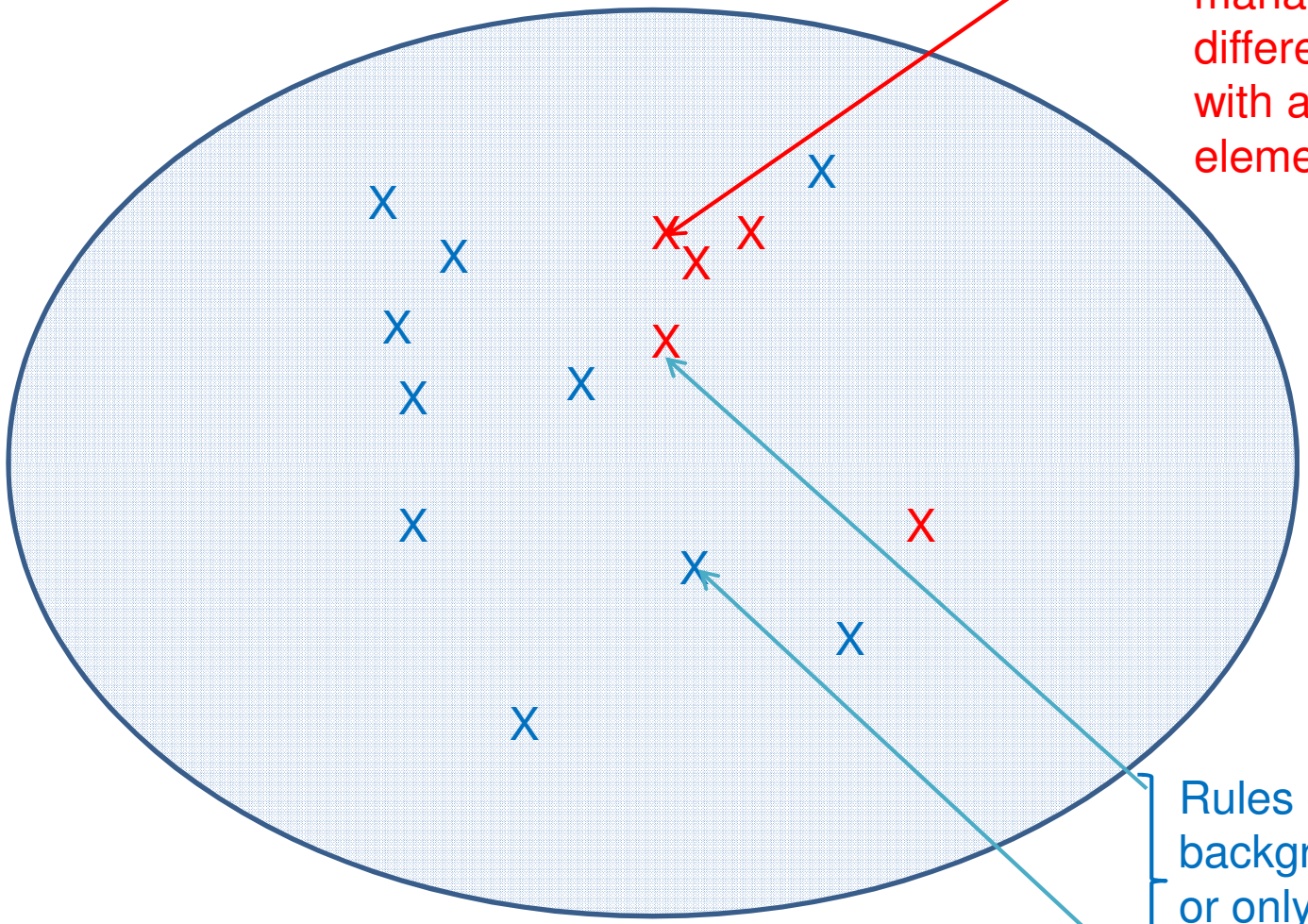
Pietro Terna - DipEco

1. Agents and schedule

Bland* and **tasty#** agents

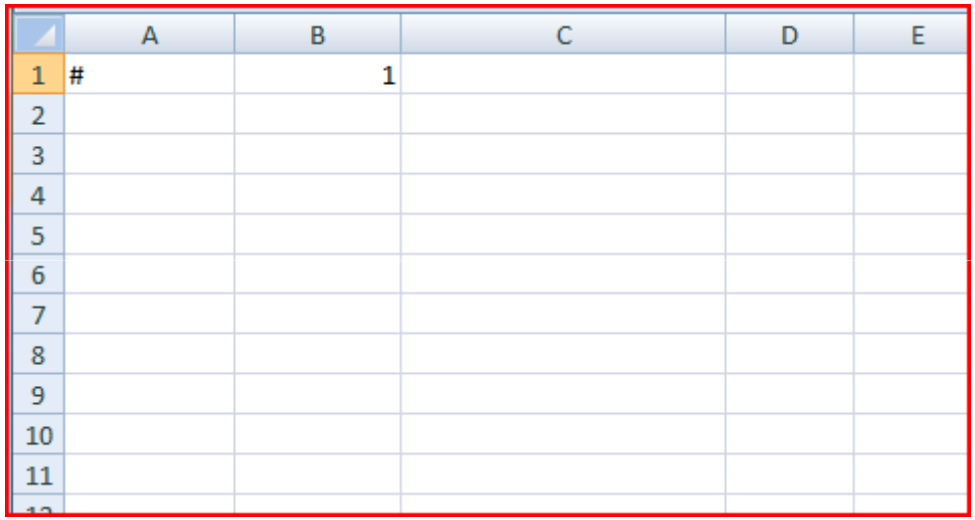


Rules operating "in the foreground", explicitly managed via a script (with different sets of agents, with a different number of elements)

Rules operating "in the background" for all the agents, or only for the blue ones (to be decided)

*Bland = simple, unspecific, basic, insipid, …
#Tasty = specialized, with given skills, discretionary, …

Empty schedule (no tasty agents, only bland ones, operating with the background rules)



	A	B	C	D	E
1	#	1			
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					

```
How many 'bland' agents? 3
X Size of the world? 10
Y Size of the world? 10
How many cycles? (0 = exit) 5
World state number  0  has been created.
Agent number  0  has been created at  7 ,  1
Agent number  1  has been created at  3 ,  2
Agent number  2  has been created at  7 ,  0

Time = 1
agent #  0 moving
agent #  2 moving
agent #  1 moving
Time =  1 ask all agents to report position
Agent number  0  moved to X =  0.0131032296035  Y =  3.0131032296
Agent number  1  moved to X =  8.9868967704  Y =  0.0
Agent number  2  moved to X =  0.986896770397  Y =  3.9868967704
Time = 2
agent #  0 moving
agent #  1 moving
agent #  2 moving
Time =  2 ask first agent to report position
Agent number  0  moved to X =  6.18205342701  Y =  6.8441530322
```

Creation of the bland agents

bland agents **acting with the background rules**

All the agents reporting their position **(background operation)**

The agent # 0 reporting … **(b. op.)**

```
Time = 3
agent #  1 moving
agent #  2 moving
agent #  0 moving
Time =  3 ask first agent to report position
Agent number  0  moved to X =  2.76682561579  Y =  6.8441530322
Time = 4
agent #  0 moving
agent #  2 moving
agent #  1 moving
agent 2 made a big jump
Time =  4 ask all agents to report position
Agent number  0  moved to X =  2.76682561579  Y =  2.32334710187
Agent number  1  moved to X =  2.81794657299  Y =  6.16895019741
Agent number  2  moved to X =  2.63504103748  Y =  9.46609084007
Time = 5
agent #  2 moving
agent #  0 moving
agent #  1 moving
agent 2 made a big jump
Time =  5 ask first agent to report position
Agent number  0  moved to X =  2.76682561579  Y =  2.32334710187
Time = 6
```

Schedule driving bland agents (no tasty agents)

Agent -> all agents; Agent0 -> bland agents; in this case the two sets are coincident

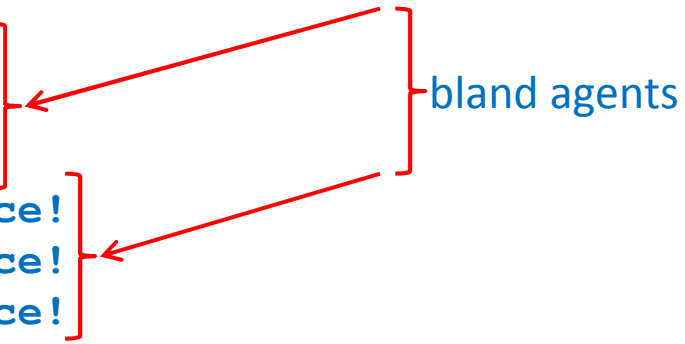
1	#	1			standard (internal) actions, like move, are applied to all agents
2	Agent0	eat			0 means internal agents
3	Agent0	dance			
4	#	2			
5	#	4			
6	Agent	0.5	dance		Agent without speficitation means all
7	Agent3	eat			3 means agents of type 3
8	WorldState	0.5	setGeneralMovingProb		
9	#	5			comments here or in successive columns
10	Agent	eat			
11	Agent	dance			
12	#	30			
13	Agent1	dance			1 means agents of type 1
14	#	31			
15	Agent1	0.5	dance		
16					

Empty sets, in this case

Acting on bland (blue) agents and on tasty (red) ones

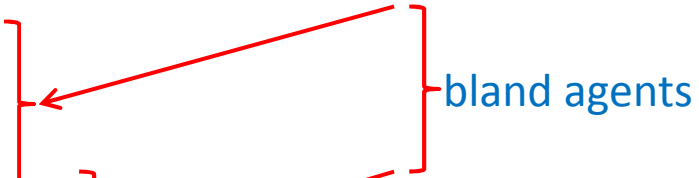
```
How many 'bland' agents? 3
X Size of the world? 10
Y Size of the world? 10
How many cycles? (0 = exit) 5
World state number  0  has been created.
Agent number  0  has been created at  7 ,  1
Agent number  1  has been created at  3 ,  2
Agent number  2  has been created at  7 ,  0

Time = 1
agent #  1 moving
agent #  2 moving
agent #  0 moving
I'm agent  1:  nothing to eat here!
I'm agent  2:  nothing to eat here!
I'm agent  0:  nothing to eat here!
I'm agent  0:  it's not time to dance!
I'm agent  1:  it's not time to dance!
I'm agent  2:  it's not time to dance!
Time =  1 ask all agents to report position
Agent number  0  moved to X =  0.972690201302  Y =  7.0273097987
Agent number  1  moved to X =  6.9726902013  Y =  2.0
Agent number  2  moved to X =  7.0  Y =  6.0273097987
```

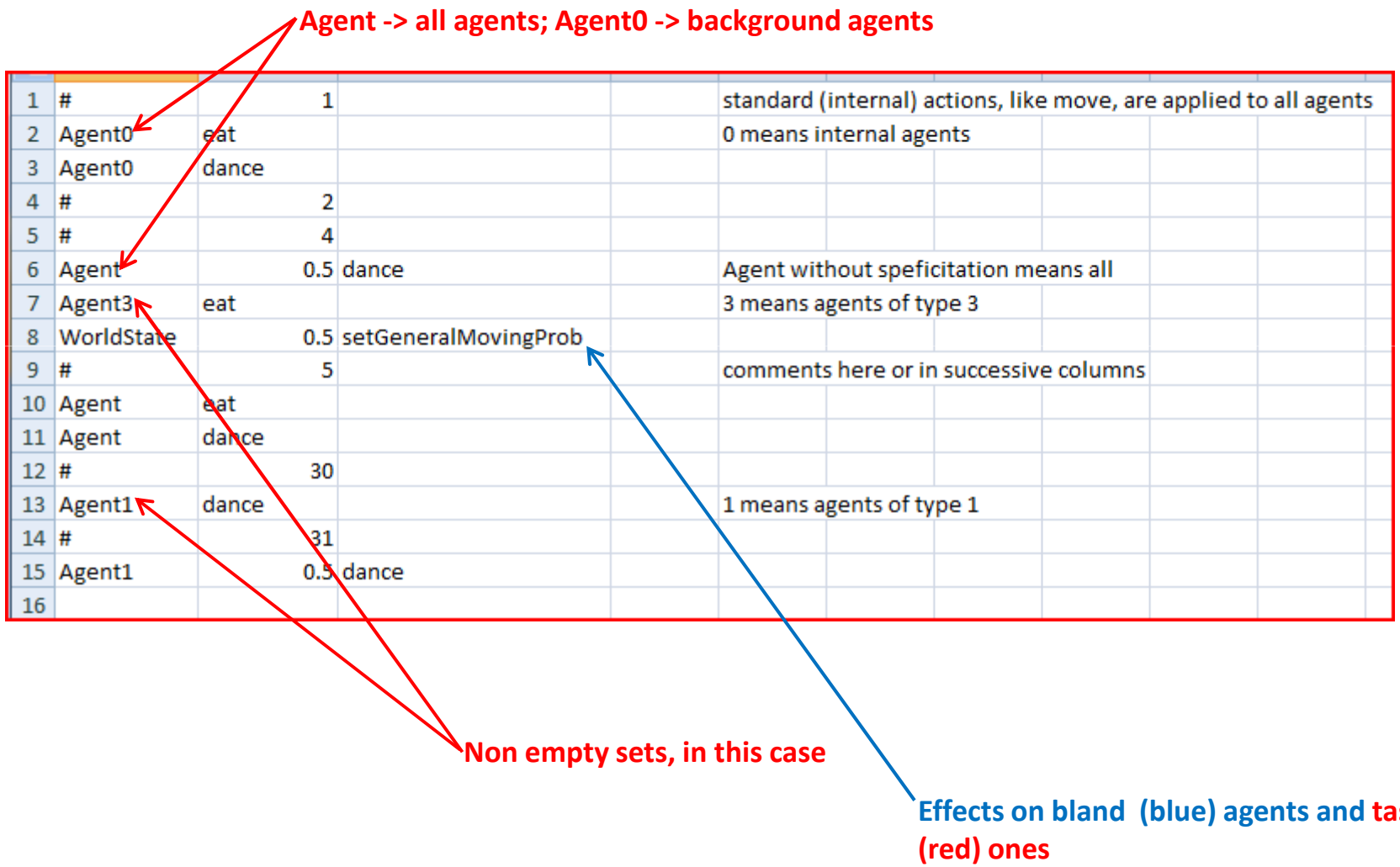


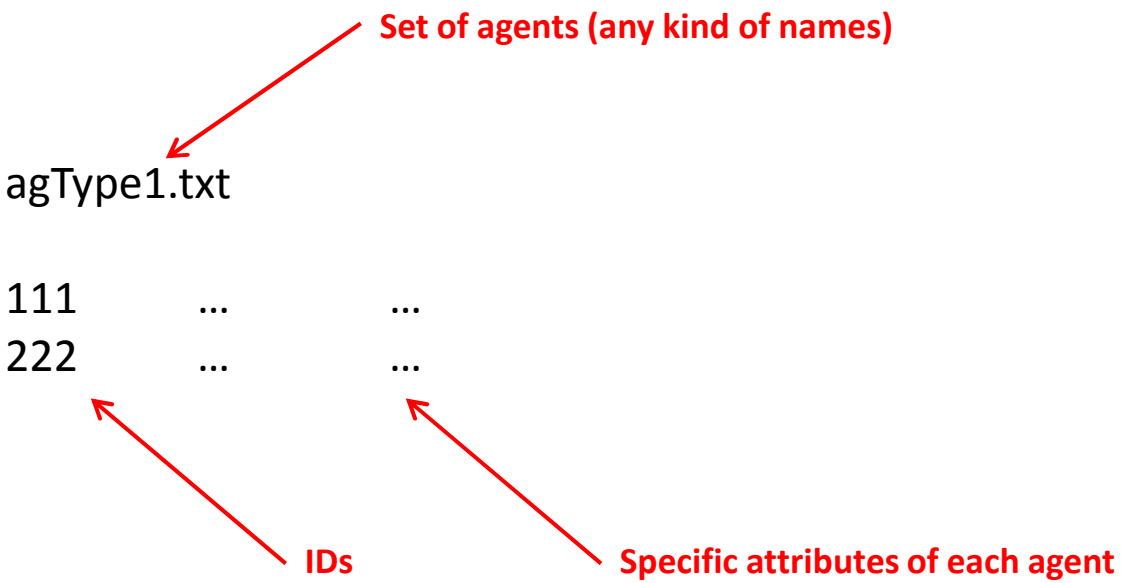
```
Time = 2
agent #  1 moving
agent #  2 moving
agent #  0 moving
Time =  2 ask first agent to report position
Agent number  0  moved to X =  3.51562472467  Y =  7.0273097987
Time = 3
agent #  1 moving
agent #  2 moving
agent #  0 moving
Time =  3 ask first agent to report position
Agent number  0  moved to X =  3.51562472467  Y =  7.0273097987
Time = 4
agent #  0 moving
agent #  2 moving
agent #  1 moving
I'm agent  1:  it's not time to dance!
Time =  4 ask all agents to report position
Agent number  0  moved to X =  3.51562472467  Y =  0.992771148789
Agent number  1  moved to X =  3.43870920817  Y =  1.00895353023
Agent number  2  moved to X =  6.00895353023  Y =  3.48437527533
```

```
Time = 5
agent #  0 moving
agent #  1 moving
agent #  2 moving
I'm agent  0:  nothing to eat here!
I'm agent  1:  nothing to eat here!
I'm agent  2:  nothing to eat here!
I'm agent  1:  it's not time to dance!
I'm agent  0:  it's not time to dance!
I'm agent  2:  it's not time to dance!
Time =  5 ask first agent to report position
Agent number  0  moved to X =  3.74036626026  Y =  0.992771148789
Time = 6
```



Schedule driving bland agents (with tasty agents)





agType3.txt

1111

```
How many 'bland' agents? 3
X Size of the world? 3
Y Size of the world? 3
How many cycles? (0 = exit) 32
World state number  0  has been created.
Agent number  0  has been created at  0 ,  2
Agent number  1  has been created at  1 ,  0
Agent number  2  has been created at  0 ,  2

creating agType1 # 111
Agent number  111  has been created at  1 ,  1
creating agType1 # 222
Agent number  222  has been created at  2 ,  0

creating agType3 # 1111
Agent number  1111  has been created at  2 ,  2

Time = 1
agent #  2 moving
agent # 222 moving
agent #  0 moving
agent # 111 moving
agent #  1 moving
agent # 1111 moving
```

tasty agents

bland and tasty agents

```
I'm agent  2:  nothing to eat here!
I'm agent  1:  nothing to eat here!
I'm agent  0:  nothing to eat here!
I'm agent  1:  it's not time to dance!
I'm agent  0:  it's not time to dance!
I'm agent  2:  it's not time to dance!
Time =  1 ask all agents to report position
Agent number  0  moved to X =  0.924426630933  Y =  2.92442663093
Agent number  1  moved to X =  1.0  Y =  0.924426630933
Agent number  2  moved to X =  0.924426630933  Y =  2.92442663093
Agent number  111  moved to X =  1.92442663093  Y =
1.92442663093
Agent number  222  moved to X =  1.07557336907  Y =
2.07557336907
Agent number  1111  moved to X =  2.92442663093  Y =  2.0
Time = 2
agent #  1 moving
agent # 111 moving
agent # 222 moving
agent #  0 moving
agent # 1111 moving
agent #  2 moving
```

```
Time = 5
agent # 222 moving
agent #  1 moving
I'm agent 1111:  nothing to eat here!
I'm agent  2:  nothing to eat here!
I'm agent 111:  nothing to eat here!
I'm agent  0:  nothing to eat here!
I'm agent 222:  nothing to eat here!
I'm agent  1:  nothing to eat here!
I'm agent  0:  it's not time to dance!
I'm agent 222:  it's not time to dance!
I'm agent 1111:  it's not time to dance!
I'm agent  2:  it's not time to dance!
I'm agent 111:  it's not time to dance!
I'm agent  1:  it's not time to dance!
```

```
Time =31
agent #  1 moving
agent # 111 moving
agent #  0 moving
agent #  2 moving
I'm agent 222:  it's not time to dance!
Time =  31 ask all agents to report position
```

#	31	
Agent1	0.5	dance