

Bayesian Equilibrium in Double Auctions Populated by Biased Heuristic Traders*

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Abstract

We use computer simulation to examine three asset markets with imperfect information. In processing imperfect information, traders in the three markets are bayesian, empirical bayesian, and heuristic (representativeness and anchor-and-adjust) respectively. All three converge to the same bayesian equilibrium--although the latter two converge more slowly--without profit maximization, natural selection, arbitrage, or mutual cancellation of random actions. The results support Becker (1962) and Simon (1973) in that the rationality of the market emerges as a consequence of the market structure, and not from the rationality of individuals.

JEL Classification Codes: A12, C11, D44, D81

Keywords: Aggregate Market Rationality, Bayesian Equilibrium, Double Auction, Representativeness Heuristic, Zero-Intelligence Trader
