

# EXPERIMENTS

## Parameters:

- $S = -1$
- $T = 2$
- $P = 0$
- ( $b = 2$  en  $c = 1$ )
- $\gamma = 1$
- $r = 50$
- $N = 100$
- $\beta = 0.1$
- trust threshold = 3
- $p = 0.25$
- $\epsilon = 0.25$

## What to test and how:

- When will individuals trust? (1)  
Het succes van trust based cooperative strategies worden worden gemeten door het tellen van het aantal keer dat de populatie alleen bestaat uit TUC.
- When should there be trust? (2)  
Meet hoe het aantal TUC in de populatie de cooperatie verhoogt aka kijk onder welke condities de aanwezigheid van TUC and TUD de cooperatie doet verhogen

## Experimenten:

### EXPERIMENT 1 :

- effect of opportunity cost ( $\epsilon$ ) on the strategies

- figure 3

- Left frequency of the strategies for different opportunity cost (between 0 and 1)(1)

- Count number of strategies in the population

- right frequency of cooperation for 2 scenarios(2)

- Count the increase of cooperation in the population
- With TUC/TUD as possible strategy
- Without TUC/TUD as possible strategy

### EXPERIMENT 2:

Importance of the game ( $\gamma$ ) and number of rounds

Figure 4

$\gamma$  between 1 and 1000

$R$  is 20, 50 and 100

6 graphs:

- 1 for each number of rounds = 3

- 1 for (1) frequency of strategy and frequency of cooperation (2) = 2

#### EXPERIMENT 3:

Trustfulness p en cost epsilon

- Figure 5
- Epsilon = 0, 0.2, 0.05
- $1/p$  as probability (shown in figure 25, 50 and 75)
- For (1) and (2)

#### EXPERIMENT 4:

Threshold

- Repeat previous experiments but with different threshold
- Threshold = 5 and 10