# Nash equilibrium play in preference games

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**Abstract**

The Nash equilibrium is a widely used concept in Economics and in many other (social) sciences. However, in several situations it does not seem to accurately predict behavior. A well-established fact is that players' own material payoffs in a game do not necessarily represent their utilities. If this is the case, the players may actually face a very different kind of strategic situation. This could be an explanation why in several cases low frequencies of equilibrium play are observed.

We conduct an experimental study to examine if players more often reach an equilibrium outcome when their social preferences are taken into account for the prediction. In doing so, we first elicit players' preferences over a set of payoff pairs. Afterwards, subjects play a couple of one-shot 2x2 games. The payoff vectors of the outcomes of the games exactly correspond to the pairs subjects ranked beforehand. This allows us to identify the equilibrium structure of what we call the "preference games". In several cases those differ with respect to their strategic properties in comparison to the original "monetary games". We find that basing the prediction on players' preferences leads to significantly higher frequencies of equilibrium play.

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