



Universiteit  
Leiden  
The Netherlands

## **Virtual Neanderthals : a study in agent-based modelling Late Pleistocene hominins in western Europe**

Scherjon, F.

### **Citation**

Scherjon, F. (2019, May 28). *Virtual Neanderthals : a study in agent-based modelling Late Pleistocene hominins in western Europe*. Global Academic Press, Vianen. Retrieved from <https://hdl.handle.net/1887/73639>

Version: Not Applicable (or Unknown)

License: [Leiden University Non-exclusive license](#)

Downloaded from: <https://hdl.handle.net/1887/73639>

**Note:** To cite this publication please use the final published version (if applicable).

Cover Page



Universiteit Leiden



The handle <http://hdl.handle.net/1887/73639> holds various files of this Leiden University dissertation.

**Author:** Scherjon, F.

**Title:** Virtual Neanderthals : a study in agent-based modelling Late Pleistocene hominins in western Europe

**Issue Date:** 2019-05-28

## **Virtual Neanderthals – A study in agent-based modelling Late Pleistocene hominins in western Europe**

1. The flexibility observed in the ethnographic record regarding the variation in extant hunter-gatherers would allow earlier hominins to be very adaptive and capable of creating the archaeological data sets as we know today. There is no reason to assume that such flexibility was lacking from the Neanderthal species.
2. One model parameter value alone is unlikely to single-handedly explain the archaeological record. Optimizing simulation results shows that generally multiple interacting parameter combinations perform very well.
3. Coastal resources were not essential for survival of early European hominins, but the additional resources allow for a more relaxed demographic sub-model with less physical stress for female Neanderthals.
4. Implementation of the foraging behaviour is one of the most important elements of my model. It took three months to implement and test all functionality. After that, including maximum foraging range as a parameter, and using such ranges according to setting values required minimal effort, roughly two days of work.
5. Computer games are for male westerners what hunting is for hunter-gatherers: addictive, rewarding and high inducing.
6. Turing tests serve to separate humans from computer algorithms. My simulated Neandertals would fail any one of such tests.
7. Where repeating of modelling experiments is key in the natural sciences, the number of published replications of simulation results shows that the value of reproducibility is underrated in the social sciences.
8. The explicit model form required for computer simulation warrants in itself the acquisition of simulation knowledge passively in bachelor and actively in master courses.
9. The behavioural repertoire of different ant species includes domestication, warfare, specialisation, anti-biotics, and the use of ranged weapons. If ants were the size of cows we would be excavating anthills.
10. If your work is labelled “serious gaming” people think that you are good in computer games, or that you are a bad scientist. Neither one is necessarily true.