1 ODD of model version 1 :

1.1 Purpose

The model was designed to make the simulations of the Bahria university cafeteria, our goal is that male and female students do not sit on the same side and after sitting on chairs they leave the cafeteria after some time.

1.2 State Variable and Scales

The main agent in this model is Students who represent an individual student of the university who comes to the cafeteria and sit there. The agent is different in their personal characteristic for instance, blue agent represents the male students and pink agent represents the female students. Behaviorally, agents are moving and goal-oriented toward a specific purpose at a given time. In this model activity is related to location which are tables and chairs there are 16 tables (black patches) and 64 chairs (yellow and green patches).

1.3 Process Overview and Scheduling

At each tick, each agent makes decision to sit on a chair but male and female agents do not sit on same side and after sitting there for some time they leave the cafeteria.

1.3.1 Design Concepts

Observation: The visualization window of model as shown in figure depicts the cafeteria with tables and chairs and it monitors the numbers of girls and boys in the cafeteria.

Emergence: The students come in cafeteria and both male and female student sit on opposite sides and after some time they leave the cafeteria.

1.4 Initialization

The simulation start with a specified number of students. There are 100 students in the cafeteria and waiting time of each student is set as 30 ticks.

1.5 input

The model did not include any external environmental variables

1.6 Submodel

Goal selection: Agents based decision making is a complex task, agents determine their activity based on their personal characteristic i.e. gender. They also consider the time when they make their goal choice. Both male and female students did not sit on same sides and after some time they leave the cafeteria

2 Behavior space experiments

Behavior space experiments of model 1 are shown in figure 1 to figure 4 of boys and girls respectively shows that all students come to cafeteria and leave after random time.

•	Expe	iment		
Experiment name experiment				
Vary variables as follows (note brad	ets and qu	otation marks):		
["numnode" 100]			^	
Ether list values to use, for example:			*	
["my-slider" 1 2 7 8] or specify start, increment, and end, for ec	-			
["my-slider" [0 1 10]] (note additional brac				
to go from 0, 1 at a time, to 10. You may also vary max-picor, min-picor,	max-pycor, r	in-pycor, random-seed.		
Repetitions 10				
run each combination this many times				
Run combinations in sequential	order			
For example, having ["var" 1 2 3] with 2		experiments' "var" values	will be:	
sequential order: 1, 1, 2, 2, 3, 3 alternating order: 1, 2, 3, 1, 2, 3				
Measure runs using these reporters				
blocknum			^	
[who] of turtles with [hash = "4221A0FC3DF8FD830DC3A13F6C72D23				
			~	
<			>	
one reporter per line; you may not split a across multiple lines	reporter			
Measure runs at every step f unchecked, runs are measured only who				
	in they are o	Go commands:		
Setup commands: setup		Go commands:		
secop	~	40		
	~		~	
> Stop condition:		Final commands:		
the run stops if this reporter becomes true		run at the end of each run		
Time limit 0				
stop after this many steps (0 = no limit)				
	OK	Cancel		

Figure 1: This is experiment to count the boys .

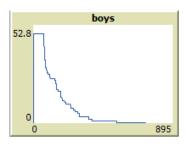


Figure 2: graph of boys.

 Experime 	nt ×			
Experiment name				
Vary variables as follows (note brackets and guotation marks):				
["numnode" 100]	^			
	~			
Eiher Ist values to one, for example: [my-addor'12.72] stat, increment, and end, for examples: [my-addor'12.72] (fore additional bracket) to go finon 0.1 at a time, to 10. 'un amy alke varue maceptor, mine-pycor, min-pycor, random-seed.				
Repetitions 10				
run each combination this many times				
Run combinations in sequential order				
For example, having ["var" 1 2 3] with 2 repetitions, the experiments' "var" values will be: sequencial order 1: 1: 2: 2: 3: 3 alternating order: 1: 2: 3: 1: 2: 3				
Measure runs using these reporters:				
count turtles with [message?]	^			
one reporter per line; you may not split a reporter across multiple lines				
Measure runs at every step				
If unchecked, runs are measured only when they are over				
Setup commands: Go c	ommands:			
setup ^ go	^ v			
	Final commands:			
the run stops if this reporter becomes true run a	t the end of each run			
Time limit 0				
stop after this many steps (0 = no limit) OK Ca	ncel			
wint messager) j or curcies				

Figure 3: This is experiment to count the girls .

Message Revieved by blocks				
160				
140 -				
120 -				
100 -		- blocks		
80 -				
60 ·		[mean of message recieved]		
40				
20 -				
0				
	1 2 3 4 5 6 7 8 9 10			

Figure 4: Graph of girls .