

# Athens vs Sparta

## ethical choices for sustainability

### Abstract

The evolutions of Athens and Sparta in the first millennium B.C. have been simulated and compared. This experimentation acts as a metaphor indicating to decision makers and public opinion the path to sustainability, pointing out the role of ethical choices.

### Keywords

Athens and Sparta, Lycurgus' laws, critical decisions, sustainability, system dynamics, discourse ethics.

### A bit of History

The evolutions of city-states of Athens and Sparta in the first millennium B.C. show, at beginning, a similar pattern until the rise of an internal crisis due to a conflict between the ruling class and the emerging class of traders, and to a lack of natural resources caused by overexploitation. Crises which will be solved by both city-states through emigrations. After this experience, Athens did not change its life-style and therefore other crises and emigrations followed in the next centuries, whereas Sparta decided not to repeat this distressful situation and took drastic measures in order to avoid conditions generating internal instabilities. Such measures, ascribed to the “mythical” lawgiver Lycurgus, but likely shared by a large part of inhabitants, were prevalently aimed at limiting the economic and demographic growth, joined however to law provisions for maintaining a satisfying level of equity inside the city-state. The authors have called such measures “the ethical choice”, since, by abandoning a luxurious life-style, Sparta ran straight into the path to sustainability.



Fig. 1 - A chart of the ancient Greece in the 400's BC.

### Why simulate

Why replicate the behavior of Athens and Sparta by means of a formal model? Simulation acts as a heuristic device not only because it allows researchers both to focus upon the explicitness and completeness of the model and to generate interrelationships that create unexpected results, but also because decision makers and lay citizens may experiment with the model, getting insights from it, evaluate the effectiveness of the underlying metaphor, and become fully aware of the problem. Or rather, simulation is a powerful, participative, tool, which helps us to make good decisions, that in many cases are apparently the less intuitive ones.

### The model structure

In order to conveniently replicate the behavior of Athens and Sparta in the first millennium B.C., the model has been structured into seven interconnected sectors: population (ruling class, traders or emerging class, farmers, slaves), production and consumption, wealth, war activities, abroad trading, emigrations, and arsenal shipbuilding.

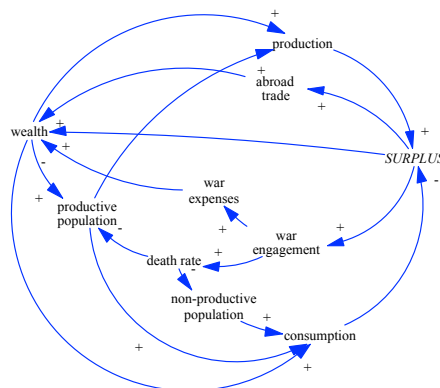


Fig. 2 – The main cause-effects relationship within the economic system of the ancient city-state.

### Simulation results

Simulation output fits *grasso modo* the data extrapolable from the works of Herodotus, Thucydides, and Xenophon. Athens shows seven emigrations in the 500-years time horizon, whereas Sparta stops at first one. The balance between the social classes shows a right ratio and the population level at the end of simulation run is equivalent to estimations in the days of Thermopylae battle. The ethical choice effects on the economic sector are plausible: the final savings of Sparta are less in comparison with the Athens' ones, but more equally distributed among the social classes.

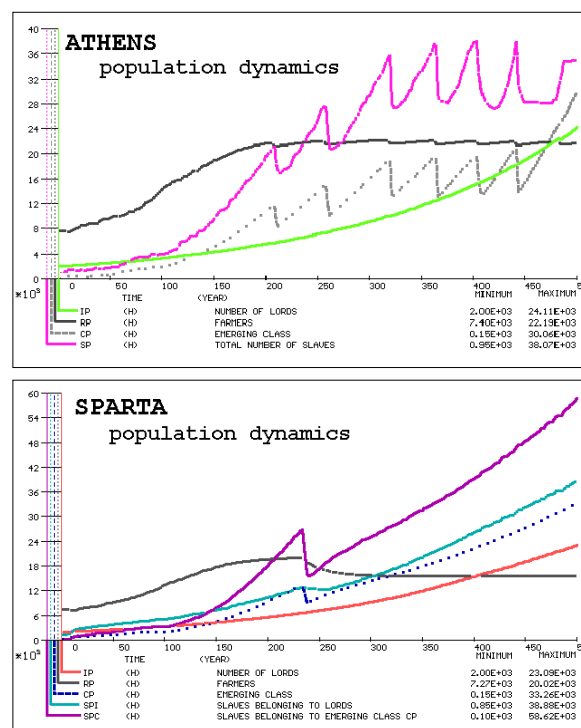


Fig. 3 - Population dynamics of the two city-states. “Saw-tooth” pattern indicates emigration.

### Lessons learned

At the theoretical level of modeling and simulation, measures to achieve a drastic change in the behavior of a society appear to be quite easier to find than one can expect, and at the same time such measures are rather simpler to apply. The authors' belief is that such measures could be effective also in the real complex world (and not only in the past) if the ethical and participative component is present. Moreover, the powerful tools of modeling and simulation not only are an essential aid to discover the path to sustainability, but also make possible a participative process in decision making such as stakeholder engagement and “discourse ethics”.

### Next steps

A gaming version of the model is under construction: It would be crucial to determine if the proposed metaphor effectively works fine. Moreover, it's the authors' intention of reformulating the model to update interpretative criteria to now-a-days categories of judgment, for better explaining dynamics of conflicts and logic of decision. Collaboration to this project is welcome.

### Conclusions

The proposed metaphor could stir up perplexity: We all would had lived in a society presenting the peculiarities that can be found in Athens. But if we want to solve sustainability and social equity problems, drastic decisions similar to Lycurgus' laws are needed. It is worth to mention that the Spartan frugality assured internal stability and three centuries of peace. Finally, sacrifices and renunciations, imposed by the “ethical choice”, are not be considered long-lasting, because an equitable and sustainable society could become the basis for a harmonious development, able to avoid the crises that we are experiencing.

### Essential references

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### Remark

Even though modeling and simulation could be considered powerful tools for the historiographical research (i.e., one of the ancillary disciplines of History), our model of Athens and Sparta would be only a support to the frugality metaphor.

**Acknowledgments** The metaphor of Athens and Sparta is Professor Mauro L. Piattelli's thought. The authors, following his wake, are very grateful to him.

**Credits** The chart of the ancient Greece has been taken from the History-Howstuffworks website <http://history.howstuffworks.com/ancient-greece/ancient-greece3.htm>