

# Transpersonal Understanding through Social Roles, and Emergence of Cooperation\* †

Mamoru Kaneko<sup>‡</sup> and J. Jude Kline<sup>§</sup>

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## Abstract

Inductive game theory has been developed to explore the origin of beliefs of a person from his accumulated experiences of a game situation. So far, the theory has been restricted to a person's view of the structure not including another person's thoughts. In this paper, we explore the experiential origin of one's view of the other's beliefs about the game situation. We restrict our exploration to a 2-role (strategic) game, which has been recurrently played by two people who occasionally switch roles. By switching roles, each person accumulates experiences of both roles and these experiences become the source of his transpersonal view about the other. Reciprocity in the sense of role-switching is crucial for deriving his own and the other's beliefs. We consider how a person can use these for his behavior revision, and we define an equilibrium called an intrapersonal coordination equilibrium. Based on this concept, we show that cooperation will emerge as the degree of reciprocity increases.

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‡Institute of Policy and Planning Sciences, University of Tsukuba, Ibaraki 305-8573, Japan (kaneko@shako.sk.tsukuba.ac.jp)

§Department of Economics, School of Business, Bond University, Gold Coast, QLD 4229, Australia, (Jeffrey.Kline@bond.edu.au)