

Keep your enemies closer and be loud about it

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Question

Does local reputation in Spatial Prisoner's Dilemma promote cooperation?

Intro

1. We can model **rational** behaviour using Iterated **Prisoner's Dilemma** game:

$$T > R > P > S, 2R > T+S \text{ [1]}$$

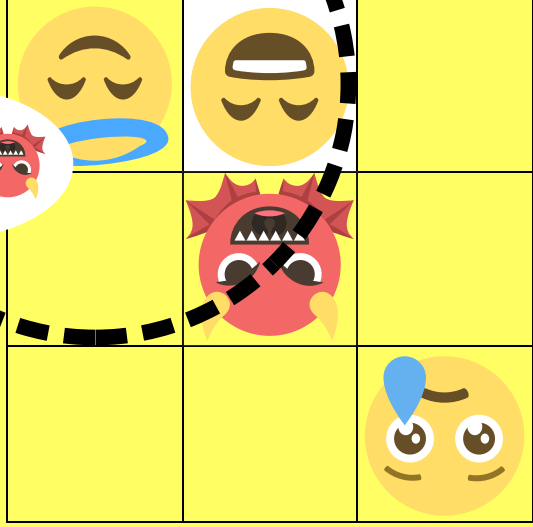
| | | Opponent's move | |
|---------------|-----------|--------------------------|--------------------------|
| | | Cooperate | Defect |
| Player's move | Cooperate | Player: R Opponent: R | Player: S Opponent: T |
| | Defect | Player: T Opponent: R | Player: P Opponent: P |

2. **Global reputation systems** promote cooperation well [2, 3]
(e.g. Ebay's seller rating)

3. What about **local reputation**?
(no central system, only **communication**)

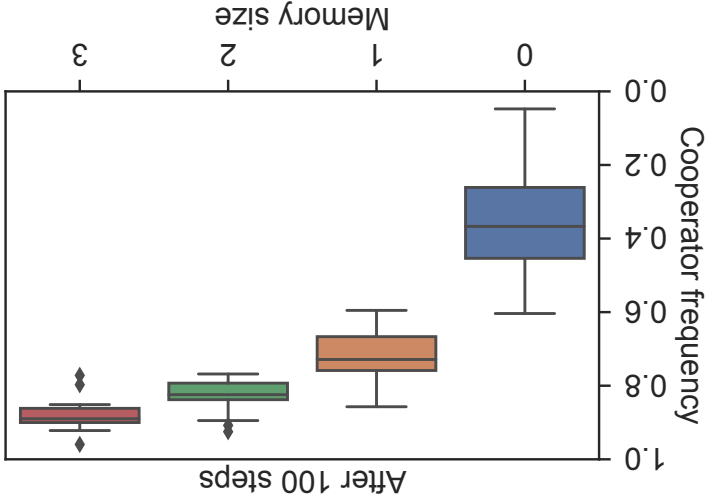
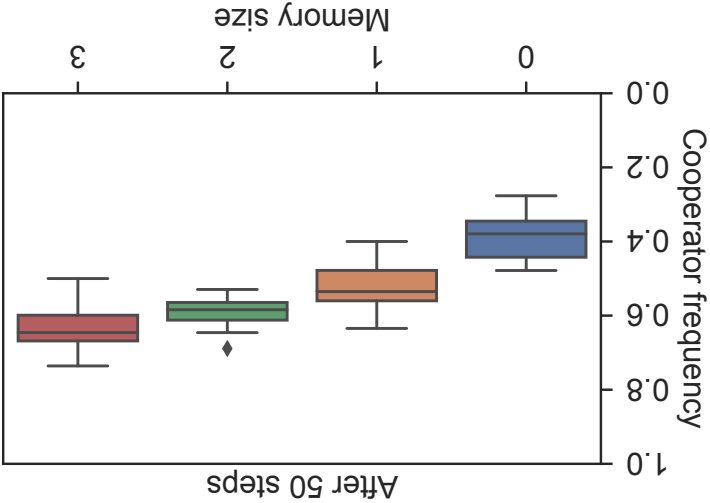


without reputation



with local reputation

Results



References

- [1] Axelrod, R. (1984) The Evolution of Cooperation. Basic, New York.
- [2] Camerer, G. and Casari, M. (2009). Cooperation among strangers under the shadow of the future. American Economic Review, 99:979–1005.
- [3] Stahl, D. O. (2013). An experimental test of the efficacy of a simple reputation mechanism to solve social dilemmas. Journal of Economic Behavior & Organization, 94:116–124.