

Team Based Learning 2

Questions Validation

Validation is regarded to be the most difficult part of ABMs. Which step in the validation process is the most difficult part of validating the Evacuation model? You can select multiple answers.

- a. **Input validation**, as we cannot set a building to fire to collect data that is correct/valid.
- b. **Process validation**, as we do not know what people in a building are doing at the time an evacuation starts.
- c. **Descriptive validation**, as there are no patterns that we can replicate.
- d. **Predictive validation**, as there is no independent data available

To check the validity of a model, you should know the purpose of the model.
Which of the statements below about the Wolf-Sheep-Grass model is correct?

- a. This model does not have a purpose, and therefore, it cannot be validated.
- b. The purpose of this model is to show that wolf-sheep dynamics is a complex system. Therefore, descriptive output validation is the most important aspect of the validation process.
- c. The purpose of this model is to predict how many sheep can survive with a given number of wolves in a neighborhood. Therefore, predictive output validation is the most important aspect of the validation process.
- d. The problem with this model is that not all processes, like flocking of sheep, are implemented, and therefore, the model cannot be validated.

In the Living Textbook, you find the concept “validation” as one of the steps in the ABM design steps. Under challenges, various issues are listed that might apply to the evacuation model. Select all correct statements below.

- a. The stochastic nature
- b. Predictive versus retrodictive capability
- c. Data Quality
- d. Path Dependency