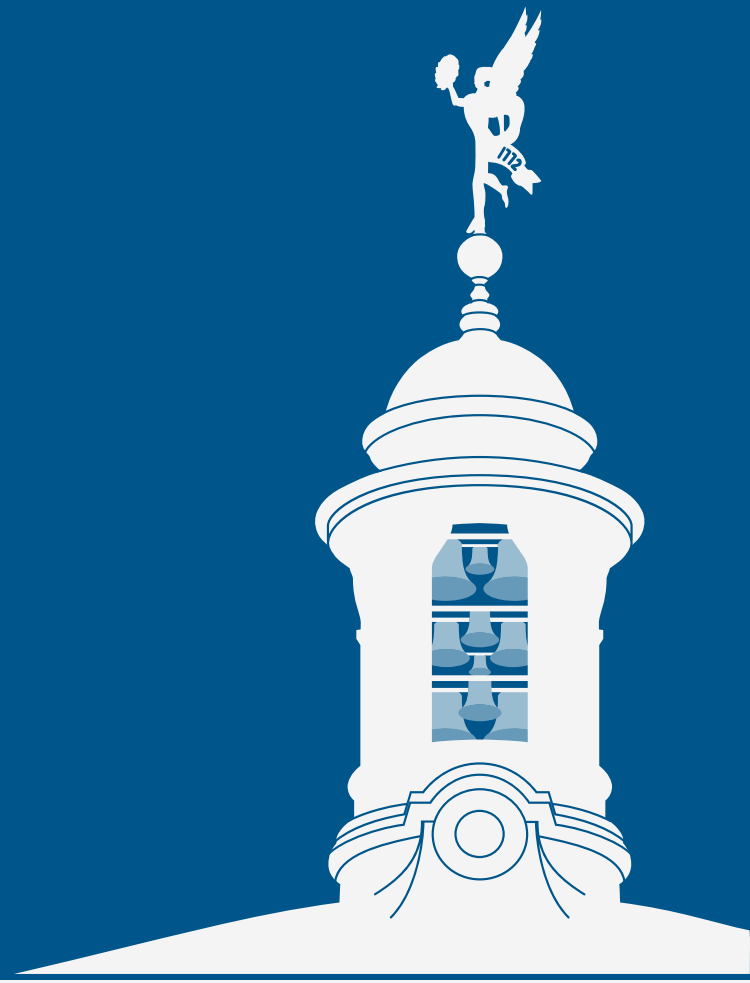
WWU
MÜNSTER

Segregation Model

Geosimulation Modelling WS 2017/2018

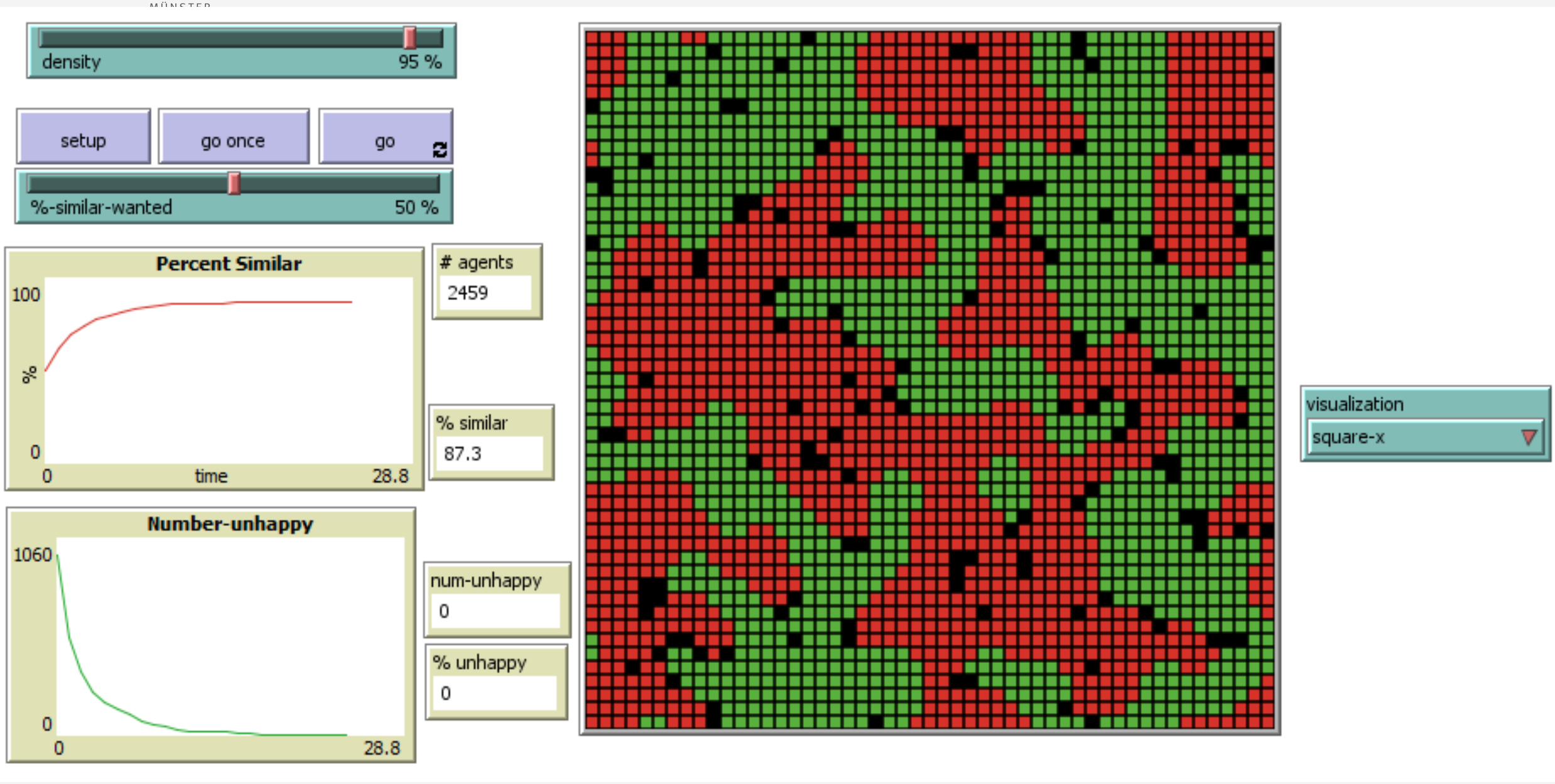


Saphir El-Kaiy
Shenaha.S

living.knowledge

ACTUAL MODEL

- This project models the behavior of two types of agents in a neighborhood. The **red agents** and **green agents** get along with one another.
- But each agent wants to make sure that it **lives near some of "its own**". That is, each red agent wants to live near at least some red agents, and each green agent wants to live near at least some green agents.
- The simulation shows how these individual preferences ripple through the neighborhood, leading to **large-scale patterns**.


density
95 %
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87.3
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28.8
num-unhappy
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% unhappy
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visualization
square-x

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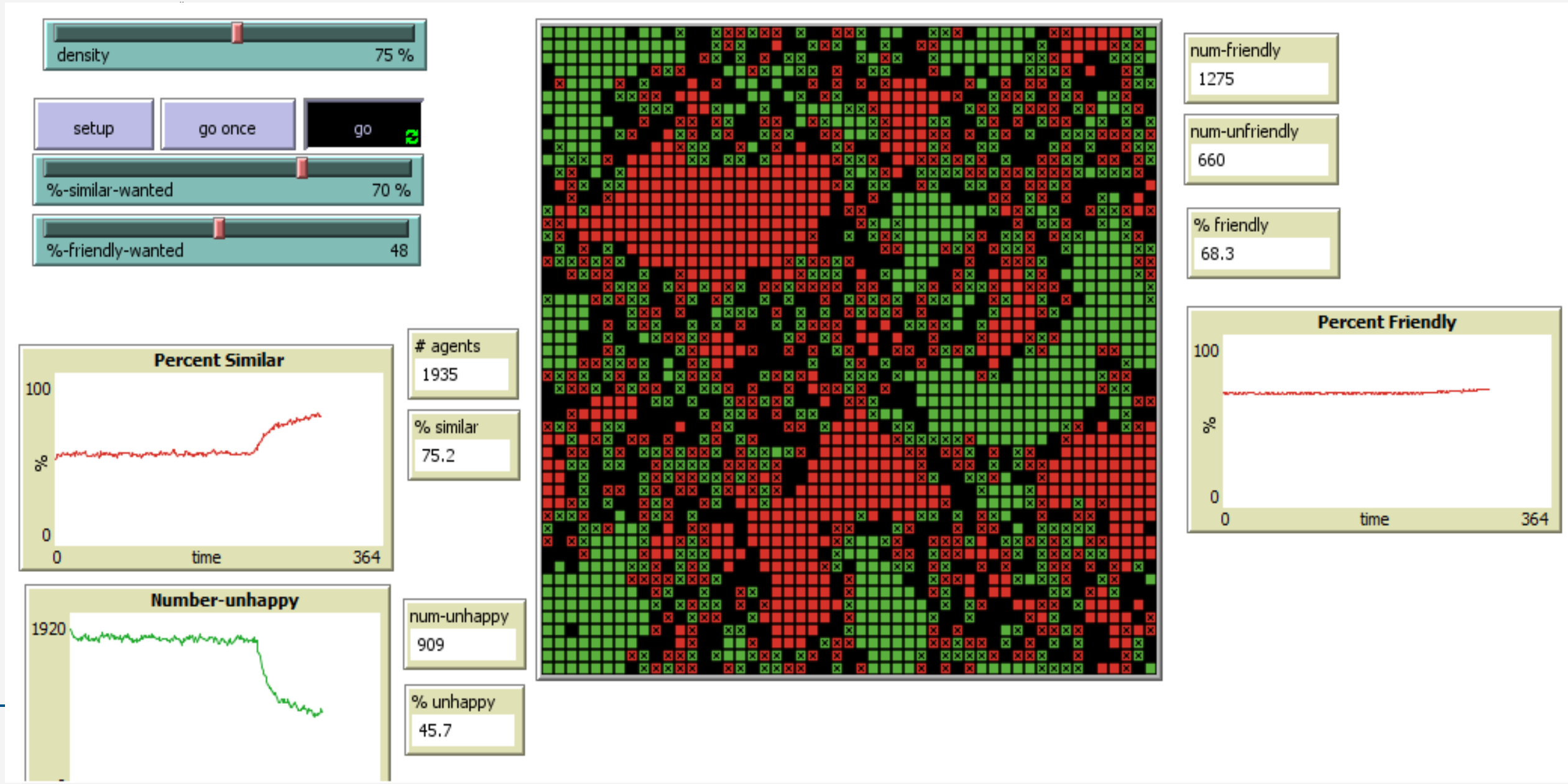
FINDINGS

- **2/3** of all the turtles are **"friendly"** and **1/3** of all the turtles are **unfriendly**.
- Also one important aspect regarding colour vs. friendliness: turtles look at their colour to look for similar turtles of the same colour.
- This is the one small but important difference between colour and friendliness.
- This behaviour is **NOT** the case with friendliness: all the turtles are seeking friendly turtles REGARDLESS of their own friendliness, meaning that friendly as well as unfriendly turtles are looking for friendly turtles in their neighbourhood.
- It is easier to became "happy" within similar groups rather than within supposedly friendly groups.
- The **higher the expectations for friendliness** are, the **more difficult** it is to obtain happiness.
- The more components are being added to the model, the more unlikely it is to get full (= 100%) happiness.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48
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Percent Friendly
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%
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0
time
364
agents
1935
% similar
75.2
Percent Similar
100
%
0
0
time
364
Number-unhappy
1920
num-unhappy
909
% unhappy
45.7

RESEARCH SCOPES

- By infusing another component in the already existing model, how will the outcome of the model change or vary from the original?
- By incorporating more than 2 agents and study the pattern formation.
- Giving levels or degree of neighbourhood based on agents behaviour to live in close or far neighborhood.

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Thank you

Questions???