

UC Merced

Proceedings of the Annual Meeting of the Cognitive Science Society

Title

Studying the long-term dynamics of reciprocity based on welfare tradeoff ratios

Permalink

<https://escholarship.org/uc/item/2t4475kw>

Journal

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

Authors

Qi, Wenhao

Vul, Ed

Publication Date

2022

Peer reviewed

Studying the long-term dynamics of reciprocity based on welfare tradeoff ratios

Wenhao Qi

University of California, San Diego, La Jolla, California, United States

Ed Vul

University of California, San Diego, La Jolla, California, United States

Abstract

People reciprocate another person's altruistic or spiteful intentions toward themselves over repeated interactions, but it is unclear how such other-regarding intentions are represented in people's minds and how the dynamics of reciprocity unfold. Recent work formalizes other-regarding intentions as welfare tradeoff ratios (WTR) and demonstrates that people reciprocate by adjusting their own WTR in response to the perceived WTR of another person. However, due to the complexity and inaccuracy of existing WTR measurements, it is still infeasible to study the long-term dynamics of people's WTR adjustment beyond a few trials. Here we develop an experimental paradigm based on nonlinear continuous decomposed games that precisely reveals to the participant the opponent's WTR and measures the participant's WTR in a single trial. We find that participants are sensitive to the opponent's WTR and adjust their WTR accordingly. This experimental framework enables the fine-grained investigation of the long-term dynamics of people's intention-based reciprocity.