Language change: parameter exploration

Homework | Agent-based modelling, Konstanz, 2024

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Following the example set in the lecture, simulate a population of variational learners, obtaining the evolution (=history) of the average value of p. Explore how variation in the following **model parameters** affects the population's evolution. Use the *Plots* package to visualize your findings.

1. `N`: population size, i.e. the number of agents
2. `p`: the initial value of p. Set this to the same value for each learner.
3. `P1`: probability of a string that only G_1 can parse. Set this to the same value for each learner.
4. `P2`: probability of a string that only G_2 can parse. Set this to the same value for each learner.
5. `gamma`: learning rate.

For the learning rate parameter, do both of the following:

1. First, set `gamma` to the same value for each learner.
2. In a second set of simulations, initialize your population so that each learner gets a randomly chosen `gamma` from the interval between 0 and 1.