

Cooperative Extensions of the Bayesian Game*

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Abstract

The first part of this talk provides conceptual discussions of key ingredients. We first present the basic one-shot model of Bayesian society, which synthesizes Harsanyi's Bayesian game and Aumann and Peleg's non-side-payment game (NTU game). Jackson's observation of the equivalence of the two widely adopted formulations of incomplete information is briefly reviewed. Two required meaningful conditions on an endogenously determined strategy are discussed: (1) Radner's measurability condition with respect to an information structure, and (2) Bayesian incentive compatibility. Two descriptive *interim* solution concepts, the Bayesian incentive-compatible coarse core and the Bayesian incentive-compatible *interim* core, are discussed.

The second part presents some results on the two *interim* solutions for the Bayesian pure exchange economy (a specific instance of the Bayesian society) in the private information case. The Bayesian incentive-compatible coarse core is nonempty. The Bayesian incentive-compatible *interim* core may be empty, as pointed out by Yannelis. Sufficient conditions for its nonemptiness are explicitly formulated. It is unlikely that these two positive results are extended to the general framework of Bayesian society.

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