

Readme for R M L Evans (2018): Ultimatum game steady-state and transient evolution data
University of Leeds. [Dataset]. <https://doi.org/10.5518/458>

Simulation data from a spatial model of agents evolving (reproducing with mutation) on a lattice while playing the Ultimatum Game (UG) in random order with nearest neighbours. Details of the model are given in:

"Pay-off scarcity causes evolution of risk-aversion and extreme altruism",
R M L Evans, Sci. Rep (2018) 8:16074.
DOI:10.1038/s41598-018-34384-w

The csv files contain data that support the findings of that publication, including the data presented in Figs. 1, 3, 4, 8 and 9. All of the csv files are organised into the following columns of data:

RandomNumberSeed
Mutation strength μ
BirthDeathRate (R)
L (Linear system size; the system contains $L \times L$ sites on a square lattice)
HalfAndHalf initial condition (True or false, corresponding to the two initializations discussed in the methods section of the publication)
t (Time)
<offer> (Population-averaged value of the UG offer p)
<accept> (Population-averaged value of the UG acceptance threshold q)
<wealth> (Population-averaged value of agent wealth w)
<age> (Population-averaged value of the ages of all agents currently present; i.e. difference between t and the time at which each agent was born)
offer SD (Standard deviation of the current population's p values)
accept SD (Standard deviation of the current population's q values)
wealth SD (Standard deviation of the current population's w values)
age SD (Standard deviation of the current population's ages)
offer skewness (Third cumulant of the distribution of p values present in the population)
offer kurtosis (Fourth cumulant of the distribution of p values present in the population)

The simulation computer code is available at <https://github.com/RMLEvans/UltimatumGame>