The good, the bad and the selfish: how individuals react in front of inequalities?

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How individuals react in front of inequalities?

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REGION REUNION

Related Literature (short review)

- **Lehmann (2001)**: Study Store owner's behaviour in a competition environment.
  → Subjects declare to be more satisfied when the sales were equal but low for both the stores than when their own sales were higher but the sales of the competitor were even greater.
- **Zizzo & Oswald (2002)**: Study interdependent preferences.
  → 62,5 % of individuals reduce others' payoff even by incurring a heavy and personal cost.

Objectives

- Observe individuals' reactions and strategies when facing inequalities of income.
  - When facing an inequality (whether advantageous/disadvantageous), how do individuals react?
  - Do people care about the difference between their situation and others' situation?
  - Can the inequality induce the individuals to make additional efforts in order to increase their situation (Negative action afterwards)?
  - Can the inequality induce individuals to destroy other's situation (Positive action afterwards) ?

- Study the intensity of individuals' reactions in front of inequalities.
  - Do people react identically to inequalities?
  - Do people exhibit higher efforts (whether positive or destructive) when the difference is at their advantage or at their disadvantage ?

- Does the absolute effect exerts an influence on individuals' behaviour?
  - Are individuals' actions similar in the case when the absolute difference is high than when the absolute difference is low?

Experimental Protocol

- *Strategy Method* (Selten).
- Subjects randomly and anonymously paired.
- Partner Design.
- Each player receives an initial endowment of 10 ECUs (Experimental Currency Unit).
- A subject can only face one kind of inequality (whether advantageous, equal or disadvantageous).
- The experiment consists in 3 steps.

Conversion rate : 10 ECUs = 1 €

First step :

All subjects receive information about :

- Their own endowment (conditional on the treatment).
- The endowment of the other member of the pair (opponent afterwards).
- The value of action C.
- The value of the multiplicative coefficient.

Second step :

- Each subject has to choose a specific action among 3 distinct actions:
  - **Action A**; consists in investing part of the initial capita in order to reduce the opponent's payoff.
  - **Action B**; consists in investing part of the initial capita in order to increase the subject's own payoff.
  - **Action C**; consists in receiving the highest amount possible but also increases the opponent's payoff (subject renounces to his initial capita).

Any integer amount invested in actions A or B is multiplied by a coefficient (which vary among treatments), identical for both actions. Any amount kept is not multiplied.

Third step :

- If choosing action A or B, subjects have to determine the value of the action.
- Subjects have to indicate the (integer) amount of the initial capita (10 ECU) they want to invest in their action.
- The value of the action is determined by the amount invested (≤10 ECU) multiplied by a coefficient.

Treatments

Advantageous Inequality	Equality	Disadvantageous Inequality
(60; 30) *+30* *3*	(30 ; 30) *3*	(30 ; 60) *-30* *3*
(80; 40) *+40* *4*	(40 ; 40) *4*	(40 ; 80) *-40* *4*
(120; 60) *+60* *6*	(60, 60) *6*	(60 ; 120) *-60* *6*
(160 ; 80) *+80* *8*	(80 ; 80) *8*	(80 ; 160) *-80* *8*
(240 ; 120) *+120* *12*	(120 ; 120) *12*	(120 ; 240) *-120* *12*

In red, the subject's payoff. In italics, absolute difference between the subject's payoff and the payoff of the opponent.

Global results

Sample = 30 subjects. Sessions organized at LEEM (Montpellier).

	Action A	Action B	Action C
Number of actions	46	236	153
Total proportions	10,58%	54,25%	35,17%

• Most actions undertaken are actions B (positive actions), i.e. individuals are willing to increase their own payoff without increasing/decreasing the difference between their position and others' position.

•Actions A only represent 10% of total decisions.

Distribution of actions among treatments

Action	A	B	C
Advantage	21,8%	33,47%	39,87%
Equal	21,8%	37,72%	23,53%
Disadvantage	56,4%	28,81%	36,6%

•Whereas actions A are little, worst-off players took up to three times more negative actions than well-off players and equal players.
•Worst-off and well-off players invested a significantly more important part of their initial capita in negative actions than equal players.

Individual(s) results : About disadvantaged players?

Use of actions concerning disadvantaged players :

	Opponent's action A	Opponent's action B	Opponent's action C
Action A	46,15%	30,77%	23,08%
Action B	39,70%	35,30%	25%
Action C	19,64%	32,14%	48,22%

Individual(s) results : About equal players?

Use of actions concerning equal players :

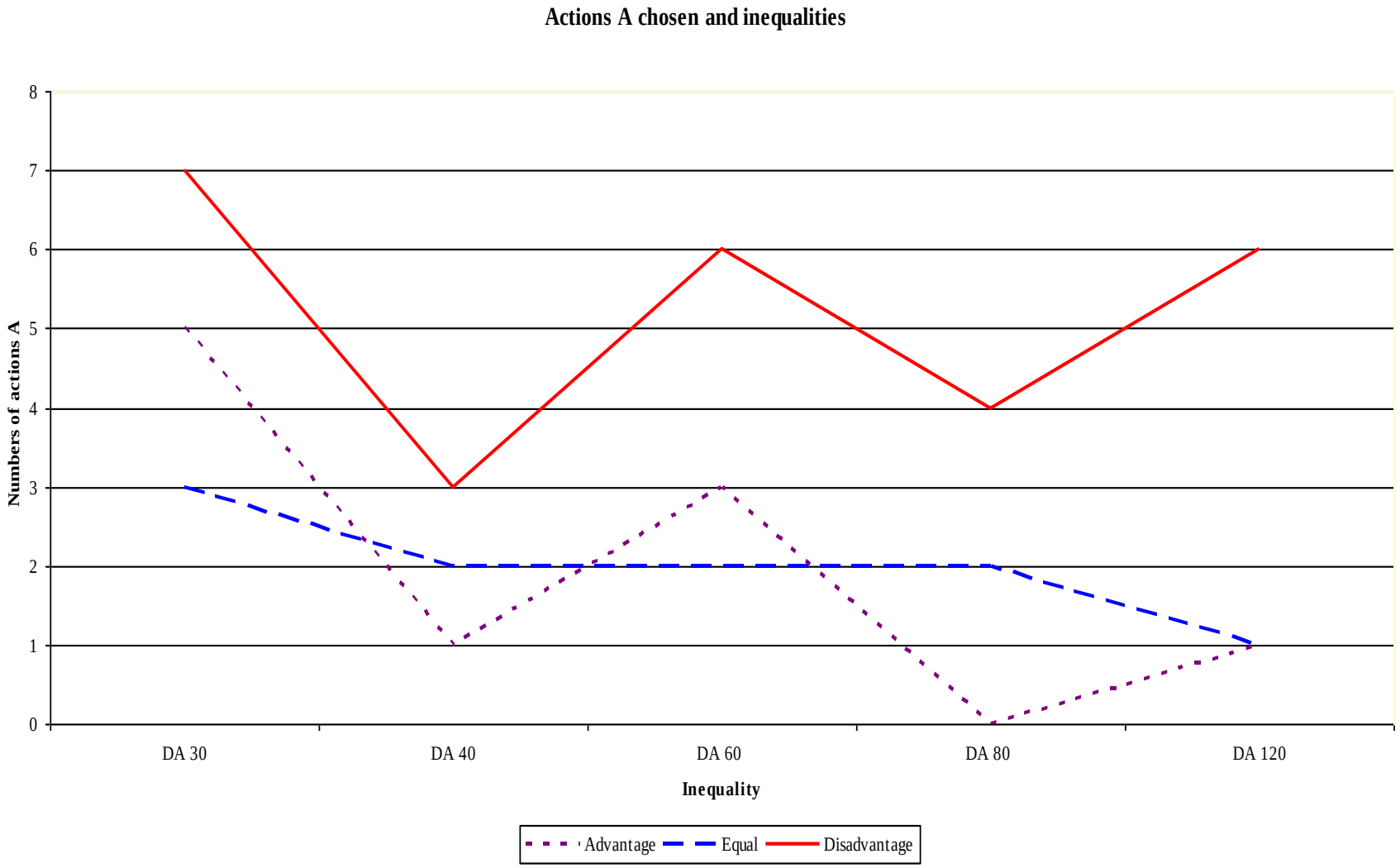
	Opponent's action A	Opponent's action B	Opponent's action C
Action A	50%	40%	10%
Action B	29,20%	31,40%	39,40%
Action C	38,88%	36,12%	25%

Individual(s) results : About advantaged players?

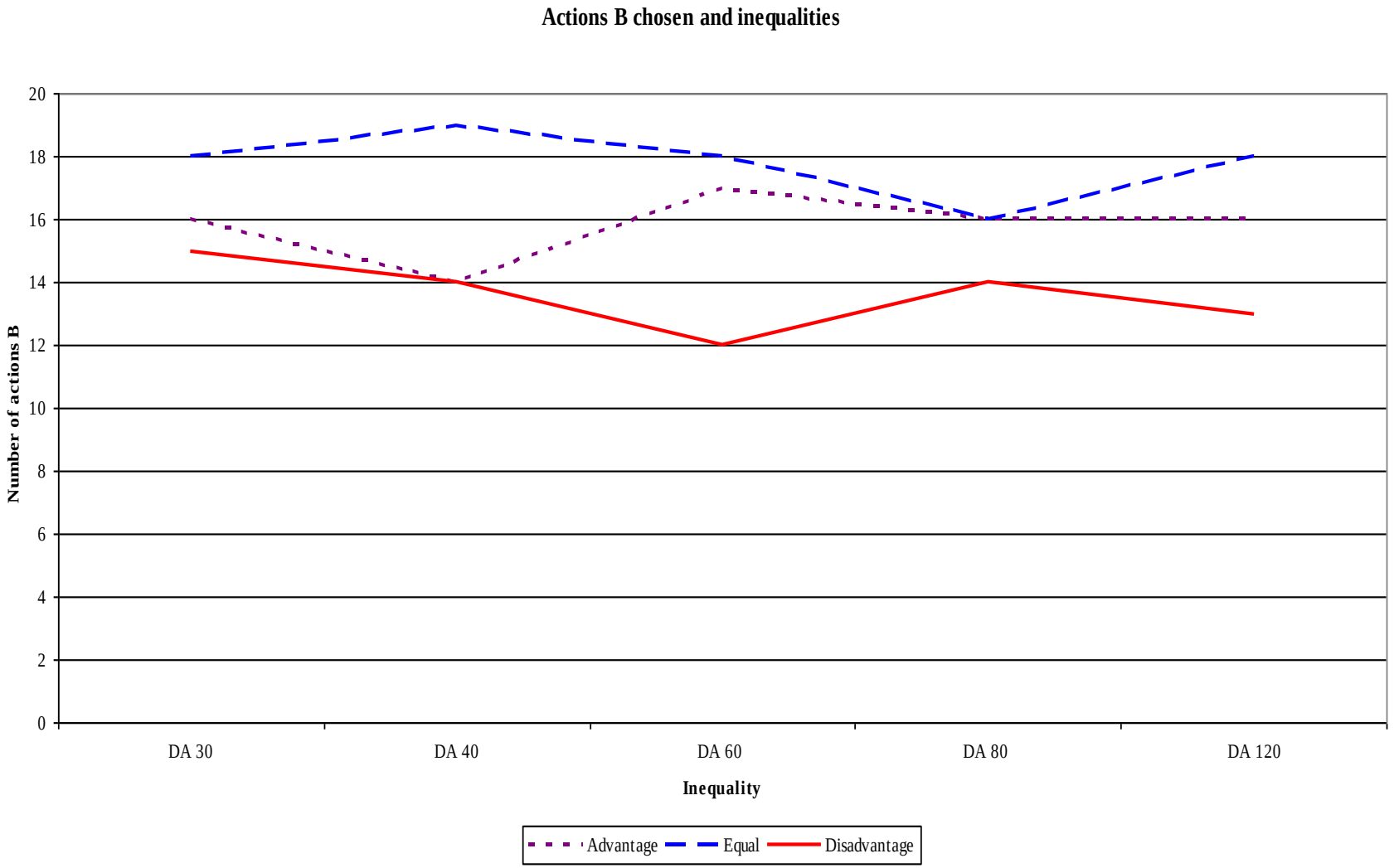
Use of actions concerning advantaged players

	Opponent's action A	Opponent's action B	Opponent's action C
Action A	20%	30%	50%
Action B	39,30%	36,70%	24%
Action C	27,87%	29,50%	42,70%

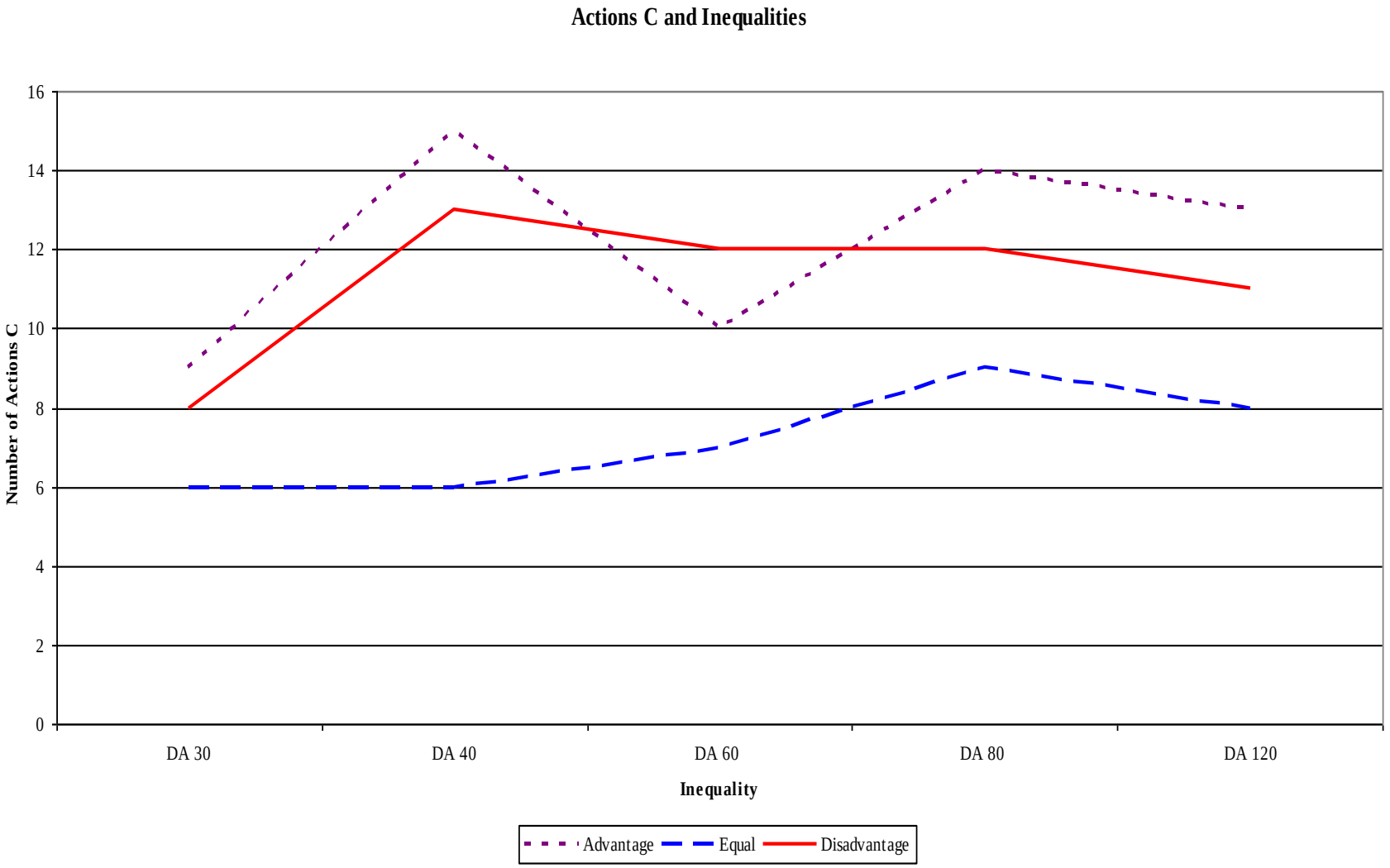
Graphic evolution of actions A chosen



Graphic evolution of actions B chosen



Graphic evolution of actions C chosen



Annex:
Mean effort by action A and by inequality

	Advantage	Equal	Disadvantage
DA 30	6	4,71	5,66
DA 40	5	3,66	7,5
DA 60	8,33	4,5	7,5
DA 80	-	4,75	6,5
DA 120	10	6,33	5
Mean	**7**	**4,92**	**6,5**

Annex:
Mean effort by action B and by inequality

	Advantage	Equal	Disadvantage
DA 30	7,93	9	9,66
DA 40	9,64	9,68	8,92
DA 60	9,29	10	9
DA 80	9,18	10	8,5
DA 120	10	10	9,6
Mean	**9,21**	**9,74**	**9,14**

The End

Thank you for you attention.

Special thanks to everyone who listened to me, advised me and reach (more or less) to put up with me…I will remember it!

Individuals' actions among treatments

	A	B	C
Advantage	10 ***6,67%***	79 ***52,67%***	61 ***40,67%***
Equal	10 ***7,41%***	89 ***65,93%***	36 ***26,67%***
Disadvantage	26 ***17,33%***	68 ***45,33%***	56 ***37,33%***

•Worst-off and well-off players invested a significantly more important part of their initial capita in negative actions than equal players.