

Rationality, Bargaining and Inequality

Inequality constitutes one of the most pressing economic and social concerns of our time. This project enquires into the potential causes for its emergence and thereby discovers important implications for how rationality should be conceptualized.

The emergence of economic inequality has often been linked to individual differences in mental or physical capacities. However, simulations of an agent-based model of bargaining suggest that neither of these is a necessary condition. Rather, inequality can arise from iterated interactions of fully rational agents. Due to an intricate feedback-loop between belief-updating and strategy choice, utility maximizing agents perform suboptimal in comparison with other strategy types. Consequentially, the standard notion of rationality as maximizing expected utility is insufficient, even for certain standard cases of economic interaction. Instead, rationality's sensitivity to different contextual factors must be taken into account.

In these complex social interactions, information asymmetries are shown to emerge endogenously and structurally. Beyond classic exploration-exploitation trade-offs, where individuals need to invest resources in a trial-and-error-fashion, the model shows that certain strategic actions lead to structurally biased beliefs, leaving poorer actors systematically misinformed about the actual success potential of aggressive bargaining strategies.

Furthermore, the consideration of various strategic rationales and decision making heuristics plays a major role in this analysis. These are derived from classic rational choice theory and empirical observations. The analysis puts special emphasis on the conditions under which some strategies significantly outperform others, and how this changes in light of evolutionary pressure or constrained cognitive capacities.

Another focus is put on institutional settings of bargaining that hamper or foster inequality's emergence and persistence. For example, while stable patterns of economic interactions are often praised for their efficiency, they are also demonstrated to be more prone to aggravating existing inequalities and cementing them in the long run.

The project also discusses the far-reaching normative implications from these findings for justifying potential redistributive interventions: If significant inequalities emerge as a result of rational behavior and on a systemic basis, the burden of proof shifts upon those who want to justify existing inequalities on a meritocratic basis.

Methodologically, the project shows how agent-based modeling and simulation augments and complements game theoretic models and associated equilibrium solution concepts, in particular with regards to incorporating bounded rationality and complex social interactions.

Project status: One paper published (in *Synthese* with D. Klein & J. Marx), one monography published, two papers work in progress