

The evolution of human civilization

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I build a simple evolutionary game theory model for the evolution of human societies. The starting point is the Hawk-Dove game, where cooperative and non-cooperative subpopulations compete. I introduce social innovations as random perturbations to the payoff matrix, with a social cost. Innovations that increase productivity are selected as different societies compete with each other. I classify innovations conceptually and mathematically. With a particular specification of the model, society evolves first towards theocracy and then to secularism.