Models and Simulations: Reading Questions Week 1

Topic: ABMs vs. Population Models

Readings: Morality. Chapters 1 and 2.

Reading Questions:

1. In one second, Gary Kasparov can evaluate three possible chess moves. In the same amount of time, the computer Deep Blue could evaluate 200 million. According to Newell and Simon, what explains why Kasparov won the first match? In what ways does Gigerenzer's theory of "fast and frugal heuristics" provide a similar answer? A different one?

2. What is the distinction between parametric and strategic choice?

3. What does Alexander suggest is the connection between one's "moral sense" and "maximizing satisfaction of life preferences"? Does Alexander's answer entail that individuals always act with the purpose or intent of maximizing expected utility?

4. Explain, in your own words, what the replicator dynamics says about the relative number of different individuals in a population at different times in terms of their "fitness."

5. What benefits of ABMs does Alexander mention that we have not yet discussed in class?

6. What do you think is the relationship between rules like "Imitate the best neighbor" discussed in Chapter 2 and the "heuristics" for problem-solving discussed by Newell, Simon, and Gigerenzer?

7. What is a lattice model? A small-worlds one?