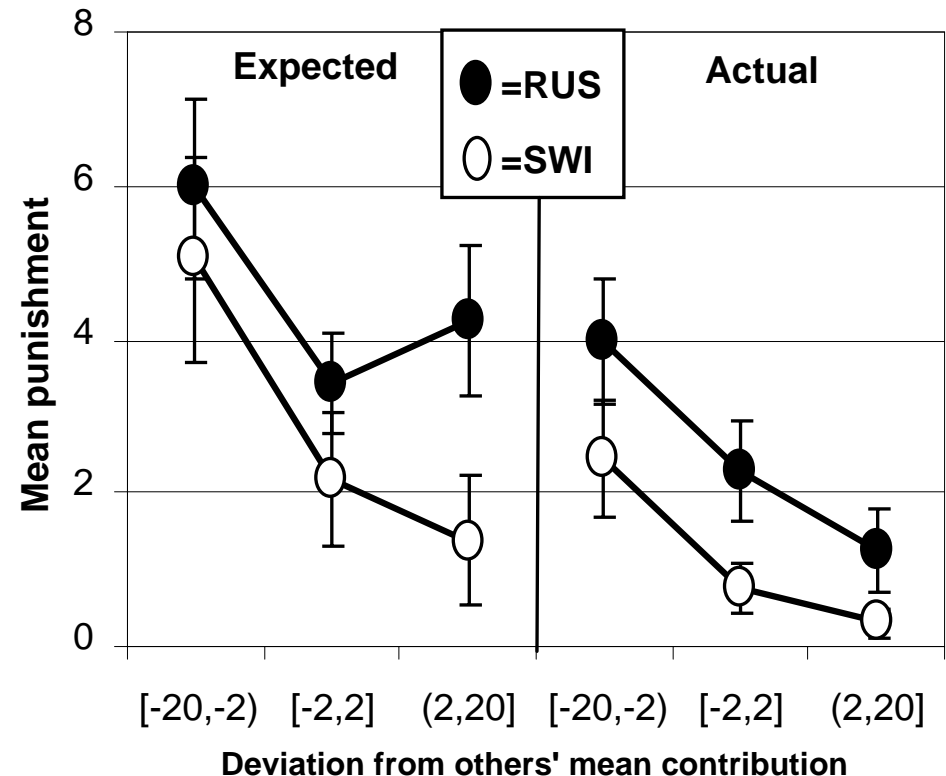
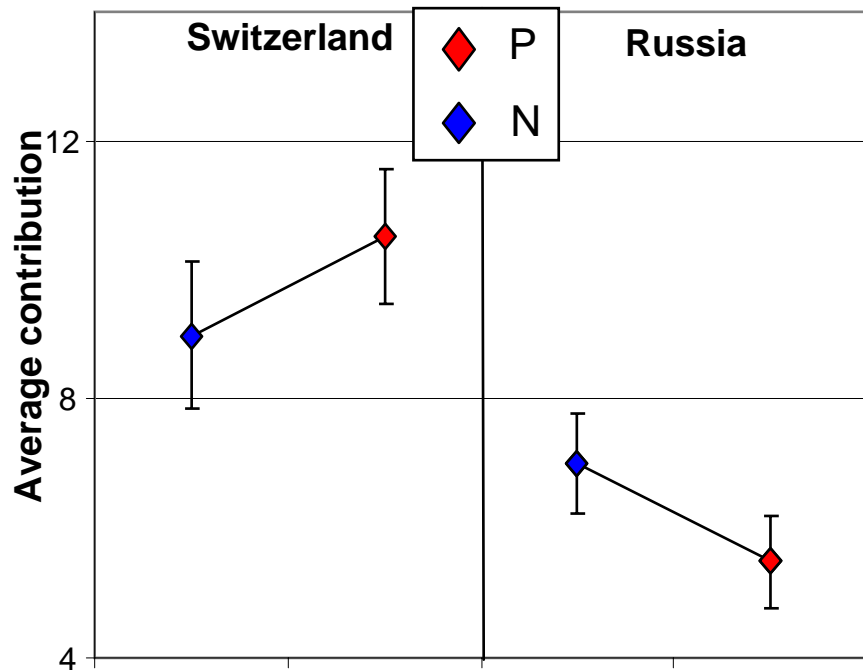


Antisocial behavior

- **Antisocial punishment**
 - Pervasiveness across societies
- **Conflict and rent seeking**
 - The darker side of cooperation
 - *Homo rivalis*
 - Conflict and peace
- **The dark side of human behavior**
 - Punitive games

Antisocial punishment

- **Differences in punishment behavior** Gächter & Herrmann 2007
 - Design
 - VCM: $n = 3$, $e = 20$, MPCR = 0.5, one-shot game, costs 1 to damage by 3, run in Switzerland and Russia

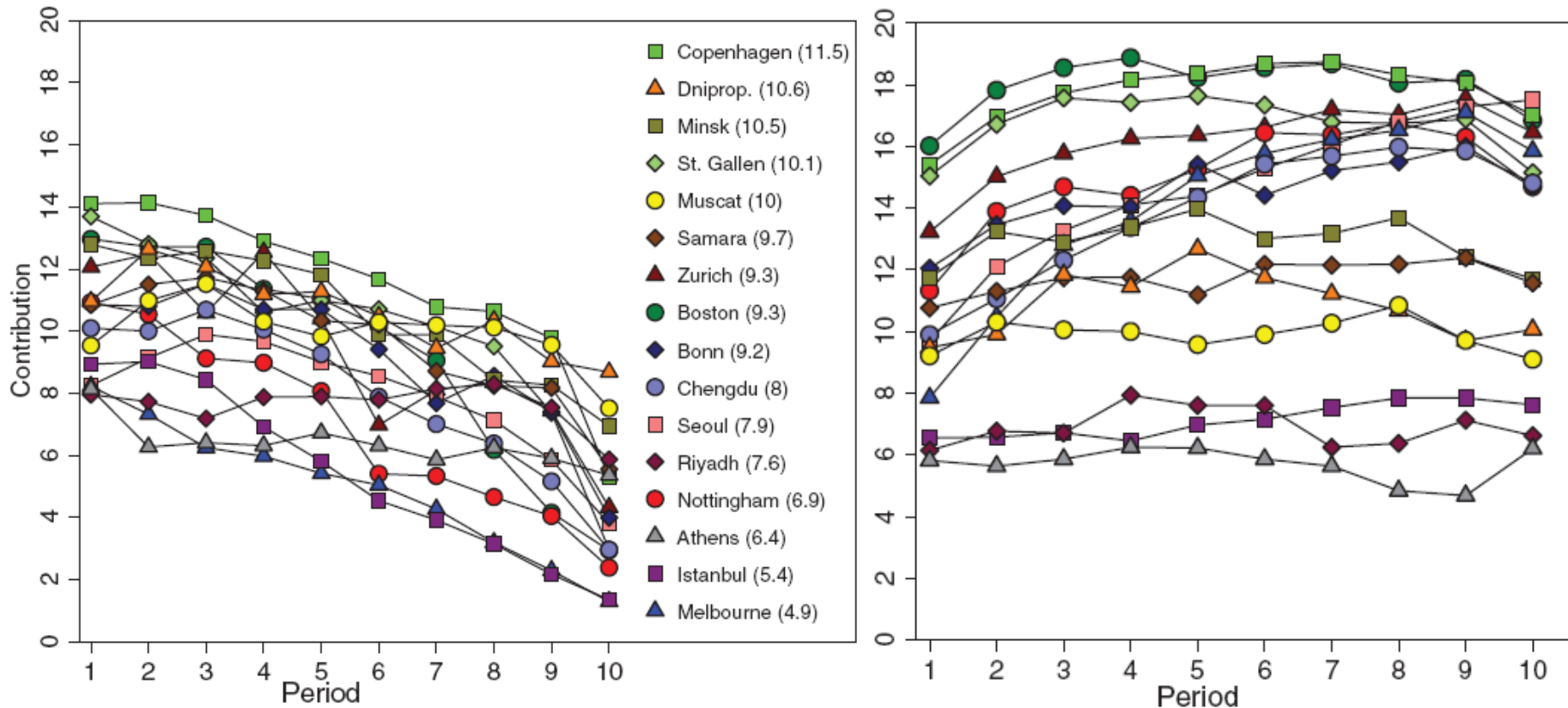


Antisocial punishment

- **Antisocial punishment across societies** Herrmann et al. 2008
 - Is punishment used and does it increase contributions in other societies?
- Design
 - VCM: $n = 3$, $e = 20$, MPCR = 0.5, partners matching, costs 1 to damage by 3
 - Treatments: punishment / no punishment
 - Run in various cities
 - Boston, Nottingham, Copenhagen, Bonn, Zurich, St. Gallen, Minsk, Dnipropetrovs'k, Samara, Athens, Istanbul, Riyadh, Muscat, Seoul, Chengdu, Melbourne

Punishment across societies

- **Antisocial punishment across societies** Herrmann et al. 2008
 - Punishment is pervasive but it does not always increase contributions
 - Works: Boston, Nottingham, Copenhagen, Bonn, Zurich, St. Gallen, Minsk, Seoul, Chengdu, Melbourne
 - Did not work: Dnipropetrovs'k, Samara, Athens, Istanbul, Riyadh, Muscat

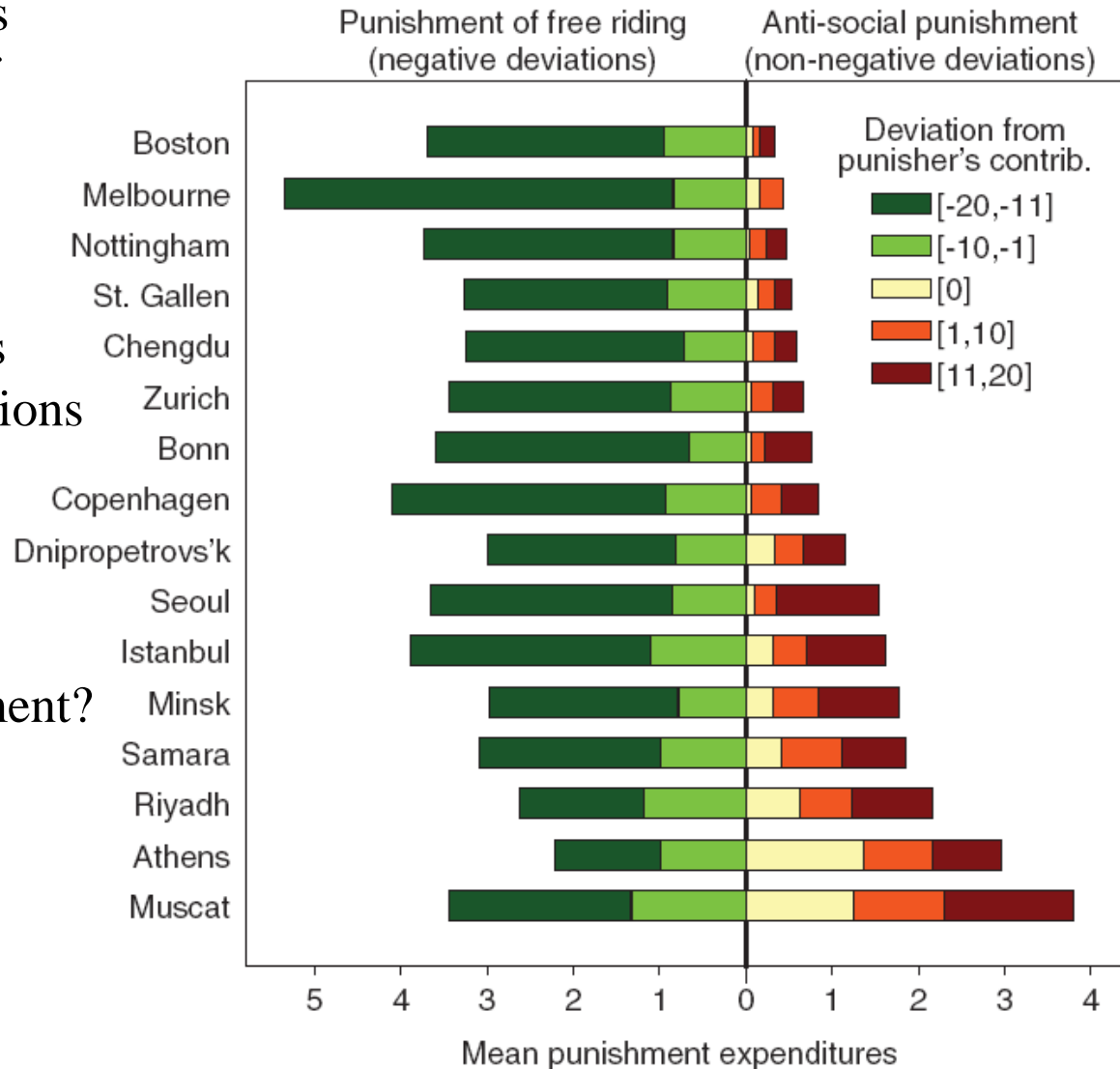


Punishment across societies

Antisocial punishment across societies Herrmann et al. 2008

- Failure of punishment is related to the amount of ‘antisocial’ punishment
- Punishment of (above average) cooperators
- If punished, cooperators tend to reduce contributions

- Why antisocial punishment?
 - Revenge?
 - Spitefulness?



Rent-seeking games

- **Rent-seeking game**

- Two (or more) parties compete for an exogenous prize P
- Both parties simultaneously exert effort e_i to try to win the prize
- Each party wins with a probability proportional to its effort share

$$\text{Prob}(i \text{ wins}) = \frac{e_i}{e_i + e_j}$$

- The (symmetric) equilibrium effort is: $e_i = e_j = 1/4P$
- The expected payoff is $y_i - 1/4P + 1/2P = y_i + 1/4P$

- **Rent-seeking model is used to analyze**

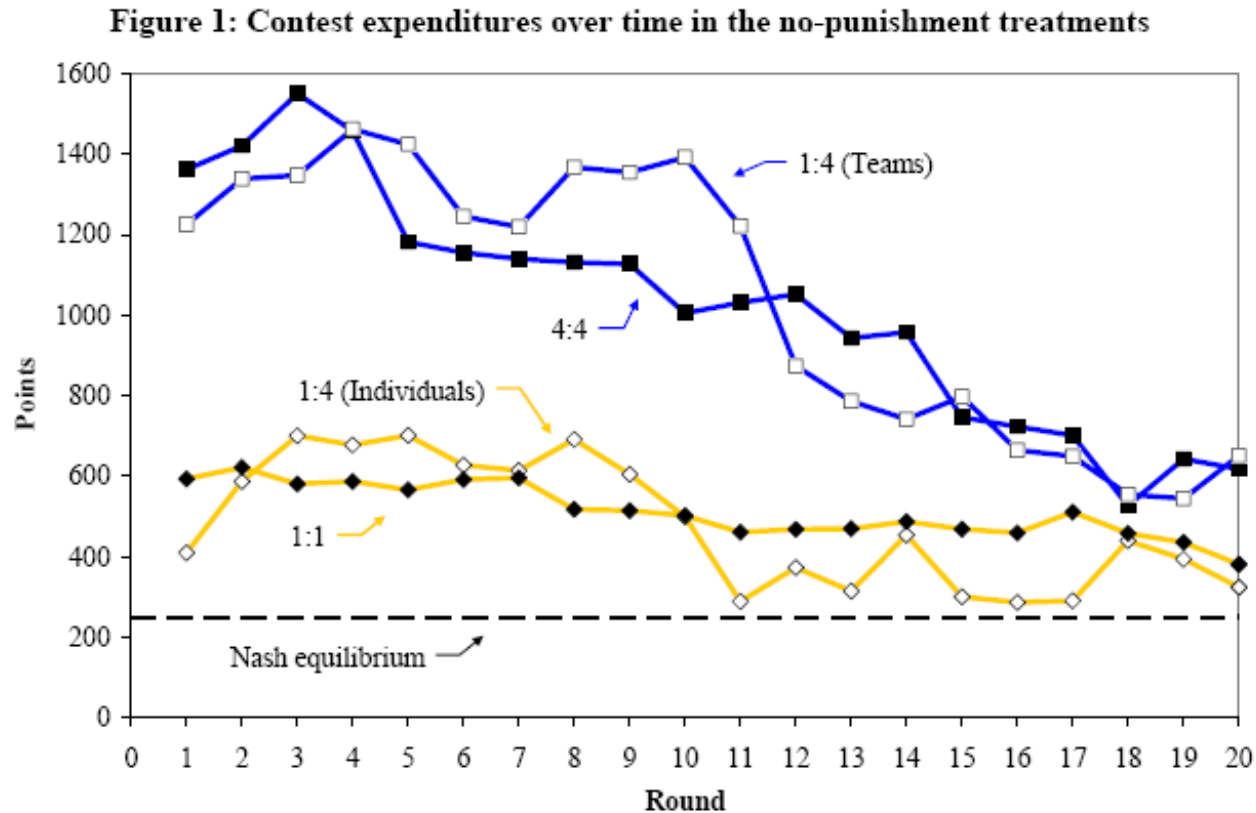
- Contests (e.g. architecture), promotion tournaments, lobbying, war and interstate conflict, charitable fundraising

Rent-seeking games

- **The dark side of cooperation** Abbink et al. 2009
- Design
 - Rent-seeking contest in teams or individuals
 - Endowment per individual is 1000 tokens
 - Price per individual is 1000 tokens
 - Repeated for 20 periods, partners matching
 - Treatments
 - 1 vs. 1
 - 4 vs. 1
 - 4 vs. 4
 - 4. vs 4 with punishment within teams

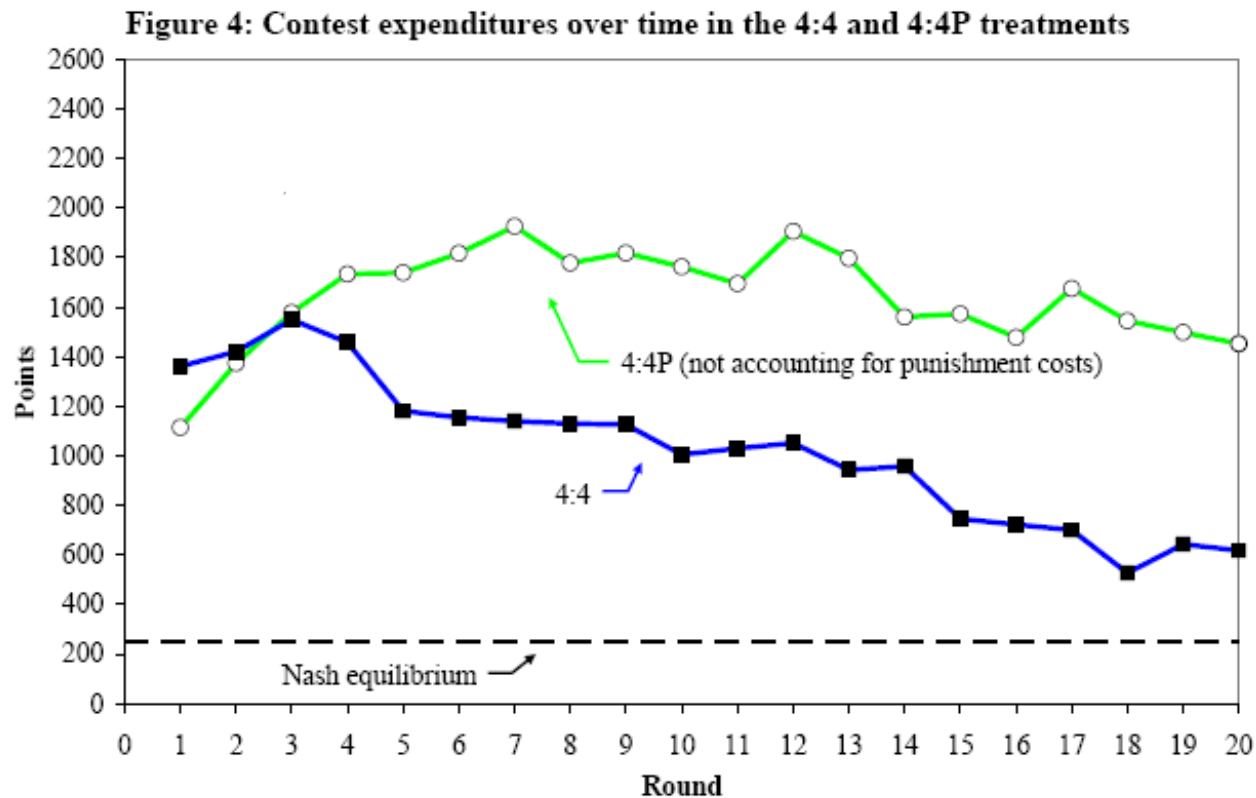
Rent-seeking games

- **The dark side of cooperation** Abbink et al. 2009
 - Both teams and individuals spend more effort than Nash
 - Teams spend much more than individuals (remember individual marginal incentives are the same)



Rent-seeking games

- **The dark side of cooperation** Abbink et al. 2009
 - With punishment effort levels are even higher!
 - Is this due to the will of a few aggressive individuals or a team effort?



Homo rivalis?

- **Rent-seeking and antisocial preferences** Herrmann & Orzen 2008
- Design
 - Rent-seeking contest between two individuals
 - Endowment per individual is \$16 and the price is \$16
 - One shot game (part 1) + 15-period repeated game (part 2)
 - Treatments
 - Direct: standard game
 - Strategy: individuals can condition on the other's investment
 - Individual: individuals can condition on the other's investment but the other is a computer

Homo rivalis?

- **Rent-seeking and antisocial preferences** Herrmann & Orzen 2008
 - Investments are well above the Nash equilibrium
 - Highest under direct and strategy

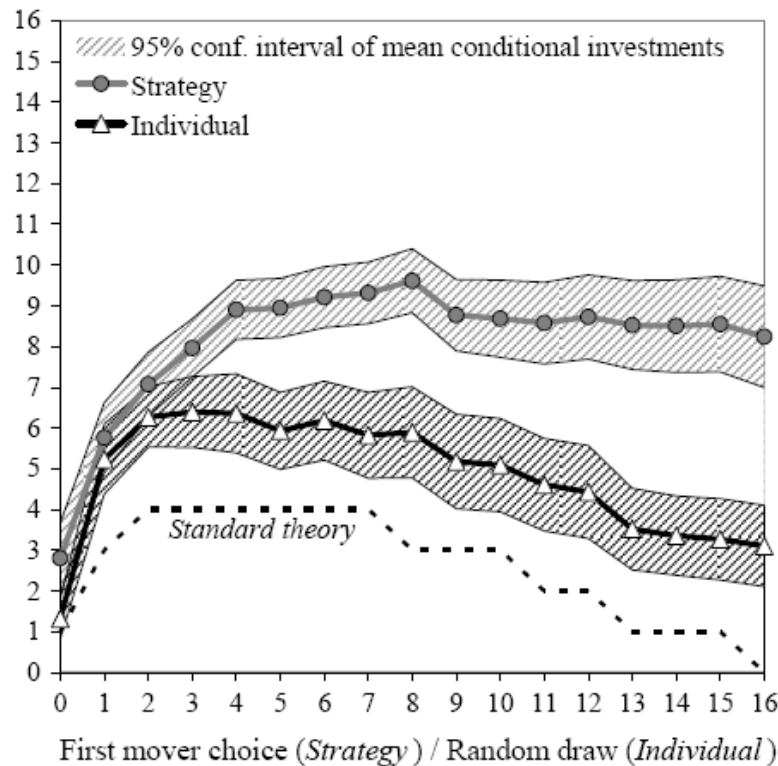
	Direct	Strategy	Individual
Part 1	9.6 (4.4)	8.8 (4.4)	4.7 (4.4)
Part 2 (last 5 periods)	8.2 (4.9)	7.3 (4.4)	5.2 (4.6)

Homo rivalis?

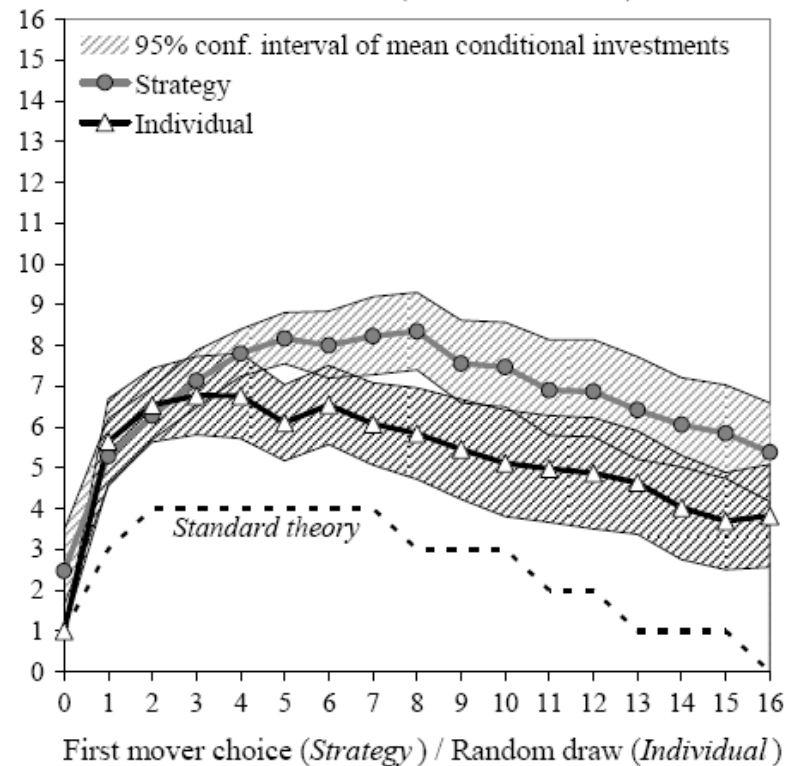
- **Rent-seeking and antisocial preferences** Herrmann & Orzen 2008
 - Conditional choices in strategy are well above those in individual and the Nash best-response

Figure 2: Average response schedules in *Strategy* and *Individual*

a. Part one



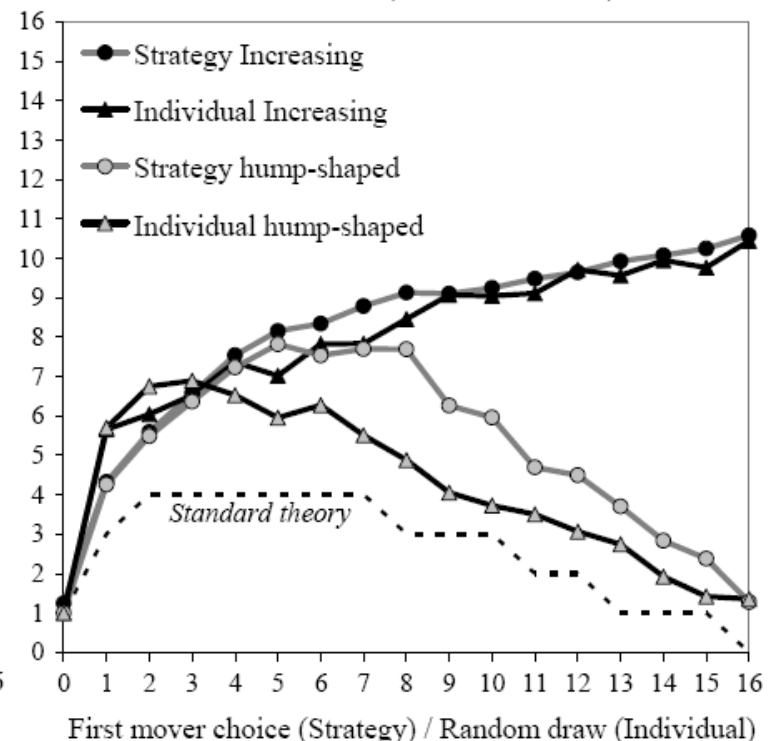
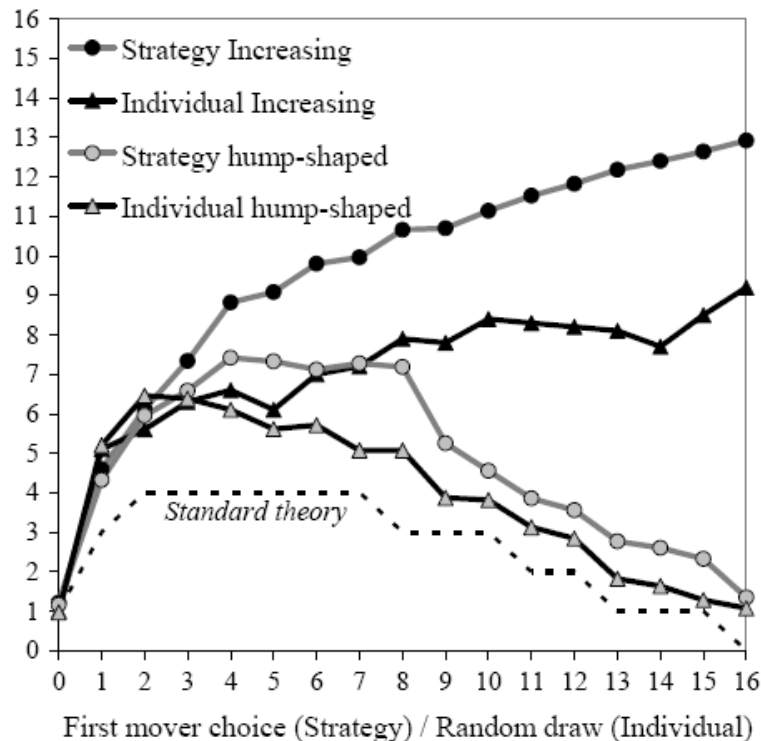
b. Part two (rounds 11-15)



Homo rivalis?

- **Rent-seeking and antisocial preferences** Herrmann & Orzen 2008
 - Types: most individuals can be classified as having increasing or hump-shaped conditional responses
 - Hump-shaped under strategy spend more than under individual

Figure 4: Average response schedules in *Strategy* and *Individual* by type
a. Part one
b. Part two (rounds 11-15)



Conflict games

- **Conflict game**

- Two parties compete for the endowment of the other party
- Both parties simultaneously invest in conflict c_i to try to win
- Each party wins with a probability proportional to its effort share

$$\text{Prob}(i \text{ wins}) = \frac{c_i}{c_i + c_j}$$

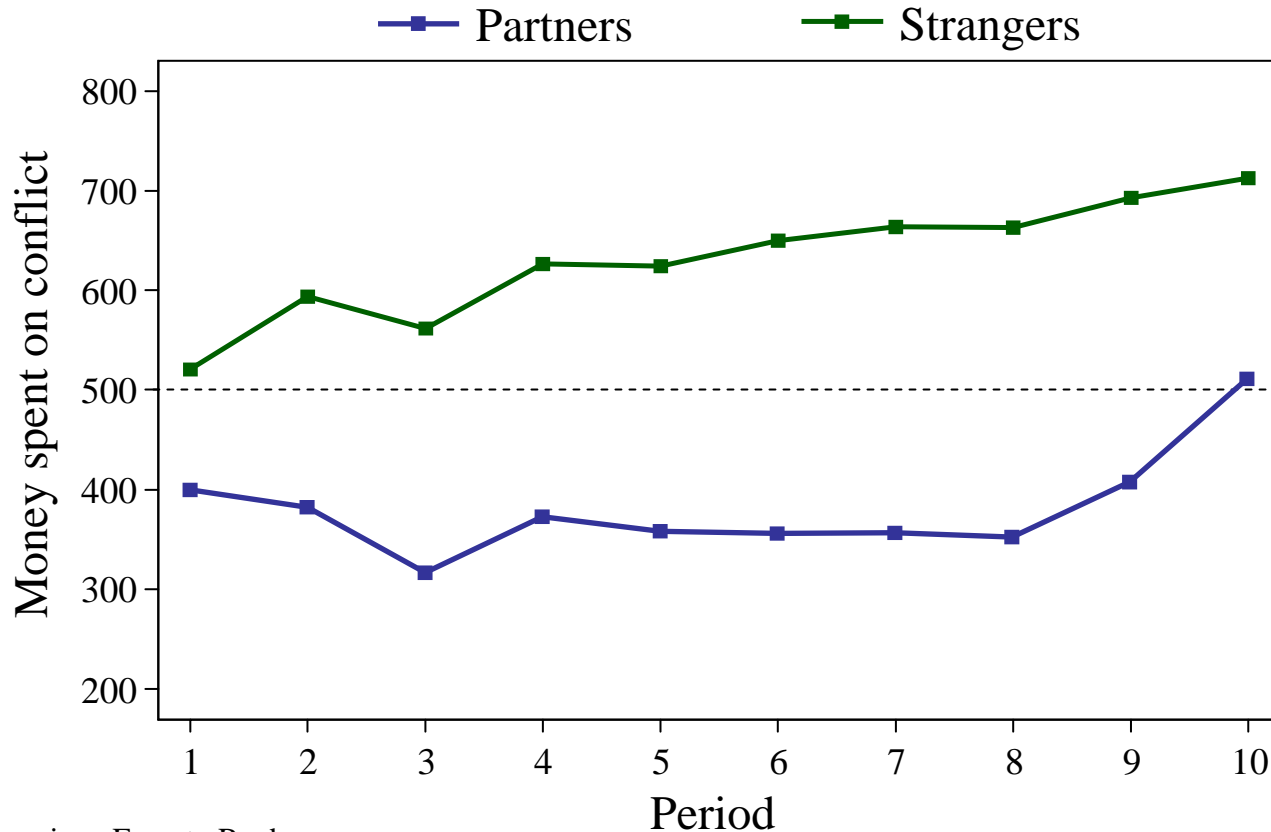
- The (symmetric) equilibrium effort is: $c_i = c_j = \frac{1}{4}(y_i + y_j)$
- The expected payoff is $\frac{1}{2}[y_i - \frac{1}{4}(y_i + y_j) + y_j - \frac{1}{4}(y_i + y_j)] = \frac{1}{4}(y_i + y_j)$

Conflict games

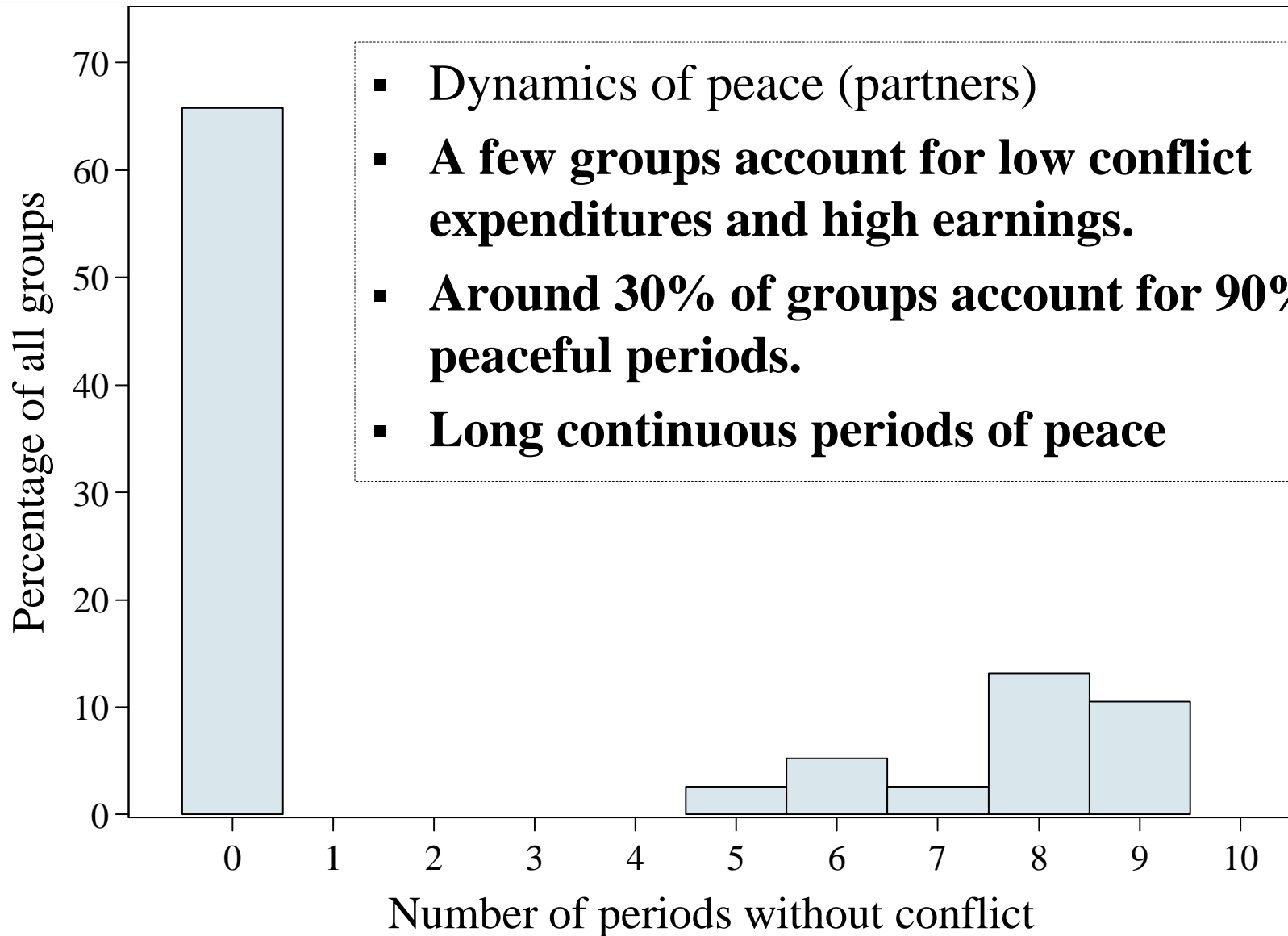
- **Repeated interaction and achieving peace** Lacomba et al. 2009
- Design
 - Conflict game with two individuals
 - Endowment per individual is 1000 tokens
 - Two sets of 10 periods: partners (part 1) strangers (part 2) matching
 - Two changes
 - Endogenize taking by the winner
 - Peace is possible: if $c_i = c_j = 0$ then there is no conflict

Conflict games

- **Repeated interaction and achieving peace** Lacomba et al. 2009
 - Overinvestment in conflict by strangers and underinvestment by partners
 - Average take rates are 98.1% by strangers and 81.1% by partners
 - Peace rates are 0.0% by strangers and 26.3% by partners

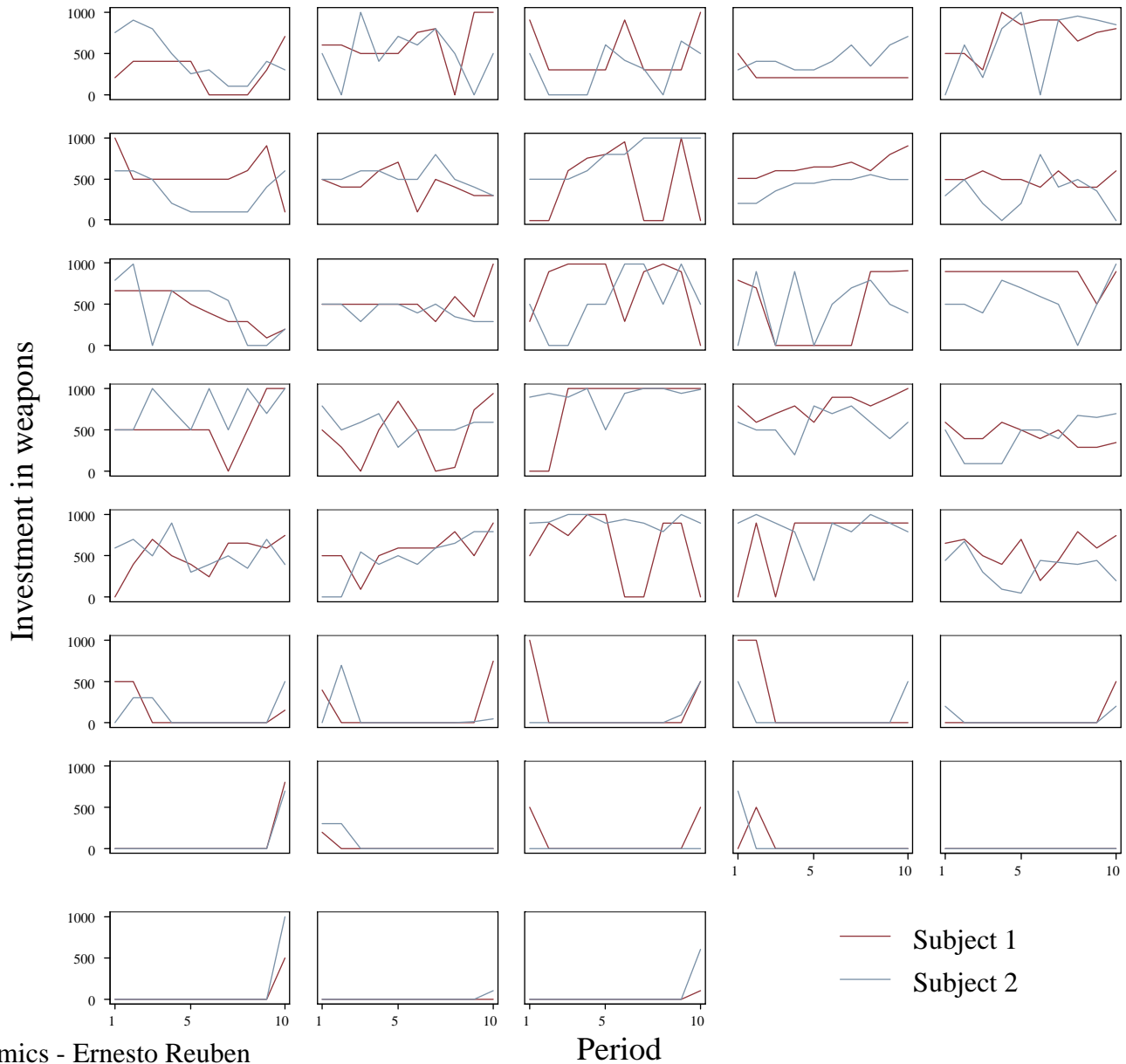


Dynamics of Peace



- Dynamics of peace (partners)
- **A few groups account for low conflict expenditures and high earnings.**
- **Around 30% of groups account for 90% of peaceful periods.**
- **Long continuous periods of peace**

Dynamics of Peace



Dynamics of Peace

- How do groups manage to coordinate?
 - 25% start their peaceful relationship from period 1.
- Peace after conflict (75% start fighting but achieve peace)
 - In *all* cases, the first period of peace is preceded by a period in which one subject does not fight.
 - Not fighting gives a 16% chance of peace
 - In addition to not fighting
 - Low take rate gives 14% higher chance of peace

The dark side of human behavior

- **The bright side of human behavior**
 - Intrinsically cooperative *Homo reciprocans*
 - Sacrifices own payoff for the benefits of others
- **The selfish side of human behavior**
 - Selfish and rational *Homo economicus*
 - Does not care about other's as long as they do not affect him
- **The dark side of human behavior**
 - Intrinsically spiteful *Homo rivalis*
 - Sacrifices own payoff to maximize his relative standing
 - These motives pose a problem for people's reputation. Compared to prosocial behavior, such behavior is keen to hide itself.

The dark side of human behavior

- **The emperor game** Abbink 200?
 - Two players, each with 10 tokens
 - Both players decide simultaneously whether or not to reduce the partner's income by 5 tokens (costs 1 token)
 - Hidden version: There is a 1/6 probability that the experimenter takes 5 tokens from the partner

