

Figure 9. Convergence time over grid size for regions. Agents with a cultural vector of 7 features and 5 possible traits. Results were averaged over 100 simulations.

The graphs look very much alike except for the different scale in the convergence time. The result found is consistent with [1] where it is stated that the amount of events (time steps) it takes until the stable state is reached is proportional to the amount of agents. In Fig. 8 & 9 the grid size is on the x-axis which is why a quadratic relation was found.

Also the number of neighbors which are allowed for interaction of one agent can be adjusted. Up to now all the results were generated by using only the four nearest neighbors (see Fig. 10a). But this does not necessarily have to be the case. Fig. 10 shows four possible neighborhood configurations. The type of neighborhood affects the dynamics heavily because previous borders (for the case of 4 neighbors) can now simply be overcome for a different configuration like Fig. 10c for example.

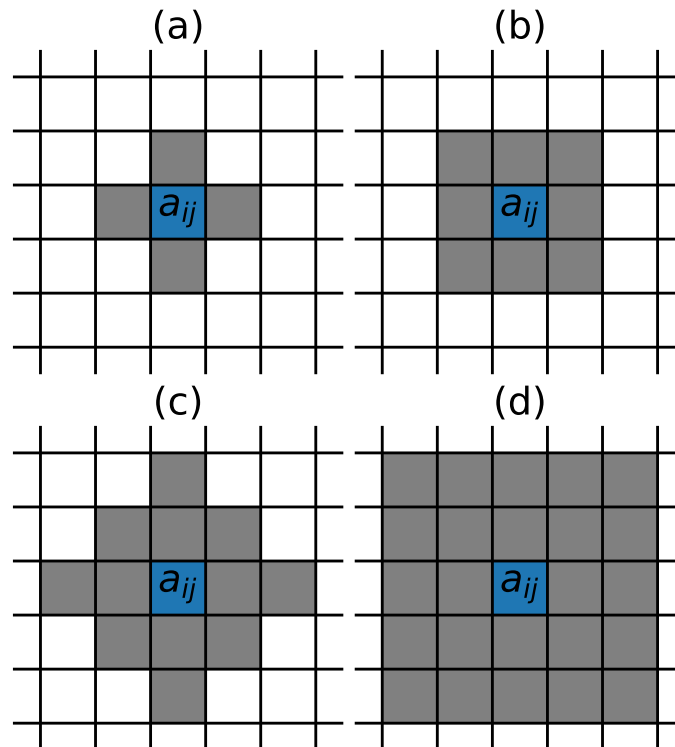


Figure 10. Possible neighborhood configurations for an agent a_{ij} . (a) Only the four nearest neighbors. (b) Eight nearest neighbors. (c) Twelve nearest neighbors. (d) All the agents on the grid.