

Repeated Games with Incomplete Information

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Abstract

Games with incomplete information are games in which one (or more) of the players does not know the complete description of the game; for instance, he does not know the other players' utility functions or their strategic possibilities. **J.C. Harsanyi** proposes a model for such games. He shows that, granted some conditions and postulates, games with incomplete information are game-theoretically equivalent to certain games which he calls "Bayesian Games" which are games with complete information and can therefore be treated by the usual methods of game theory.

Aumann and **Maschler** applied Harsanyi's theory to games with incomplete information which are played a large number of times. In such games the players can learn something about the parameters originally unknown to them but known to the others, by watching which strategies the other players use. Such repeated two-person zero-sum games with incomplete information are the subject of this thesis.