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Knowledge into action

THE PARADOX OF TRUST

CIRANO Note, prepared by Jim Engle-Warnick, June 2008

Businesses and organizations require working relationships, and working relationships require trust. Whether the relationship is between a firm and a supplier, a central bank and the people it serves, a bank and a borrower, a business person and a partner, a manager and an employee, a professor and a student, a judge and a jury, a home owner and a contractor, or even a parent and a child, if we had to depend on formally enforcing more than a small fraction of our contracts and agreements with each other, our society and its economy would suffer greatly.

While trust is an integral part of relationships, the degree to which it exists and its fragility or robustness to external events is difficult to ascertain. This is because many things, sometimes observable and sometimes not observable to others, may affect behaviour in the relationship. For example, a bank may write covenants into a loan to secure repayment, but a borrower's concern about her reputation may actually be what drives the repayment. For another example, a supplier's failure to make an on-time delivery may be due to an event outside of its control, making it difficult to know how to respond to the failure to deliver.

One way to isolate and understand trust in relationships is to observe it in an Experimental Economics Laboratory. In the experimental laboratory, human subject volunteers make decisions. The subjects are paid according to the outcomes of their decisions, and their decisions are compared with theoretical predictions and behaviour observed in similar situations in the past.

In one such experiment, Jim Engle-Warnick and Robert Slonim ("Learning to Trust in Indefinitely Repeated Games", Games and Economic Behavior, 54:95-114, 2006) presented subjects with a trust game. The game consisted of several rounds of play. In each game, both players received an amount of money to begin. Then, a Trustor decided whether or not to send her money to a Trustee. After seeing the money sent increase as the result of an investment, the Trustee decided whether or not to split the earnings with the Trustor.

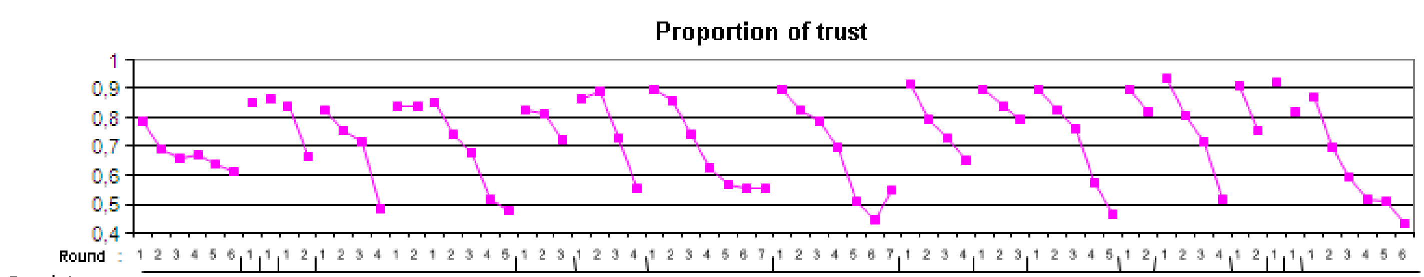
This simple game, which reduces trust to the action of sending money, and which reduces trustworthiness to the action of returning money, was then embedded in a repeated game.

In the repeated game, subjects played the game with the same partner repeatedly for several rounds, but did not know how long the game would last. After the repeated game ended, each subject played the game again with a different partner.

This type of repeated game is used in the laboratory to see how people behave when they care about their reputation. Figure 1 shows the proportion of times the send action, which involves trust, was chosen by the Trustors in each round of the repeated game. On the horizontal axis there are twenty repeated games, labeled 1-20, and just above these labels are presented the rounds in the repeated game. For example, the figure shows six rounds of decisions in the first repeated game, and one round in the second repeated game.

The figure shows beautifully how trust declines during the course of a repeated game, but then resets to a high rate at the start of the next repeated game. For example, in the first repeated game, the proportion of trust actions declined from 0.80 in round one to 0.60 in round six. But in the first round of the second repeated game, the proportion of trust reset to 0.85. One can see this pattern of behaviour throughout the course of all twenty repeated games. No matter how low the rate of trust became (less than half at the end of five repeated games), it reset. In fact, the figure also reveals that the overall trend of the rate of trust in the first is positive throughout the experiment.

The results from this experiment show that trust across relationships is robust to a decline of trust within relationships. The results suggest a way to avoid complacency, which we might interpret as the decline of trust within a relationship, is to shake up relationships. This type of regime change happens often in organizations. Imagine an employee taking up a new position in a different department or division. Imagine a company changing from one supplier to another. Or imagine a company faced with an offer for a majority of its shares. The results from this experiment suggest a rationale, based on trust, for these events.



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