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# Causality and Self-Signaling in Economic Games

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## Abstract

Our ability to cooperate is one of the cornerstones of our success as a species, and the story of how humans have been able to put aside immediate personal gain in favor of a longer view is widely studied. We add to this literature by exploring certain seemingly irrational behaviors observed in economic games. Modes of cognition such as those reflected in self-signaling theory may serve to explain how the seemingly irrational might sometimes be quite sensible. We elicit these behaviors using real-time multiplayer economic games and suggest mechanisms whereby players may incorporate the value of receiving certain signals themselves into their utility calculations, thus making for rational behavior and rational inference in cases where it is not obviously so. These phenomena are consistent with a combination of self-signaling and a limit on the direction of inference in time.