

## Language as a complex adaptive system: Insights from physical modelling

Initiative: "Originalitätsverdacht?" Neue Optionen für die Geistes- und Kulturwissenschaften (beendet)

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The present project gauges the applicability and utility of physical-mathematical models for addressing theoretical questions in sociolinguistics. Specifically, the project engages two case studies: a) modelling of incipient sociolinguistic innovations (the actuation problem; Weinreich et al. 1968) by means of statistical-physics models of aggregation and gelation, and b) the application of stochastic Lévy processes for analyzing translocal diffusion of linguistic features. The project on the one hand connects to recent theoretical developments in linguistics, which view language as a complex adaptive system. On the other hand, it draws on sophisticated mathematical models with a long and successful tradition in theoretical physics. Beyond the immediate context of the two case studies the project aims to promote a more open exchange of ideas between the two disciplines in order to assess the potential for interdisciplinary synergies.

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