

The Effect of Group Competition in the Prisoner 's Dilemma Game*

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Abstract

How does competition between groups affect individuals ' behavior? To study this, I conducted an experiment in which two groups compete with each other. In each group, subjects play the iterated prisoner 's dilemma game, and the group that has the larger number of people who cooperated, wins, and each member of that group gains stakes. The stakes come from fines from the losing group. Theoretically, cooperation is a dominant strategy when the amount of the stakes is sufficiently high, and betrayal is a dominant strategy when the amount of stakes is low enough. The result of the experiment shows that i) subjects cooperate if the stakes are high enough, ii) subjects also keep a high-level cooperation rate even if the stakes are moderate, hence betrayal is the dominant strategy for every player, iii) no significant difference is found between the high and moderate stakes treatments though their dominant strategy is different, and iv) the cooperation level of high and moderate stakes treatments are significantly higher than that of the zero stakes treatment.

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