

Nash Equilibrium with Ambiguity: Ambiguity Makes Irrationality

Osamu Kada

Faculty of Engineering, Yokohama National University
79-5 Tokiwadai, Hodogaya, Yokohama 240-8501, Japan

Abstract

We introduce a notion of Nash equilibrium with ambiguity. This is an action profile such that each action of a player is a best response to other players' action profile with respect to expected ambiguous utility which is defined as in Gul and Pesendorfer (GP) (2008). We define a belief with irrationality from ambiguity, and it is shown that expected utility with respect to this belief with irrationality and the expected ambiguous utility are the same. We apply this notion to chicken games, experimental beauty contest games, and games of battle of sexes.