

Bayesian Communication Leading to a Nash Equilibrium in Belief

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Abstract. A Bayesian communication in the p -belief system is presented which leads to a Nash equilibrium of a strategic form game through messages as a Bayesian updating process. In the communication process each player predicts the other players' actions under his/her private information with probability at least his/her belief. The players communicate privately their conjectures through message according to the communication graph, where each player receiving the message learns and revises his/her conjecture. The emphasis is on that both any topological assumptions on the communication graph and any common-knowledge assumptions on the structure of communication are not required.

Keywords: p -Belief system, Nash equilibrium, Bayesian communication, Protocol, Conjecture, Non-corporative game.

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