Biased perceptions explain collective action deadlocks and suggest new mechanisms to prompt cooperation. Authors Vítor Vasconcelos and Fernando Santos on the article

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2.2 Biased perceptions explain collective action deadlocks and suggest new mechanisms to prompt cooperation

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Authors Vítor Vasconcelos and Fernando Santos on the article:

Our most urgent societal challenges involve system-wide changes in highly interrelated complex systems and are often called transitions. System transitions are collective action problems for which any single element, an individual or even a sector, loses by acting alone. The barriers to human cooperation in such dilemmas—and mechanisms to facilitate it—have inspired multiple research areas, including works in behavioral sciences and biology. At a fundamental level, collective action depends on individuals' decision-making, which, in turn, depends on how people perceive their social environment (Fischbacher et al., 2001). Recent results have pointed out how norm interventions—clarifying behaviors of others—are a primary instrument to trigger cooperation (Miller and Prentice, 2016). Despite the centrality of expectations about others' behaviors in collective action, individuals often fail to accurately anticipate what others believe or how likely

they are to cooperate towards the collective good. Recent results show that individuals tend to systematically perceive the number of potential cooperators in a population incorrectly (Leviston et al., 2013; Mildenberger and Tingley, 2019). Therefore, it is necessary to explore the effect of social perception biases in collective action dynamics methodically to improve our understanding of how to design effective interventions.

In work by Santos, Levin, and Vasconcelos published at iScience (Cell Press) in April 2021, the authors open a new chapter on the research on collective action dynamics (chiefly, non-linear public goods games) where perception biases are paramount to understand observed behaviors and to find solutions to the complex collective action problems we face. Their framework provides a systematic study of the effects of expectation biases on collective action dynamics. Based on previous behavioral science research, it combines methods of evolutionary biology, statistical physics, and economics in a mathematical model that simulates populations comprising individuals best-responding to their perceived environment. The framework unifies the concepts of 'over-trust', 'under-trust', 'pluralistic ignorance', and 'false consensus.' It shows that different observed social perception biases fundamentally impact traditional coordination results in non-linear public goods games and, importantly, can explain why some societies find themselves in sub-optimal deadlock configurations (e.g., without enough individuals cooperating to attain collective success). The study further shows that incentives typically designed by the systems' managers (e.g., fees or monetary rewards) designed to remove these deadlocks have a radically different impact when considering identical populations that incur different expectation biases. Understanding which biases prevail in a population in issues like climate change is thereby fundamental to develop effective interventions that trigger effective collective action.

Further Readings Suggestions / References:

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