

Economic Theory, Decision Theory and Experimental Economics
Seminar

Rationality and consistent beliefs: theory and experimental evidence

Terri Kneeland

University of British Columbia

Tuesday, 8th October 2013

12:30pm Room 3-E4-SR03 Via Röntgen 1 Milano

Abstract

This paper investigates the behavioral and experimental support for different epistemic conditions that form the foundations of several game theoretic solution concepts. It employs strategic choice data from a carefully chosen set of ring-network games to obtain individual-level estimates of the following epistemic conditions: rationality; beliefs about the rationality of others; and consistent beliefs about strategies. We find that 94 percent of subjects are rational, 72 percent are rational and believe others are rational, and 44 percent are rational and hold at least second-order beliefs about the rationality of others. Of the 72 percent of subjects that satisfy the sufficient rationality conditions needed to observe consistent beliefs, none of them satisfy consistent beliefs. Not a single subject satisfies all three sufficient epistemic conditions for Nash equilibrium.

The unique design allows us to weigh the relative plausibility of alternatives to Nash equilibrium; the data tend to support the level-k model.

Keywords: epistemic game theory, behavioral game theory, Nash equilibrium, level-k, qre