, Jean-Philippe Antonietti, Laurence Kaufmann. 2014. Rousseau's Child. *Swiss Journal of Psychology* **73**, 105-110. [[CrossRef](#)]
32. Ola Kvaløy, Miguel Luzuriaga. 2013. Playing the trust game with other people's money. *Experimental Economics*. [[CrossRef](#)]
33. Laurent Bègue. 2013. Do just-world believers practice private charity?. *Journal of Applied Social Psychology* n/a-n/a. [[CrossRef](#)]
34. P. M. Gromann, D. J. Heslenfeld, A.-K. Fett, D. W. Joyce, S. S. Shergill, L. Krabbendam. 2013. Trust versus paranoia: abnormal response to social reward in psychotic illness. *Brain* **136**, 1968-1975. [[CrossRef](#)]
35. Soo Hong Chew, Richard P. Ebstein, Songfa Zhong. 2013. Sex-hormone genes and gender difference in ultimatum game: Experimental evidence from China and Israel. *Journal of Economic Behavior & Organization* **90**, 28-42. [[CrossRef](#)]

36. Giuseppe Di Vita, Gianluca Foresta, Carla Zarbà. 2013. Il consumo giovanile di bevande alcoliche: un'indagine su alcuni modelli comportamentali. *ECONOMIA AGRO-ALIMENTARE* 203-232. [[CrossRef](#)]
37. Philipp Koellinger, Maria Minniti, Christian Schade. 2013. Gender Differences in Entrepreneurial Propensity\*. *Oxford Bulletin of Economics and Statistics* 75:10.1111/obes.2013.75.issue-2, 213-234. [[CrossRef](#)]
38. Rosie Campbell. 2013. Leaders, footsoldiers and befrienders: The gendered nature of social capital and political participation in Britain. *British Politics* 8:1, 28-50. [[CrossRef](#)]
39. Christiane Schwieren. 2012. The gender wage gap in experimental labor markets. *Economics Letters* 117, 592-595. [[CrossRef](#)]
40. DANIELE NOSENZO. 2012. PAY SECRECY AND EFFORT PROVISION. *Economic Inquiry* no-no. [[CrossRef](#)]
41. SIMON GÄCHTER, DANIELE NOSENZO, ELKE RENNER, MARTIN SEFTON. 2012. WHO MAKES A GOOD LEADER? COOPERATIVENESS, OPTIMISM, AND LEADING-BY-EXAMPLE. *Economic Inquiry* 50:10.1111/ecin.2012.50.issue-4, 953-967. [[CrossRef](#)]
42. Stefano R. Belli, Robert D. Rogers, Jennifer Y.F. Lau. 2012. Adult and adolescent social reciprocity: Experimental data from the Trust Game. *Journal of Adolescence* 35, 1341-1349. [[CrossRef](#)]
43. Matthias Heinz, Steffen Juranek, Holger A. Rau. 2012. Do women behave more reciprocally than men? Gender differences in real effort dictator games. *Journal of Economic Behavior & Organization* 83, 105-110. [[CrossRef](#)]
44. Kiridaran Kanagaretnam, Stuart Mestelman, S.M. Khalid Nainar, Mohamed Shehata. 2012. The impact of empowering investors on trust and trustworthiness. *Journal of Economic Psychology* 33, 566-577. [[CrossRef](#)]
45. Aurora García-Gallego, Nikolaos Georgantzis, Ainhoa Jaramillo-Gutiérrez. 2012. Gender differences in ultimatum games: Despite rather than due to risk attitudes. *Journal of Economic Behavior & Organization* 83, 42-49. [[CrossRef](#)]
46. MATTEO MIGHELI. 2012. Assessing Trust Through Social Capital? A Possible Experimental Answer. *American Journal of Economics and Sociology* 71:10.1111/ajes.2012.71.issue-2, 298-327. [[CrossRef](#)]
47. Aaron Nicholas. 2012. Fairness as a constraint on reciprocity: Playing simultaneously as dictator and trustee. *The Journal of Socio-Economics* 41, 211-221. [[CrossRef](#)]
48. Kenju Akai, Robert Jiro Netzer. 2012. Trust and reciprocity among international groups: Experimental evidence from Austria and Japan. *The Journal of Socio-Economics* 41, 266-276. [[CrossRef](#)]
49. Justine Burns. 2012. Race, diversity and pro-social behavior in a segmented society. *Journal of Economic Behavior & Organization* 81, 366-378. [[CrossRef](#)]
50. Bernd Hayo, Björn Vollan. 2012. Group interaction, heterogeneity, rules, and co-operative behaviour: Evidence from a common-pool resource experiment in South Africa and Namibia. *Journal of Economic Behavior & Organization* 81, 9-28. [[CrossRef](#)]
51. Jose Apesteguia, Ghazala Azmat, Nagore Iriberry. 2012. The Impact of Gender Composition on Team Performance and Decision Making: Evidence from the Field. *Management Science* 58, 78-93. [[CrossRef](#)]
52. Rey Dang, Linh-Chi VoWomen on Corporate Boards of Directors: Theories, Facts and Analysis 3-21. [[CrossRef](#)]
53. Alexander Pfaff, Maria Alejandra Vélez. 2011. Efficiency and equity in negotiated resource transfers: Contributions and limitations of trust with limited contracts. *Ecological Economics* . [[CrossRef](#)]

54. Debra J. Mesch, Melissa S. Brown, Zachary I. Moore, Amir Daniel Hayat. 2011. Gender differences in charitable giving. *International Journal of Nonprofit and Voluntary Sector Marketing* 16:10.1002/nvsm.v16.4, 342-355. [[CrossRef](#)]
55. X. Pan, D. Houser. 2011. Mating Strategies and Gender Differences in Pro-sociality: Theory and Evidence. *CEifo Economic Studies* . [[CrossRef](#)]
56. Xiangdong Qin, Junyi Shen, Xindan Meng. 2011. Group-based trust, trustworthiness and voluntary cooperation: Evidence from experimental and survey data in China. *The Journal of Socio-Economics* 40, 356-363. [[CrossRef](#)]
57. Brice Corgnet, Angela Sutan, Róbert F. Veszteg. 2011. My teammate, myself and I: Experimental evidence on equity and equality norms. *The Journal of Socio-Economics* 40, 347-355. [[CrossRef](#)]
58. David Masclet, Thierry Pénard. 2011. Do reputation feedback systems really improve trust among anonymous traders? An experimental study. *Applied Economics* 1-21. [[CrossRef](#)]
59. Chia-Jung Tsay, Lisa L. Shu, Max H. Bazerman. 2011. Naïveté and Cynicism in Negotiations and Other Competitive Contexts. *The Academy of Management Annals* 5, 495-518. [[CrossRef](#)]
60. Özalp Özer, Yanchong Zheng, Kay-Yut Chen. 2011. Trust in Forecast Information Sharing. *Management Science* 57, 1111-1137. [[CrossRef](#)]
61. Elias Jammal, Melanie Leistikow 147-160. [[CrossRef](#)]
62. Ali Ahmed. 2011. Conditional reciprocity in the investment game. *The Social Science Journal* . [[CrossRef](#)]
63. Ananish Chaudhuri, Erwann Sbai. 2011. Gender differences in trust and reciprocity in repeated gift exchange games. *New Zealand Economic Papers* 45, 81-95. [[CrossRef](#)]
64. Paul A.M. Van Lange, Catrin Finkenauer, Arne Popma, Mark van Vugt. 2011. Electrodes as social glue: Measuring heart rate promotes giving in the trust game. *International Journal of Psychophysiology* . [[CrossRef](#)]
65. Timothy R. Koscik, Daniel Tranel. 2011. The human amygdala is necessary for developing and expressing normal interpersonal trust. *Neuropsychologia* 49, 602-611. [[CrossRef](#)]
66. Sascha Fullbrunn, Katharina Richwien, Abdolkarim Sadrieh. 2011. Trust and Trustworthiness in Anonymous Virtual Worlds. *Journal of Media Economics* 24, 48-63. [[CrossRef](#)]
67. 2011. Table of Contents. *ASHE Higher Education Report* 37:10.1002/aehe.v37.2, 1-155. [[CrossRef](#)]
68. Nancy R. Buchan, Gianluca Grimalda Reducing Social Distance: The Role of Globalization in Global Public Goods Provision 147-187. [[CrossRef](#)]
69. Leonardo Becchetti, Giacomo Degli Antoni, Marco Faillo. 2010. Let's meet up! The role of relational goods in promoting cooperation. *The Journal of Socio-Economics* 39, 661-669. [[CrossRef](#)]
70. Robert Slonim, Pablo Guillen. 2010. Gender selection discrimination: Evidence from a Trust game. *Journal of Economic Behavior & Organization* 76, 385-405. [[CrossRef](#)]
71. Siu Man Lui, Wendy Hui Effects of Smiling and Gender on Trust Toward a Recommendation Agent 398-405. [[CrossRef](#)]
72. Marco Castillo, Gregory Leo. 2010. Moral Hazard and Reciprocity. *Southern Economic Journal* 77, 271-281. [[CrossRef](#)]
73. CAGRI S. KUMRU, LISE VESTERLUND. 2010. The Effect of Status on Charitable Giving. *Journal of Public Economic Theory* 12:10.1111/jpet.2010.12.issue-4, 709-735. [[CrossRef](#)]
74. Jitka Lindova, Ales A. Kubena, Hana Sturcova, Romana Krivohlava, Martina Novotna, Anna Rubesova, Jan Havlicek, Petr Kodym, Jaroslav Flegr. 2010. Pattern of money allocation in experimental games supports the stress hypothesis of gender differences in *Toxoplasma gondii*-induced behavioural changes. *Folia Parasitologica* 57, 136-142. [[CrossRef](#)]

75. Håkan J. Holm, Paul Nystedt. 2010. Collective Trust Behavior. *Scandinavian Journal of Economics* 112:10.1111/sjoe.2010.112.issue-1, 25-53. [[CrossRef](#)]
76. Rebecca J. Hannagan, Christopher W. Larimer. 2010. Does Gender Composition Affect Group Decision Outcomes? Evidence from a Laboratory Experiment. *Political Behavior* 32, 51-67. [[CrossRef](#)]
77. Henrik Egbert, Vanessa Mertins. 2010. Experiential Learning with Experiments. *International Review of Economics Education* 9:2, 59. [[CrossRef](#)]
78. Mariah Ehmke, Jayson Lusk, Wallace Tyner. 2010. Multidimensional tests for economic behavior differences across cultures. *The Journal of Socio-Economics* 39, 37-45. [[CrossRef](#)]
79. Iris Bohnettrust in experiments 253-257. [[CrossRef](#)]
80. Ali Ahmed, Osvaldo Salas. 2009. The Relationship between Behavioral and Attitudinal Trust: A Cross-cultural Study. *Review of Social Economy* 67, 457-482. [[CrossRef](#)]
81. Aurélie Bonein, Daniel Serra. 2009. Gender pairing bias in trustworthiness. *The Journal of Socio-Economics* 38, 779-789. [[CrossRef](#)]
82. MARIAH D. EHMKE, JASON F. SHOGREN. 2009. Experimental methods for environment and development economics. *Environment and Development Economics* 14, 419. [[CrossRef](#)]
83. Detlef Fetchenhauer, David Dunning. 2009. Do people trust too much or too little?. *Journal of Economic Psychology* 30, 263-276. [[CrossRef](#)]
84. Kiridaran Kanagaretnam, Stuart Mestelman, Khalid Nainar, Mohamed Shehata. 2009. The impact of social value orientation and risk attitudes on trust and reciprocity. *Journal of Economic Psychology* 30, 368-380. [[CrossRef](#)]
85. Rachel Croson,, Uri Gneezy. 2009. Gender Differences in Preferences. *Journal of Economic Literature* 47:2, 448-474. [[Abstract](#)] [[View PDF article](#)] [[PDF with links](#)]
86. Cynthia S. Wang, Adam D. Galinsky, J. Keith Murnighan. 2009. Bad Drives Psychological Reactions, but Good Propels Behavior: Responses to Honesty and Deception. *Psychological Science* 20:10.1111/psci.2009.20.issue-5, 634-644. [[CrossRef](#)]
87. William L. Cron, Mary C. Gilly, John L. Graham, John W. Slocum Jr.. 2009. Gender differences in the pricing of professional services: Implications for income and customer relationships. *Organizational Behavior and Human Decision Processes* 109, 93-105. [[CrossRef](#)]
88. Natalia Kolyesnikova, Tim H. Dodd, James B. Wilcox. 2009. Gender as a moderator of reciprocal consumer behavior. *Journal of Consumer Marketing* 26, 200-213. [[CrossRef](#)]
89. Mark A. Boyer, Brian Urlacher, Natalie Florea Hudson, Anat Niv-Solomon, Laura L. Janik, Michael J. Butler, Scott W. Brown, Andri Ioannou. 2009. Gender and Negotiation: Some Experimental Findings from an International Negotiation Simulation 1. *International Studies Quarterly* 53:10.1111/isqu.2009.53.issue-1, 23-47. [[CrossRef](#)]
90. S. Basu, J. Dickhaut, G. Hecht, K. Towry, G. Waymire. 2009. Recordkeeping alters economic history by promoting reciprocity. *Proceedings of the National Academy of Sciences* 106, 1009-1014. [[CrossRef](#)]
91. Research in Law and Economics 24, . [[CrossRef](#)]
92. Brent Simpson, Mark Van VugtSex differences in cooperation and prosocial behavior 81-103. [[CrossRef](#)]
93. S KOPELMAN. 2009. The effect of culture and power on cooperation in commons dilemmas: Implications for global resource management. *Organizational Behavior and Human Decision Processes* 108, 153-163. [[CrossRef](#)]
94. Massimo Finocchiaro Castro. 2008. Where are you from? Cultural differences in public good experiments. *The Journal of Socio-Economics* 37, 2319-2329. [[CrossRef](#)]

95. Robert Kurzban, Mary L. Rigdon, Bart J. Wilson. 2008. Incremental approaches to establishing trust. *Experimental Economics* 11, 370-389. [[CrossRef](#)]
96. Ahmad Mahajna, Uri Benzion, Ravid Bogaire, Tal Shavit. 2008. Subjective discount rates among Israeli Arabs and Israeli Jews. *The Journal of Socio-Economics* 37, 2513-2522. [[CrossRef](#)]
97. Rachel Croson, Melanie Marks, Jessica Snyder. 2008. Groups Work for Women: Gender and Group Identity in Social Dilemmas. *Negotiation Journal* 24:10.1111/nejo.2008.24.issue-4, 411-427. [[CrossRef](#)]
98. Linda Kamas, Anne Preston, Sandy Baum. 2008. Altruism in individual and joint-giving decisions: What's gender got to do with it?. *Feminist Economics* 14, 23-50. [[CrossRef](#)]
99. Robert Slonim, Ellen Garbarino. 2008. Increases in trust and altruism from partner selection: Experimental evidence. *Experimental Economics* 11, 134-153. [[CrossRef](#)]
100. Christiane Schwieren, Matthias Sutter. 2008. Trust in cooperation or ability? An experimental study on gender differences. *Economics Letters* 99, 494-497. [[CrossRef](#)]
101. S FURST, M REEVES. 2008. Queens of the hill: Creative destruction and the emergence of executive leadership of women. *The Leadership Quarterly* 19, 372-384. [[CrossRef](#)]
102. Juergen Bracht, Nick Feltovich. 2008. Efficiency in the trust game: an experimental study of precommitment. *International Journal of Game Theory* 37, 39-72. [[CrossRef](#)]
103. Iris Bohnet, Fiona Greig, Benedikt Herrmann, Richard Zeckhauser. 2008. Betrayal Aversion: Evidence from Brazil, China, Oman, Switzerland, Turkey, and the United States. *American Economic Review* 98:1, 294-310. [[Abstract](#)] [[View PDF article](#)] [[PDF with links](#)]
104. Jinkwon Lee. 2007. REPETITION AND FINANCIAL INCENTIVES IN ECONOMICS EXPERIMENTS. *Journal of Economic Surveys* 21:10.1111/joes.2007.21.issue-3, 628-681. [[CrossRef](#)]
105. PAUL J. FERRARO, RONALD G. CUMMINGS. 2007. CULTURAL DIVERSITY, DISCRIMINATION, AND ECONOMIC OUTCOMES: AN EXPERIMENTAL ANALYSIS. *Economic Inquiry* 45:10.1111/ecin.2007.45.issue-2, 217-232. [[CrossRef](#)]
106. C. Bram Cadsby, Yasuyo Hamaguchi, Toshiji Kawagoe, Elizabeth Maynes, Fei Song. 2007. Cross-national gender differences in behavior in a threshold public goods game: Japan versus Canada. *Journal of Economic Psychology* 28, 242-260. [[CrossRef](#)]
107. P ZAK, A FAKHAR. 2006. Neuroactive hormones and interpersonal trust: International evidence. *Economics & Human Biology* 4, 412-429. [[CrossRef](#)]
108. JAMES C. COX, CARY A. DECK. 2006. WHEN ARE WOMEN MORE GENEROUS THAN MEN?. *Economic Inquiry* 44, 587-598. [[CrossRef](#)]
109. David C. Ribar, Mark O. Wilhelm. 2006. Exchange, role modeling and the intergenerational transmission of elder support attitudes: Evidence from three generations of Mexican-Americans. *The Journal of Socio-Economics* 35, 514-531. [[CrossRef](#)]
110. Catherine C. Eckel, Rick K. Wilson. 2006. Internet cautions: Experimental games with internet partners. *Experimental Economics* 9, 53-66. [[CrossRef](#)]
111. John Dickhaut, Aldo Rustichini. Games: Trust and Investment . [[CrossRef](#)]
112. P KENNING, H PLASSMANN. 2005. NeuroEconomics: An overview from an economic perspective. *Brain Research Bulletin* 67, 343-354. [[CrossRef](#)]
113. Hå kan Holm, Peter Engfeld. 2005. Choosing Bargaining Partners—An Experimental Study on the Impact of Information About Income, Status and Gender. *Experimental Economics* 8, 183-216. [[CrossRef](#)]



114. Hakan J. Holm, Anders Danielson. 2005. Tropic Trust Versus Nordic Trust: Experimental Evidence From Tanzania And Sweden\*. *The Economic Journal* **115**:10.1111/eoj.2005.115.issue-503, 505-532. [[CrossRef](#)]
115. Todd R. Kaplan, Bradley J. Ruffle. 2004. The Self-serving Bias and Beliefs about Rationality. *Economic Inquiry* **42**, 237-246. [[CrossRef](#)]
116. Carrie Menkel-Meadow. 2000. Teaching about Gender and Negotiation: Sex, Truths, and Videotape. *Negotiation Journal* **16**:10.1111/nej.2000.16.issue-4, 357-375. [[CrossRef](#)]
117. Anne DE Bruin, Ann Dupuis. 1999. Towards A Synthesis of Transaction Cost Economics and a Feminist Oriented Network Analysis. *American Journal of Economics and Sociology* **58**:10.1111/ajes.1999.58.issue-4, 807-827. [[CrossRef](#)]
118. Ananish ChaudhuriChapter 2 Gender and Corruption: A Survey of the Experimental Evidence 13-49. [[CrossRef](#)]
119. Anabela Botelho, Glenn W. Harrison, Marc A. Hirsch, Elisabet E. RutströmBARGAINING BEHAVIOR, DEMOGRAPHICS AND NATIONALITY: WHAT CAN THE EXPERIMENTAL EVIDENCE SHOW? 337-372. [[CrossRef](#)]
120. Juan Camilo Cardenas, Jeffrey P. CarpenterTHREE THEMES ON FIELD EXPERIMENTS AND ECONOMIC DEVELOPMENT 71-123. [[CrossRef](#)]