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Title

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Journal

Proceedings of the Annual Meeting of the Cognitive Science Society, 44(44)

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Publication Date

2022

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Can Social Relations Influence Cooperation in Prisoner's Dilemma?

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Abstract

The paper explores the impact of social role assignment and the corresponding payoff distribution on cooperation in the Prisoner's dilemma following the types of relations according to Fiske's relational models' theory: communal sharing, authority ranking, equality matching, and market pricing. The corresponding roles and payoff distribution are teammates (each player receives the sum of the payoffs), partners (each player receives half of the sum of the payoffs), boss and subordinate (the boss receives 2/3 and the subordinate 1/3 of the sum of the payoffs), and opponents (each player receives the standard payoff). The results show that in the teammates' and partners' conditions cooperation was significantly higher than in the other conditions. Surprisingly, the results for the boss and subordinate condition although sharing a similar payoff distribution rule to the teammates' and partners' conditions were more similar to the opponents' condition with significantly lower cooperation rate.

In J. Culbertson, A. Perfors, H. Rabagliati & V. Ramenzoni (Eds.), *Proceedings of the 44th Annual Conference of the Cognitive Science Society*. ©2022 The Author(s). This work is licensed under a Creative Commons Attribution 4.0 International License (CC BY).