

1. Research question

How does trust influence the emergence of cooperation the spatial and evolutionary IPD?

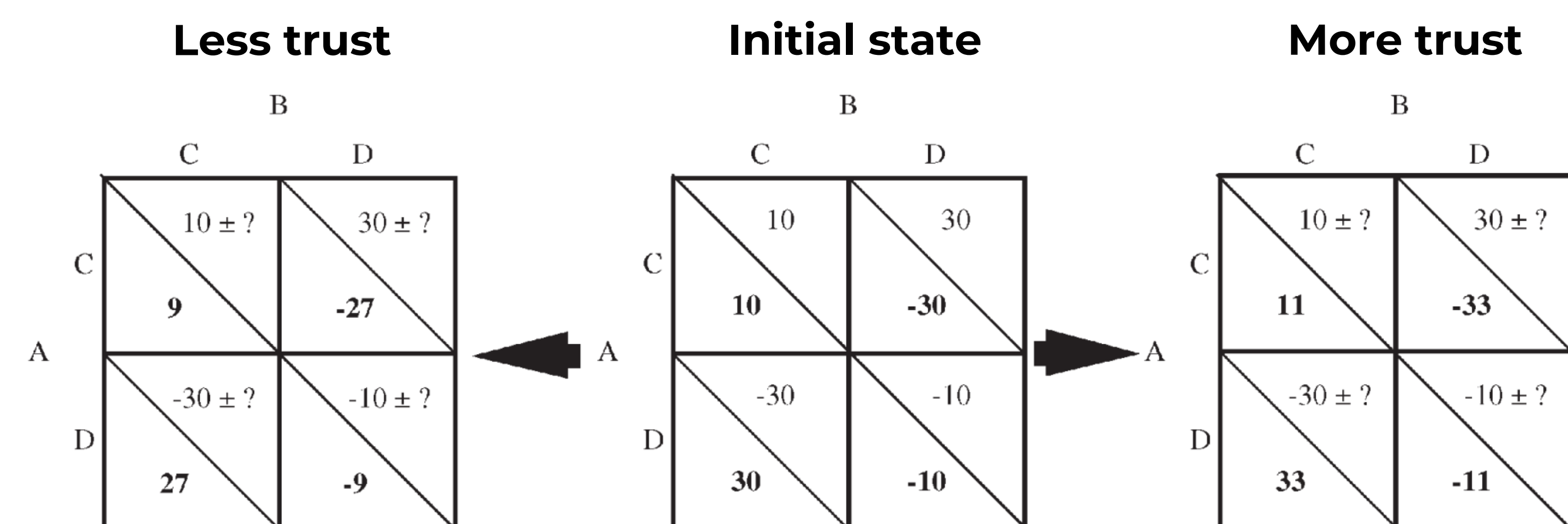
Trust: willingness to take risks under uncertainty

Spatial: agents operate in a two-dimensional environment

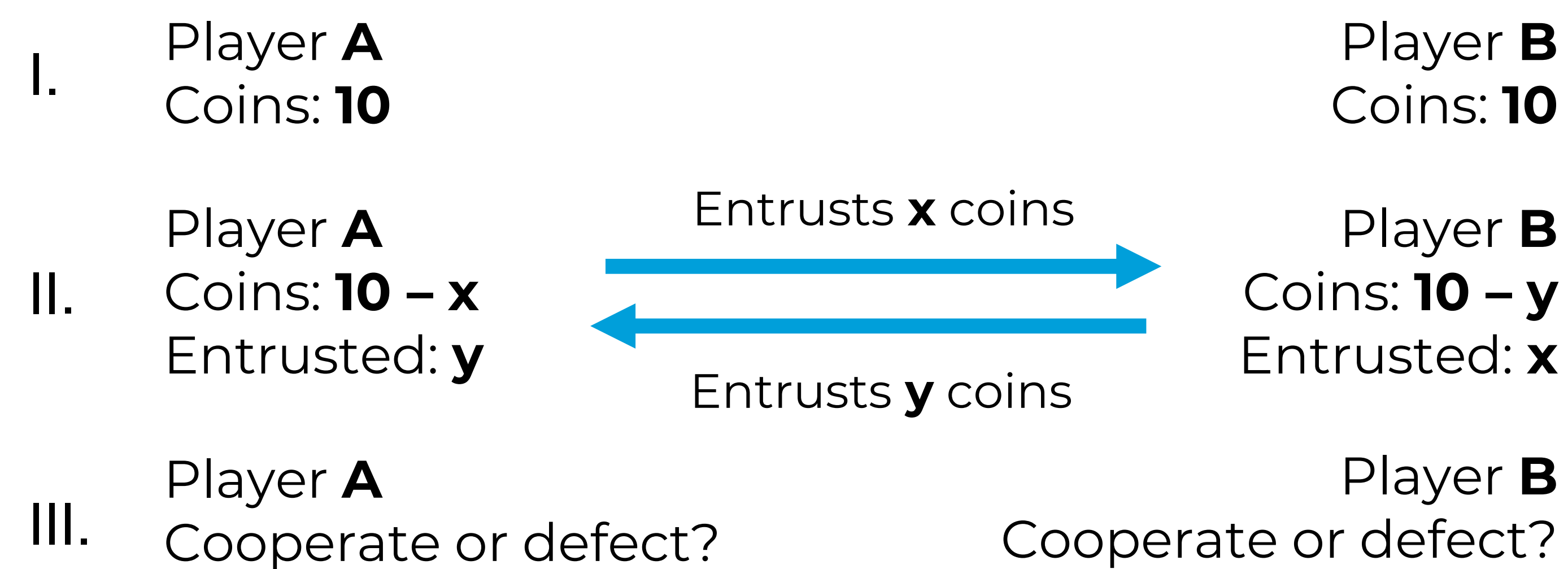
Evolutionary: agents can reproduce and follow the rules of evolution

2. Models

- PD with Trust via Matrix Changes (**PD/Dm**)

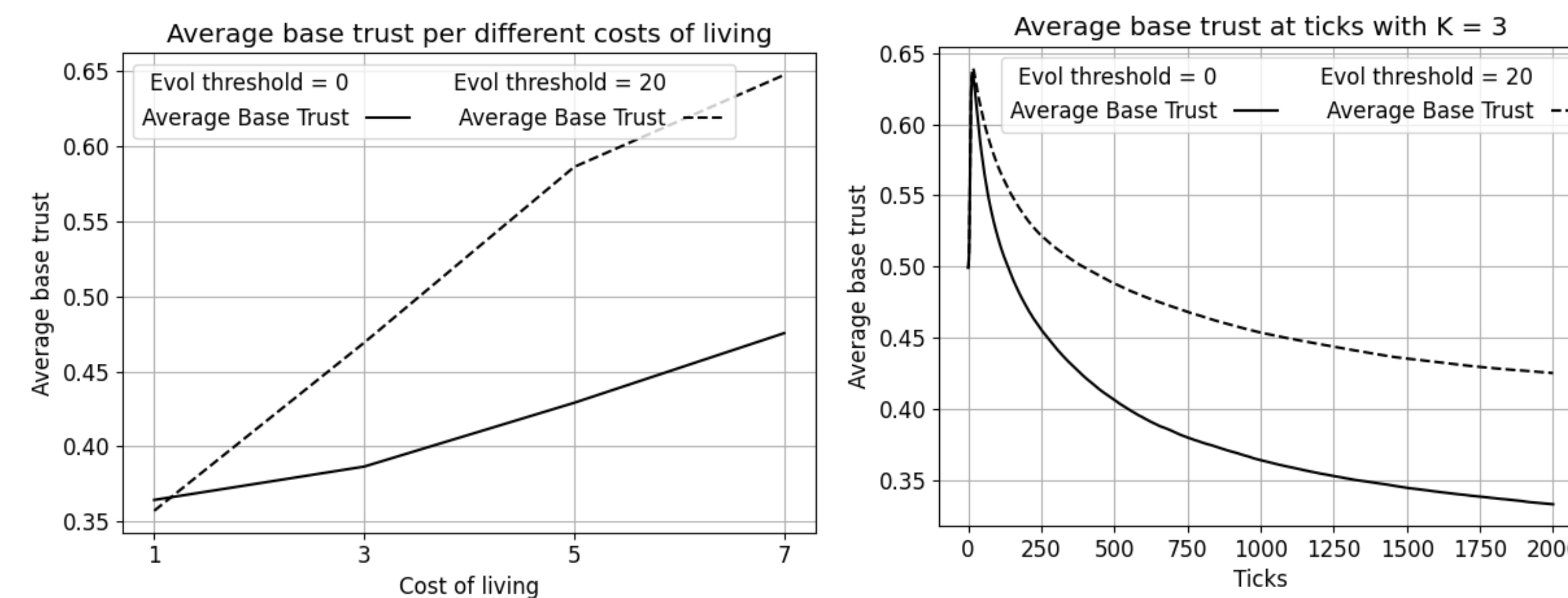
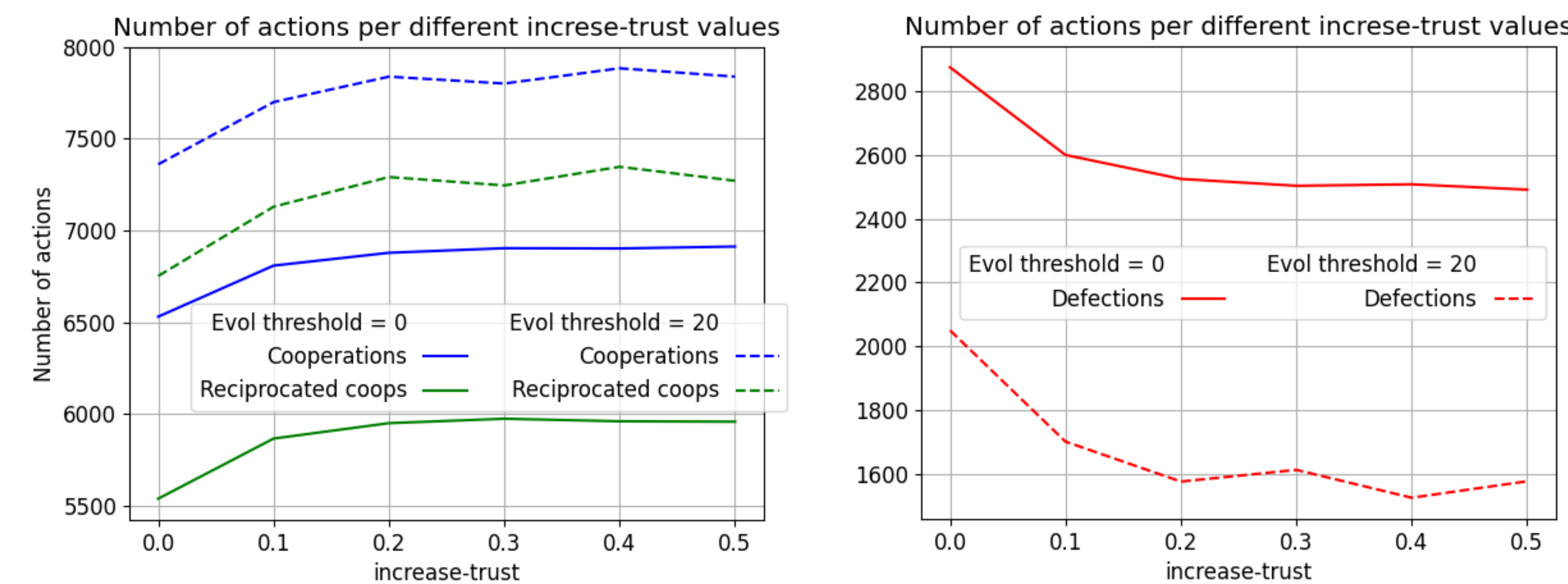


- PD with Trust via Coin Entrustment (**PD/Dc**)

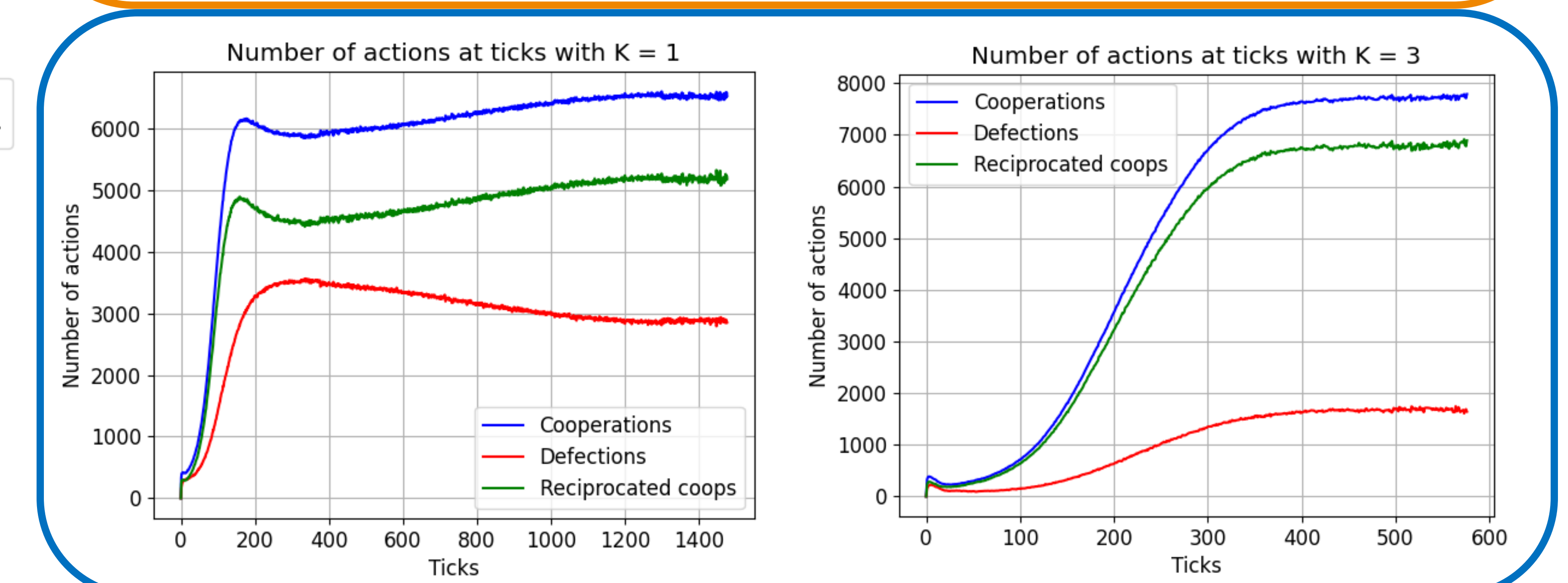
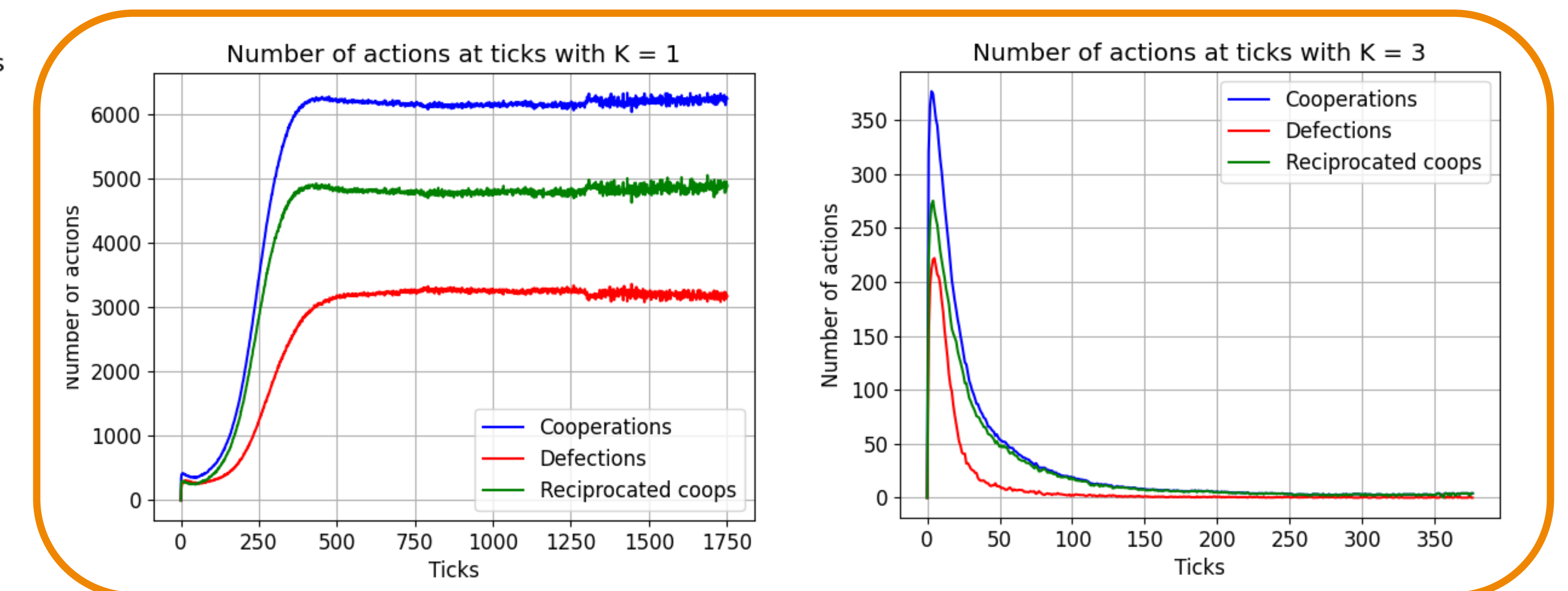


3. Results

Natural and evolutionary



Harsh and noisy



4. Conclusions

Trust facilitates *emergence of cooperation*

Agents reach **higher payoffs** faster

Agents **reproduce** more **quickly**

Agents survive in **harsher environments**

Trust opens to *exploitation by defectors*

Defectors are surrounded by **more agents**

Defectors attempt to **exploit trust**

Defectors are **mitigated** soon