Identity, Bounded Rationality, and Coordination in the Inter-Group Prisoner's Dilemma

Timothy N. Cason (Purdue University)

Sau-Him Paul Lau (University of Hong Kong)

Vai-Lam Mui (Monash University)

Abstract

Nonstandard preferences can transform a game form from its original interpretation based on monetary payoffs. For example, social preferences can transform a Prisoner's Dilemma in monetary payoffs into a Stag Hunt game in utilities. Social interactions, by affecting group identity and strengthening social preferences, can therefore affect cooperation in an Intergroup Prisoner's Dilemma. This paper reports an experimental study of the effects of different social interactions among members of two groups prior to their play of a one-shot Intergroup Prisoner's Dilemma. We show theoretically how inter-group social interactions can affect the incidence of cooperation in this game with multiple equilibria in the presence of social preferences, strategic interactions of in-group and out-group members, and bounded rationality. The experimental results show that in the Baseline treatment without inter-group social interaction, only 8.3% of teams cooperate in the Intergroup Prisoner's Dilemma. Intergroup play of a coordination game, however, increases the cooperation rate by 400 percent, and adding pre-play communication across groups increases cooperation by 700 percent.