MarketNet: Organizations and Rationality of Structures

Shabnam Mousavi (Max Planck Institute for Human Development, Berlin)
Shyam Sunder (Yale University)

Abstract

Strategies are purposive plans of action or path towards intended ends in organizations. The formation of and complex interactions among strategies are extensively studied with respect to agents' rational deliberations, where strategizing connotes purpose, intention and intelligence. This paper reports on early development of MarketNet, a software platform as an instrument for exploring the properties of market structures and organizations by turning the focus away from strategy and optimization. Robust aggregate-level properties may emerge from structures through complex interactions among micro-level components—non-strategic agents. Building on the counterintuitively-efficient performance of certain markets populated with *zero-intelligence* agents, we explore the implications of considering rationality as an emergent property of social *structures* absent in their constituent components. To the well-established concepts of substantive and procedural rationality in organizational studies, we suggest adding structural rationality as a third concept. In its minimalist spirit, structural rationality uses neither intent, nor deliberate formation of strategy, yet efficient outcomes may emerge from little more than institutional rules and constraints. Differentiating between organizational outcomes of strategy vs. structure offers a new building block for organization science. To this end, we propose to use MarketNet platform to examine the efficiency properties of outcomes of organizational structures populated by minimally-strategic agents of which zero-intelligence is an example.

Keywords: MarketNet, complexity and emergence, efficiency, structural rationality, zero-intelligence