

Simple models of opinion formation in absence of social influence

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Summary of the Master thesis

Despite vast amounts of verified information available online, misinformation is on the rise. To help understand this phenomenon, we study a model where an individual agent with seed opinions on a small number of topics uses simple heuristic rules to form further opinions based on a given signed network of relations among many available topics. Contrasting with a previously studied mechanism where the agent addresses the topics in a random order, we introduce a mechanism where the agent systematically explores the network starting from the initial seeds. We provide approximate analytical results for the new mechanism and demonstrate that they agree well with numerical simulations. Albeit the new mechanism yields better results than the old one, they both yield unreliable opinions when the number of opinions is large. Finally, we use synthetic and real relation networks to answer the questions such as the effect of how the seed topics' positions in the relation network.

Medo Matus