Summary: We introduce a framework for modeling pairwise interactive beliefs and provide an epistemic foundation for Nash equilibrium in terms of pairwise epistemic conditions locally imposed on only some pairs of players. Our main result considerably weakens not only the standard sufficient conditions by R. J. Aumann and A. Brandenburger [Econometrica 63, No. 5, 1161–1180 (1995; Zbl 0841.90125)], but also the subsequent generalization by P. Barelli [Games Econ. Behav. 67, No. 2, 363–375 (2009; Zbl 1180.91019)]. Surprisingly, our conditions do not require nor imply mutual belief in rationality.

MSC:

91A10 Noncooperative games
91A26 Rationality and learning in game theory
91A43 Games involving graphs

Keywords:
Nash equilibrium; pairwise common belief; pairwise mutual belief; pairwise action-consistency; rationality; conjectures; biconnected graph; epistemic game theory

References:


This reference list is based on information provided by the publisher or from digital mathematics libraries. Its items are heuristically matched to zbMATH identifiers and may contain data conversion errors. It attempts to reflect the references listed in the original paper as accurately as possible without claiming the completeness or perfect precision of the matching.