This model is extremely simple as it is built on an analytical model so as to illustrate a demonstration based on probabilities. This analytical model is itself a simplification of an ABM model published « When overconfident agents slow down collective learning, Simulation, 88, 01, pp 33-49. »

## Description of the model:

There are three types of agents who have different knowledge about a topic: either an agent is of level 0 or 1 or 2. All agents of level 0 know nothing; agents of level 1 know a bit; agents of level 3 know perfectly the topic.

Agents all have the same (bounded-)confidence, which is very small: which makes agents 0 and 1 able to communicate because they are close enough, as well as agents 1 and 2. However, agents 0 and agents 2 cannot communicate with each other. It implies that if there are no agents 1, agents 0 will stay ignorant forever.

The idea is that agents who are knowledgable should have a higher probability to influence those who know nothing, since it was the basis of the first model. In this model it is possible to change this probability.

## Manipulations on the screen:

It is possible to choose the respective probabilities of influence for agents 0 to agents 1; for agents 1 to agent 0 or agents 2; for agents 2 to agents 1.

If the probability for agents 1 to make agents 0 more knowledgable is much smaller than the probability of agents 2 to convince agents 1, then these medium-knowledge agents disappear and the communication does not take place anymore: agents 0 stays ignorant.

It is possible to choose the number of agents in each category at initialization. If there are too few agents 1 compared to agents 2, these medium-knowledge agents disappear and the communication does not take place anymore: agents 0 stays ignorant.