



PAPER

A tale of two (and more) altruists

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Abstract

We introduce a minimalist dynamical model of wealth evolution and wealth sharing among N agents as a platform to compare the relative merits of altruism and individualism. In our model, the wealth of each agent independently evolves by diffusion. For a population of altruists, whenever any agent reaches zero wealth (that is, the agent goes bankrupt), the remaining wealth of the other $N - 1$ agents is equally shared among all. The population is collectively defined to be bankrupt when its total wealth falls below a specified small threshold value. For individualists, each time an agent goes bankrupt (s)he is considered to be 'dead' and no wealth redistribution occurs. We determine the evolution of wealth in these two societies. Altruism leads to more global median wealth at early times; eventually, however, the longest-lived individualists accumulate most of the wealth and are richer and more long lived than the altruists.