

# **Trust and Reciprocity in Games**

(JEL Classification: C91, C72, D64)

Presiding: **Ananish Chaudhuri**, Department of Economics, *Washington State University*

**Bradley Ruffle**, *Ben Gurion University* and **Richard Sosis**, *University of Connecticut*,  
“The Impact of Religiosity on Intra-Group Cooperation and Trust”

**Catherine Eckel**, *Virginia Polytechnic Institute and State University* and **Rick Wilson**,  
*Rice University*, “When To Trust? Experiments Disentangling Trusting Behavior in  
Risky Environments”

**Kevin McCabe**, *University of Arizona*, **Mary Rigdon**, *University of Arizona* and  
**Vernon Smith**, *University of Arizona*, “Sustaining Cooperation in Trust Games”

**Ananish Chaudhuri**, *Washington State University* and **Lata Gangadharan**, *University  
of Melbourne*, “Altruism, Trust and Reciprocity: Untangling the Strands”

**Discussants:** (Listed in the conventional order, i.e. the first discussant will discuss the  
first paper and so on)

**Ted Bergstrom**, Department of Economics, University of California-Santa Barbara

**Rachel Croson**, Wharton School, University of Pennsylvania

**Eric Friedman**, Department of Economics, Rutgers University

**Sheryl Ball**, Department of Economics, Virginia Polytechnic Institute and State  
University

Ted Bergstrom will discuss the first paper “The Impact of Religiosity on Intra-Group  
Cooperation and Trust” by Bradley Ruffle and Richard Sosis.

Rachel Croson will discuss the second paper “When To Trust? Experiments  
Disentangling Trusting Behavior in Risky Environments” by Catherine Eckel and Rick  
Wilson

Eric Friedman will discuss the third paper “Sustaining Cooperation in Trust Games”  
by Kevin McCabe, Mary Rigdon and Vernon Smith

Sheryl Ball will discuss the fourth paper “Altruism, Trust and Reciprocity: Untangling  
the Strands” by Ananish Chaudhuri and Lata Gangadharan.

## **The Impact of Religiosity on Intra-Group Cooperation and Trust**

by

**Bradley J. Ruffle (Ben-Gurion University, Economics)**  
**Richard H. Sosis (University of Connecticut, Anthropology)**

Recent theories independently developed by economists and anthropologists suggest that religion can promote intra-group cooperation by increasing trust among adherents. The theories converge in recognizing that religious rituals often serve as costly signals of an individual's commitment to a religious group. These theories provide a possible explanation for the trend recently noted that religious kibbutzim have been economically more successful than secular kibbutzim. If members of religious kibbutzim maintain higher levels of intra-group trust than secular ones, they may have greater success at overcoming the collective action problems that typically plague communal pursuits. We offer an experimental test of the hypothesis that religious kibbutzim do indeed exhibit higher levels of trust than their secular counterparts. To test the impact of religiosity and privatization on intra-group trust, we develop an experimental game that captures the unique features of trust and cooperation on Israeli kibbutzim. The experiments are conducted in pairs using kibbutz members. The methodology therefore combines an experimental game of the sort familiar to economists with field methods common in anthropology. This research contributes to the literature on the determinants of trust and the burgeoning literature that employs rational choice models to explain variation in religious behavior.

## **When To Trust? Experiments Disentangling Trusting Behavior in Risky Environments**

By

**Catherine C. Eckel (Virginia Tech, Economics)**  
**Rick K. Wilson (Rice University, Political Science)**

We use a series of laboratory experiments that focus on a two-person sequential, binary trust game. We focus on financial risk characteristics embedded in the game, along with independent measures of financial and behavioral risk associated with individual subjects. We conjecture that people are strategic actors whose trusting behavior is conditional on the decision context. That context incorporates the characteristics of a partner, the potential gains or losses from the trusting decision and the possibility of recourse to a third party to enforce agreements involving trust and reciprocity.

## **Sustaining Cooperation in Trust Games**

By

**Kevin McCabe (University of Arizona, Economics)**

**Mary Rigdon (University of Arizona, Economics)**

**Vernon Smith (University of Arizona, Economics)**

Even though sustaining cooperation has received less attention in bargaining situations, it has been a primary focus in Prisoner Dilemma and public goods games. In the Prisoners Dilemma game, always defecting is an evolutionary stable strategy in the sense that it does not pay to cooperate in a population where everyone else always defects. Yet a small band of conditional cooperators (say, tit-for-tat players) can invade a population of unconditional defectors provided that the cooperators can cluster. This assumes that the pairing in the interactions is not random. The problem with random pairing is that the chance of conditional cooperators meeting each other is low. We want to adapt this idea of population clustering to a simple two-person trust game. An agent's history of choices gives him a track record. Players can be typed based on their recent track record as whether or not they are trusting (for Players 1), and whether or not they are trustworthy (for Players 2). Once the players are typed, they can then be paired according to those types - trustors with trustworthy types and non-trustors with untrustworthy types. This sort of matching protocol induces clustering within the population. The empirical question that we address here is whether this adaptation of clustering to bargaining environments can sustain cooperative play analogous to the situation in infinitely repeated Prisoners Dilemma games.

## **Trust, Reciprocity and Altruism: Untangling the Strands**

By

**Ananish Chaudhuri (Washington State University, Economics)**

**Lata Gangadharan (University of Melbourne, Economics)**

This paper reports on a set of experiments designed to distinguish between behavior motivated by altruism and behavior motivated by trust or positive reciprocity. Extant research has sought to explain deviations from game theoretic predictions in bargaining games by appealing to “altruistic motives”. However “kindness” alone does not explain all the observed deviations. Some of the behavior is the result of (1) a sophisticated form of maximizing behavior where one player displays “conditional trust” based on some belief about the paired member’s propensity to reciprocate and (2) reciprocal behavior by the second player as a response to the trusting behavior by the first player. This paper distinguishes between transfers motivated by “altruism”, “trust” and “reciprocity”. Preliminary results show that altruism alone does not explain generous behavior in many bargaining experiments. The presence of “trust” and/or “reciprocity” lead to increased transfers over and above that which is motivated by “altruism”.

**Contact Information:**

<p>Ananish Chaudhuri (Session Organizer) Department of Economics Washington State University 2710 University Drive Richland, WA 99352 Phone: (509) 372-7238 Fax: (509) 372-7512 E-mail: <a href="mailto:achaudh@tricity.wsu.edu">achaudh@tricity.wsu.edu</a></p>	<p>Eric Friedman Department of Economics Rutgers University 75 Hamilton Street New Brunswick, NJ 08901 Phone: (732) 932-7797 Fax: (732) 932-7416 E-mail: <a href="mailto:friedman@econ.rutgers.edu">friedman@econ.rutgers.edu</a></p>
<p>Sheryl Ball Department of Economics Pamplin Hall 3031 VPI&amp;SU Blacksburg, VA 24061 Phone: (540) 231-4349 Fax: (540) 231-5097 E-mail: <a href="mailto:sball@vt.edu">sball@vt.edu</a></p>	<p>Lata Gangadharan Department of Economics University of Melbourne Parkville, Victoria 3052 Australia Phone: 61-3-8344-5408 Fax: 61-3-9344-6899 E-mail: <a href="mailto:gangadha@cupid.unimelb.edu.au">gangadha@cupid.unimelb.edu.au</a></p>
<p>Ted Bergstrom Department of Economics 2127 North Hall University of California Santa Barbara, CA 93106-9210 Phone: (805) 893-3744 Fax: (805) 893-8830: E-mail: <a href="mailto:tedb@econ.ucsb.edu">tedb@econ.ucsb.edu</a></p>	<p>Kevin McCabe Room 401T 401 W. McClelland Hall P.O. Box 210108 Tucson, AZ 85721-0108 Phone: (520) 626-3165 Fax: (520) 621-8450 E-mail: <a href="mailto:kmcabe@econlab.arizona.edu">kmcabe@econlab.arizona.edu</a></p>
<p>Rachel Croson 1030 Steinberg Hall-Dietrich Hall 3620 Locust Walk Philadelphia, PA 19104 Phone: (215) 898-4159 Fax: (215) 898-1883 E-mail: <a href="mailto:crosonr@wharton.upenn.edu">crosonr@wharton.upenn.edu</a></p>	<p>Mary Rigdon Department of Economics University of Arizona P.O. Box 210108 Tucson, AZ 85721-0108 Phone: (520) 621-4747 Fax: (520) 621-8450 E-mail: <a href="mailto:rigdon@econlab.arizona.edu">rigdon@econlab.arizona.edu</a></p>
<p>Catherine Eckel Department of Economics VPI&amp;SU Pamplin Hall 0316 Blacksburg, VA 24061 Phone: (540) 231-7707 Fax: (540) 231-5097 E-mail: <a href="mailto:eckelc@vt.edu">eckelc@vt.edu</a></p>	<p>Bradley Ruffle Department of Economics Ben-Gurion University Beer-Sheva 84105, Israel Phone: 972-7-647-2308 Fax: 972-7-647-2941 E-mail: <a href="mailto:bradley@bgumail.bgu.ac.il">bradley@bgumail.bgu.ac.il</a></p>

Vernon Smith  
Room 116A-ESL  
McClelland Hall  
P.O. Box 210108  
Tucson, AZ 85721-0108  
Phone: (520) 621-4747  
Fax: (520) – 621-8450  
**E-mail:** [smith@econlab.arizona.edu](mailto:smith@econlab.arizona.edu)

Rick K. Wilson  
Department of Political Science, MS 24  
Rice University  
Houston, TX 77251-1892  
Phone: (713) 348-3352  
Fax: (713) 348-5273  
E-mail: [rkw@rice.edu](mailto:rkw@rice.edu)

Richard Sosis  
Department of Anthropology  
U-2176  
University of Connecticut  
Storrs, CT 06269-2176  
Phone: (860)486-4264  
Fax: (860) 486-1719  
E-mail: [richard.sosis@uconn.edu](mailto:richard.sosis@uconn.edu)