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Can A Social Planner Manipulate Network Dynamics And Solve Coordination Problems?

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This paper aims to build an algorithm of network dynamics with decision-making under incomplete information. Accordingly, it tries to identify if a social planner reduces the influence of individual biases, such as confirmation bias or assimilation bias on agents' actions, and solves a coordination problem. The research questions are the following: " Can the social planner increase social welfare, by manipulating the set of possible invitations and annoyances, without directly changing a network structure?", and " What are the main drivers of increasing social-planner utility functions?" "How do the results change if the social planner has incomplete information or wrong priors about the fundamental variable?" For this research, a "Liberal Social Planner" was created; a process through which network members get suggestions depending on its utility function. The results have potential applications for the management of social media platforms by the owners of these platforms. Platforms can develop robots that can help their users be more informed and more satisfied. As we live in a world of virtual connectedness, people seem to obtain more information from online network peers than from experts.

Keywords

Network dynamics, higher-order beliefs, coordination on networks

Topics

• Temporal networks, network dynamics and evolution patterns

Primary author(s) :   HAKOBYAN, Zaruhi (University of Luxembourg)

Presenter(s) :   HAKOBYAN, Zaruhi (University of Luxembourg)

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