

Population Dynamics of Conspiracy Thinking

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Abstract

The spread of conspiracy theories and the accompanying deterioration of the information environment have become significant issues, but the extent of these problems varies between countries and political groups. This study aims to clarify how the proportion of people with conspiracy thinking, driven by motivated reasoning, changes over time in interaction with the information environment. First, we develop a static cheap talk model with a reputation-concerned expert and show that as the proportion of citizens with conspiracy thinking increases, the information transmitted from the expert to citizens becomes more aligned with conspiracy theories, leading to a decline in the quality of information. Then, we construct a model of evolutionary dynamics to analyze how the proportion of citizens with conspiracy thinking changes over time. The analysis reveals that (i) under certain conditions, more informative experts can unintentionally facilitate the spread of conspiracy thinking, and (ii) the long-run prevalence of conspiracy thinking may depend on its initial distribution, due to the presence of multiple stable equilibria.