

Bayesian Modelling of Disagreement, Trust and Higher-Order Beliefs

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The main goal of the project is to contribute to an understanding of how rational agents react to disagreement, with focus on which role trust in information and higher order evidence plays. The project will strive to model trust and higher order evidence in a Bayesian theoretical framework, and to contribute to developing a simulation program for epistemic interaction between Bayesian agents, developed at Lund University. Part of the project is to model disagreement situations using this simulation program. One such disagreement situation is the phenomenon belief polarisation, where people with different inclinations about some proposition p develop even more opposing attitudes after seeing some evidence about p . In the field of social psychology, this behaviour has long been understood as irrational, since the people involved “twist” the evidence to bolster their initial views (known as motivated reasoning). It turns out that the Bayesian rational agents of the simulation program exhibit the same behaviour under many different circumstances. So either we need to adjust our thinking that this behaviour is irrational, or we need to better characterise the kind of rationality that the Bayesian agents employ. The strategy of my project will be to develop the latter idea.