

This is a review submitted to Mathematical Reviews/MathSciNet.

Reviewer Name: Bruni, Riccardo

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Address:

Dipartimento di Lettere e Filosofia
Università degli Studi di Firenze
via della Pergola 60
50121 Florence
ITALY
riccardo.bruni@unifi.it

Author: Perkov, Tin

Title: Intuitive equilibriums in games like traveler’s dilemma.

MR Number: MR5004653

Primary classification:

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Review text:

This paper provides a rigorous attempt to resolve the paradox between the Nash equilibrium solution and intuitive or experimental outcomes in the game known as the Traveler’s Dilemma (TD, henceforth) by K. Basu [*Am. Econ. Rev.*, 84, 391–395 (1994)]. The author seeks to formalize the notion that human players often reason using “imprecise” or “ill-defined” sets of strategies rather than precise integers. The work demonstrates that by partitioning strategy spaces into broader categories such as high, mid, and low one can identify “intuitive equilibria” that better reflect how players behave in real-world settings. To make the analysis rigorous, the author considers the application to the TD of a formal framework for (P, v) -transformations of the original game and a modal logic (as used by van Benthem et al. [*Games*, 2, 52–86 (2011); MR2786014]) for reasoning about it. In this framework, a game is transformed by partitioning the original strategy sets (P) and by defining new preference relations (v) over these partitions. By introducing modalities that represent player strategies, possible deviations, and preferences, the author is able to logically characterize the existence of equilibria. Through the analysis of various payoff matrices, Perkov illustrates how the stability of “high-value” equilibria is sensitive to the award/penalty parameters of the game, aligning the theoretical model with observed experimental data. Finally, the author provides a critical review of contemporary literature, specifically challenging the “unacceptable payoffs” theory proposed by P.R. Daniels [*Philos. Investig.*, 45, 146–160 (2022)].