Equilibrium social hierarchies: a non-cooperative ordinal status game

(**preliminary draft; please do not quote**)

by

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Abstract

The article analyzes a non-cooperative game in strategic form, where each player's payoff depends on his action and his social status, which is given by his rank-order in the actions distribution. It examines the relationship between the degree of heterogeneity among status-seeking players and the Nash equilibrium distribution of their actions. The approach stands out because it does not use the heuristic assumption of a continuum of players. The latter is usual in the literature on status, although it is hard to reconcile with the widely accepted view that people's sensitivity to status is particularly relevant in small local environments. Our finding of different types of Nash equilibria brings forward that the role of social status can integrate both economic and sociological explanations of human behaviour. Basically, if differences among players are large, their equilibrium actions diverge; if differences are small, their equilibrium actions are the same. The article also shades the well-known claim that status seeking is socially inefficient by examining the Pareto efficiency of Nash equilibria. Finally, its key results are illustrated with a brief discussion of the impact of status seeking on savings behaviour.

Keywords: social status, Nash equilibria, game in strategic form, discontinuous payoff functions, Pareto efficiency, saving

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