

Monitoring and Sanctions as Incentives for Cooperation
in Contributing to a Public Good:
An Experimental Study

by

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EXECUTIVE SUMMARY

The results of the standard VCM experiment (the Baseline treatment) demonstrate that if there are incentives not to cooperate, it is difficult to have stable cooperation (optimal social outcome on provision of public good). There seems to be different types of participants with different "propensities" to cooperate, such as cooperative type, reciprocal type, free-riding type, etc. We observed many examples of reciprocity, in which behavior is conditionally based on what others do. Therefore, although not everyone is a payoff maximizing type, some free-riders cause reciprocation and contribution levels go down ("rotten apple effect"). Once the cooperation level goes down, it is harder to build it back because of the difficulty in rebuilding trust. Also, in the Baseline case, free-riders earn more, which discourages cooperation. In the Baseline treatment cooperative types have no way to punish others except by defecting. Therefore, the entire contribution goes down.

Even in the Baseline Stranger treatment (just a repetition of one-shot game and no incentive for the future play), we observed a significant number of contributions. Although there are contributions in the Baseline Stranger, the Partner treatment (same people play during entire session) produced more contributions than the Stranger. From this, we can say that reputation building for future interaction is important for higher cooperation.

The standard VCM experiment with punishment opportunity (the Punishment treatment) results in high and stable contributions. There are significant numbers of punishers, even though punishment costs. Also, even in the Stranger Punishment

treatment, there are a significant number of punishers; punishments are not only driven by strategic reasons. Most punishments go to low contributors (free-riders), so punishment acts to protect cooperative types from free-riders. In the punishment condition, the Stranger treatment also gets stable contributions, but at a significantly lower level than the Partners treatment. As in the Baseline case, reputation building is important.

Punishment opportunities attain some equity; contributors can get more than free-riders, which encourages cooperation. Punishment changes the incentive structure and contributing becomes more profitable. However, there are second-level free-riders who get more than punishers, which is unfair since punishment is a public good. Also, there are “perverse” punishments (about 20%) which are aimed at high contributors. Perverse punishment has a negative effect on cooperation. Although a punishment option attains stable cooperation because both giving and receiving punishment has costs, total earnings are not significantly different from the Baseline treatment due to high levels of punishment and “noisy” punishment.