

***Talk on Tuesday, 20. January 2026******Start: 10:15 till 11.30 Uhr******in HS 424******The talk will be presented in English***

# **The complex effects of envy on societal inequality**

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A vast literature attests that the social function of envy is to regulate social hierarchies. People react to a superior person's higher social rank either by increasing their own efforts—benign envy—or by harming the other's social rank—malicious envy. Hence, according to psychological theorizing, envy levels differences in social rank and should thereby reduce societal inequality. Yet, how envious interactions unfold and when they

increase or decrease inequality remains challenging to study with common empirical designs and theorizing in other disciplines makes different predictions.

Drawing on complexity science, I propose using agent-based modeling to examine these dynamics. I integrated agents with varying levels of dispositional envy into a well-established model of inequality. Agents compete for a valued resource, and envious agents respond to others' wealth with benign or malicious envy. Extensive simulations of 144,000 societies evolving over 2,000 time steps show that envy can increase or decrease inequality depending on (a) the proportion of agents with benign or malicious dispositions, (b) the scarcity of the resource, and (c) the number of competing agents.

This model yields theoretical insights that empirical studies could hardly produce, informs future research on envy, and highlights the potential of agent-based modeling for studying the complexity of the social functions of emotions.