

Partner

	Cooperation	Betrayal
Cooperation	Reward (For Mutual Cooperation) ¥2000	Money Cheated Out Of ¥500 Payment
Betrayal	Gain (Skillful Deception) ¥3000	Fine (For Mutual Betrayal) ¥100 Payment

Me

Figure 2. Remuneration & Payment Based on Results of Prisoner's Dilemma Game (Seen from the Perspective of "Me"). Here, I (Yamatō) will explain the prisoner's dilemma wager game in a simplified fashion. Imagine there is a bookie that judges two players and pays them their winnings. The two players each have two cards: "cooperate" and "betray." In silence, they simultaneously present one at a time to each other. When both present their "cooperate" card, the bookie gives them a large reward (¥2000 each). When both present their "betrayal" card, the bookie takes money (¥100 each) as a fine. In the case that one person presents their "cooperate" card and the other presents their "betrayal" card, the former is judged to have been tricked because he or she is too good-natured, and made to pay ¥500. However, the latter, who announced that they were going to behave selfishly, is given a large reward (¥3000). If this game is played repeatedly, the players come to understand that a way of playing in which both benefit and the bookie loses—in other words, both present their "cooperate" card—is the most beneficial. They build a trusting relationship, and continue to present their "cooperate" card. In practice, this strategy is the best. Similarly, when living beings are surviving and evolving in an ecosystem, they generally increase in number with this kind of "cooperative" (or "good-natured") strategy. In other words, when the Earth (bookie) has in its environment a lot of unrestricted resources (money), insofar as the various living beings (players) adopt a "good-natured" modus operandi in which they cooperate with each other, or do not interfere and act selfishly with regard to one another, everyone benefits. I think that as a result of this, living beings have diversified through evolution and been able to prosper.

On the other hand, if in a restricted environment an established wager game is carried out multiple times, since it is of course uncertain whether players will cooperate with each other, they will grow suspicious and avoid presenting their "cooperate" card. When this happens, the tendency to present the "betray" card ("selfish" strategy) will grow stronger. In other words, a lot of selfish people tend to appear. This is why when the game is under restricted conditions (in other words, when the bookie does not have a lot of money) and only played a limited number of times, the players end up operating in a way that benefits only themselves; the "selfish strategy" becomes predominant. In such a situation, "good-natured" people are betrayed and therefore end stop trusting each other.

There are various degrees to this behavior, including how "good-natured" companions end up acting. In practice, people adopt various strategies. Furthermore, the game's conditions can vary; for example, the reward and fine amounts can be higher or lower. Depending on these conditions, the results of the game can vary greatly. Here, I have presented in a simple fashion the way players typically behave.