

Why Do You Keep Punishing Me? Investigating the Role of Time Delays in Self-Governance Mechanisms

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Abstract

Economists and management scholars have widely studied self-governance mechanisms, such as internal communication and peer punishment, to address the problem of commons and social dilemmas. While most studies show such mechanisms can lead to cooperation among resource users and improved collective outcomes in experimental contexts, some researchers question the generalizability of these results. We developed a comprehensive system dynamics model, which provides a more realistic experimental environment, including time delays, nonlinearities, and uncertainties, to test the effect of communication and peer punishment on cooperation and collective outcomes. Using data from Amazon Mechanical Turk, we show that, unlike conventional predictions, communication and peer punishment do not prevent overinvestment in capital and overexploitation of shared resources. Specifically, our results show that peer punishment can lead to lower payoffs when the delay is higher. Although communication can mitigate the adverse effect of peer punishment in the case of higher delays, it does not lead to higher payoffs than the base case.