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Abstracts of Papers Presented at the Conference

**THE EFFICIENCY OF DIRECT PUBLIC INVOLVEMENT
IN ENVIRONMENTAL POLICYMAKING:
AN EXPERIMENTAL TEST**

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Abstract

In one of the most ambitious forms of environmental decision-making, representatives of interested parties – environmentalists, developers, farmers, loggers, miners, etc. - are charged with the responsibility of developing a set of public policies that is acceptable to all of them. Although this approach has become increasingly popular, and has been widely discussed in the academic literature, little is known about the characteristics of the outcomes that are reached in this type of negotiation. We do not know, for example, whether these outcomes meet the standard criteria for efficiency or equity.

In this paper, we use laboratory experiments to test whether a number of *axiomatic* models of bargaining can predict the behavior of the parties to environmental decision making. In recognition of the multi-dimensional aspect of most public land use conflicts, we ask pairs of subjects to negotiate over two goods, without the possibility of cash side payments. We thus provide one of the first experimental tests of a prediction associated with the Edgeworth Box: that parties with an initial endowment that is Pareto inefficient will make trades until they reach a Pareto efficient allocation. We further test whether parties in particular reach the Nash bargain when it coincides with or conflicts with outcomes that maximise the parties' joint payoffs and with outcomes at which the parties' receive equal payoffs. Finally, the effect of providing parties with full or partial information regarding payoffs is also examined.

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Giving to the Less Fortunate: A Real-Effort Experiment¹

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November 20, 2007

Abstract

Understanding charitable giving has been the focus of a growing literature in economics since the 1980s. This paper studies how the determinants of income, both for the donors and the recipients, affect charitable giving. We consider a two-stage, real-effort experiment where individuals have to compete in groups of four to earn their income. Our main finding is that those who are ranked first are significantly less likely to give than those who are ranked second. Interestingly, this difference between the first-ranked and the second-ranked disappears when income levels are determined purely by endowments. Hence, we conclude that whether individuals spend effort to earn their income has an important effect on their giving behavior. We also examine whether individuals are more likely to give to an individual affected by (bad) luck using an additional treatment where income levels are shaped by both effort and luck. This allows us to evaluate whether inequality aversion depends on the cause of inequality.

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On the Efficacy of Implicit Contracts: the Role of Reciprocity in Contract Enforcement

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Abstract

We analyse whether preferences for trust and reciprocity have implications for contract enforcement along the lines of Fehr et al. (1997, 2006). We also investigate gender differences in this context. We show that implicit contracts implemented in an environment where explicit incentive contracts are *not* an option perform as well as the latter in eliciting effort. However, implicit contracts implemented in an environment where explicit contracts *are* an option perform significantly worse. Compared to male employers, female employers make significantly more generous contract offers when it comes to contracts with explicit incentives.

Keywords: Incentive Contracts, Trust, Reciprocity, Incomplete Contracts

JEL Classification Numbers: C71, C91, J30

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Gender Differences in Trust and Reciprocity

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ABSTRACT

In this paper we explore gender differences in trust and reciprocity using the Berg et al. (1995) trust game and the Fehr et al. (1997) gift exchange game. Our study differs from previous ones in that subjects play the stage game repeatedly with random re-matching of players. Contrary to prior studies that report men are more trusting, we find no strong gender differences in trust. We also find that women are less reciprocal in the gift exchange game which is contrary to prior studies that find women to be more reciprocal.

JEL Classification: C72, C91, D83

Keywords: Trust, Reciprocity, Gift Exchange, Gender, Experiments

Survey Trust, Experimental Trust and ROSCA Membership in Rural Cameroon[§]

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November 2007

Abstract

Broadly speaking, economic experiments and surveys have found trust to be much lower in Africa than in industrialized countries. We analyze new experimental and survey data from rural Cameroon, where the average level of trust appears to be much higher than is typical of Africa. A substantial part of this difference can be explained by the prevalence of Rotating Saving and Credit Associations (ROSCAs) in the area: membership of a common ROSCA is one of the most important factors determining experimental behavior. Correspondingly, responses to the survey questions indicate that villagers have a high degree of trust in people with whom they interact regularly, though not in people in general. There is a significant correlation between the degree of trust exhibited in the game and the degree of trust declared in response to survey questions. However, survey responses do not capture all of the systematic variation in experimental behavior, and understate the importance of ROSCA membership in predicting someone's propensity to trust others.

Keywords: social capital, trust, reciprocity, economic experiments, ROSCAs

JEL Classification: C93, O12, Z13

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Group Formation Strategy to Eradicate Poverty

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Abstract

Microfinance today is viewed as a tool to take people out of vicious circle of poverty and reshape their life. Microfinance Institutions (MFIs) introduced the novel idea of Group lending without physical collateral. Poor are deprived of loan due to lack of collateral. Microfinance provides loan to them on basis of social collateral which serve as a substitute for physical collateral. Group borrowing power is exhibited due to joint liability of loan repayment of members. Several studies tried to find the influence of various group lending mechanisms on repayment performance. But no study has ever tried to compare the distinct features of these group lending techniques. We address in our study an important feature of group lending techniques in relation to formation of groups and their access to loan.

Group lending institutions like Grammen bank give loan to self-selected group members. They are jointly responsible for loan repayment. An alternative group lending institution like Self-Help Group insists members to save first and meet certain threshold level. This process helps to strengthen the bond among them and build partial physical collateral. They approach MFI or bank to get loan against those savings. Our hypothesis is that savings as physical collateral are more effective than social capital and group ties in providing effective incentives to maintain group solidarity and, thus, ensuring high repayment rates. We test through experiment the major incentives behind group performance. Our experimental design allowed us to isolate the effect of the provision of physical collateral on group repayment. This is then compared to the case where repayment depends purely on the social capital within the group. The results show that group performance in terms of loan repayment is high in case there is both social and physical collateral as compared to physical and social collateral alone. Further, we find that it is not easy for group to form physical collateral without social collateral. Its policy implication is for MFIs in deciding how group formation should be encouraged to achieve high group solidarity shown in terms of repayment and thus helps in eradicating poverty. The research is directed towards finding the ways that can enhance the use of MFI services so that it becomes beneficial for both the lenders and borrowers.

Overconfidence in Forecasts of Own Performance: An Experimental Study

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October 2007

Abstract

If, as many psychologists have concluded, individuals have a systematic tendency to be overconfident in their own abilities and prospects there could be important economic consequences. But overconfidence has received little direct testing within economics. We use an experiment to test for overconfidence in people's forecasts of their own absolute or relative performance in two unfamiliar tasks. Given their choice of effort at the tasks, participants have incentives to forecast accurately, and have opportunities for feedback, learning and revision. Forecast accuracy is evaluated at both the aggregate level as done in psychology, and at the individual level using realized outcomes. We find very little evidence of overconfidence, with zero mean error or underconfidence more prevalent. Deviation from mean accuracy to under-confidence is greatest in tasks with absolute rather than relative win criteria, often among those using greater effort quantity or quality.

Keywords: overconfidence, forecast errors, self-assessment

JEL classification: C91 D83 D84 J24

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Do repeated game players detect patterns in opponents? Revisiting the Nyarko & Schotter belief elicitation experiment

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Abstract

The purpose of this paper is to reexamine the seminal belief elicitation experiment by Nyarko and Schotter (2002) under the prism of pattern recognition. Instead of modeling elicited beliefs by a standard weighted fictitious play model this paper proposes a generalized variant of fictitious play that is able to detect two period patterns in opponents' behavior. Evidence is presented that these generalized pattern detection models provide a better fit than standard weighted fictitious play. Individual heterogeneity was discovered as ten players were classified as employing a two period pattern detection fictitious play model, compared to eleven players who followed a non-pattern detecting fictitious play model. The average estimates of the memory parameter for these classes were 0.678 and 0.456 respectively, with five individual cases where the memory parameter was equal to zero. This is in sharp contrast to the estimates obtained from standard weighted fictitious play models which are centred on one, a bias introduced by the absence of a constant in these models. Non-pattern detecting fictitious play models with memory parameters of zero are equivalent to the win/stay-lose/shift heuristic, and therefore some subjects seem to be employing a simple heuristic alternative to more complex learning models. Simulations of these various belief formation models show that that this simple heuristic is quite effective against other more complex fictitious play models.

JEL classification number: C9; C70; C72; C73

Keywords: Behavioral game theory; Learning; Fictitious play; Pattern detection; Simulations; Beliefs; Repeated games; Mixed Strategy Nash equilibria; Economics and psychology

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Convergence: An Experimental Study of Teaching and Learning in Repeated Games

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November 28, 2007

Abstract

Nash equilibrium can be interpreted as a steady state of a game where players hold correct beliefs about the other players' behavior and act rationally. In this paper, we experimentally examine the process that leads to this steady state. We find: (1) For non-dominance solvable games the existence of a teacher greatly facilitates (is necessary for) convergence to Nash equilibrium. (2) For dominance solvable games, while a teacher is again a facilitator for convergence when the time horizon of the game is relatively short (20 periods), if the horizon is long enough subjects appear to be able to converge by iteratively eliminating dominated strategies, even if teaching is difficult. (3) The ability to see one's opponent's payoffs is essential for convergence. (4) A successful model of belief formation should include a component taking a player's opponent's payoffs into account.

Keywords: Game Theory, Belief Formation, Learning, Convergence.

JEL Classification: C70, C91, D83, D84

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Social Learning and Conditional Cooperation in a Laboratory Public Goods Game

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Abstract

It is commonly observed that in finitely repeated laboratory public goods games contributions start at about 40–60 percent of the social optimum and decay from there onwards with increasing free-riding. The reason behind this decay in contributions over time has been the subject of much study.

Andreoni (1988) looks at two possible explanations behind this phenomenon of decay – “learning” and “strategies”. The “learning” hypothesis suggests that contributions decay because players do not realize that free-riding is the dominant strategy of the game but learn so gradually over time leading to contributions dropping off. The “strategies” hypothesis suggests that some players may realize that free-riding is the dominant strategy but they do not want to educate their peers about it and hence the more sophisticated players mimic the others in the initial stages of the game and then bail out and free-ride towards the end of the game. But neither Andreoni nor a number of researchers who have replicated this study later come up with definitive answers.

In our study we appeal to the ideas of “conditional cooperation” and “strong reciprocity” to suggest that in the presence of reciprocal preferences it is possible to think about the public goods game as a “coordination problem” with high contributions being an efficient equilibrium and low contributions being an inefficient equilibrium with others in between. (Fischbacher, Fehr and Gächter, 2001; Rabin, 1993). Thus the problem is essentially one of equilibrium selection.

We elicit player beliefs regarding the contributions to be made by their peers in the game and find that these beliefs play a crucial role in determining the player’s subsequent contributions.

In a treatment where players do *not* get to observe others’ contributions till the very end of the game there is no decay in contributions at all. Participants who believe that others will contribute 70% or more on average contribute in the same range on average for the entire duration of play. Similarly those who believe others will contribute between 40% and 60% (less than 40% respectively) contribute similar amounts. Hence in the absence of social learning about the contributions of others there is no decay in contributions.

The fact that contributions seem to depend more on beliefs about others’ contributions and not on the availability of signalling opportunities provides evidence against the strategies hypothesis. Furthermore the fact the contributions do not decay unless players get to observe the contributions of their peers provides evidence against introspective learning/learning-by-doing arguments.

In treatments where players do get feedback about others’ contributions we see the familiar pattern of decay suggesting that it is social learning that is primarily responsible for this phenomenon. We find that the contributions by players possessing different beliefs regarding their peers converge towards the average contribution in the long run and this is particularly true in treatments where the players get to observe the contribution of others every fourth round as opposed to in every round. We also find that those players who initially contribute higher than the group-average decrease their contribution over time and those who initially contribute lower than the group-average increase their contribution over time. The overall contributions therefore decay over time because

increases in the contributions by subjects who contribute below the average do not offset the decrease in contributions by those who contribute above the average.