INTUITIONISM AND REPEATED GAMES

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In non-cooperative game theory, a *stage game* is one that is played repeatedly; a standard example is an iterated prisoners' dilemma. A strategy can be part of an equilibrium of an infinitely repeated stage game, yet not part of any equilibrium if the number of stages is finite. Subjects in laboratory experiments typically play finitely repeated stage games, at least during an initial segment, as if they were playing an infinitely repeated stage game. By doing so, the subjects often receive higher payoffs than they would receive from playing equilibrium strategies.

We provide a theoretical explanation for this observed behavior by modeling the players of a game as reasoning intuitionistically. In particular, we take the position that the players of a game may not necessarily know what game they will play or what opponents they will face at stages in a sufficiently remote future. In this setting, any strategy a subject chooses in an infinite stage game is also one that the subject would be willing to choose in any stage game that had a sufficiently similar initial segment; this is essentially Brouwer's continuity principle. We show that the classically problematic behavior is intuitionistically quite sensible.

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