

Here we explain what the different attributes of the agent

resting time: value (0 -++) which updates every time the agent performs a task. It is made of the task(sum(value)) in a proportion to be determined >> interesting for the trading model/algorithm

preference: it is a value (e.g. 1-10) for the agent's preference to do a certain task. For each task in the model, there will be a value (1-10). This value can be updating or it can be fixed (to be decided). If updating: every time a task is completed, the preference drops (e.g. -0.5) - this is "curious" agent; OR preference increases (e.g. + 0.5) this is "aspiring master" agent.

laziness: value (e.g. 1-4) for the agent's "feeling like doing" any task. It increases with work, and is updated every time the agent completes a task (e.g. +1). Or it is set to constant if we observe that it does not affect the model realistically and reasonably.

skill: value (e.g. 1-10) for the agent's skillfulness in a certain task. For each task in the model, there will be a value (1-10) with which the agent is initiated. This value can be updating or it can be fixed (to be decided). If updating: every time after completing a task, skill increases (e.g. +0.1)

solidarity: value (e.g. 1-10) for the likelihood of an agent to take up a NOT_able agent's task. This permits the NOT_able agent to REST even without having any resting time. It is a way to give away resting time instead of trading it >> interesting for the trading model/algorithm.

ability: it is a boolean that defines whether or not the agent is currently able to do a task with justifiable reasons (e.g. has a broken arm or is healthy). This value will randomly go to NOT.

occupied: it is a boolean that defines if the agent is working or not. As long as it is occupied he can't take any other tasks

value:

Agent
ATTRIBUTES:
+ capital
+ preference
+ lazyness
+ skill
+ solidarity
+ ability
+ occupied
+ type
+ trade()

Task
ATTRIBUTES:
+ amount of time
+ value
+ urgency
+ type
+ updateUrgency()
+ updateValue()
+ chooseAgent()

Methods:

updateUrgency(agent)
this method is called every tick by increasing the urgency by a specific amount according to the task.

updateValue(Array.agents)
the value is defined by the amount of the agent that want to take the task.

chooseAgent(Array.agents)
The task chooses one agent from the available pool.
The task is assigned by picking enough agents that with their skill will reduce urgency to 0.
Inside here we need take in consideration the trade function of the agent.

Shopping

urgency: increases each tick and goes to zero one times a day
amount time:

Here we explain what the different attributes of the Task

amount of time: Duration in seconds or tickt it takes to 'carry out' the task. For this duration the status of the agent is 'busy' - it is not 'resting', it can not be assigned task, it can not be traded with. Note for later, when human players are introduced: Duration has to have a 'human scale' so that human players can carry out tasks - rather seconds than milliseconds.

value: Value of a task expresses the relative exchange rate to other task. The value of a task goes up every time an agent decides to 'trade'. The value goes down every time an agent (or agents) decide to 'carry out' the task.

urgency: increases each tick. I.e. the task for eating needs to be done 3 times per day therefore it should reach the max urgency 3 times per "day"

type: "clean", "cook", "admin", "shop"