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Intergroup cooperation and Collective sanctions

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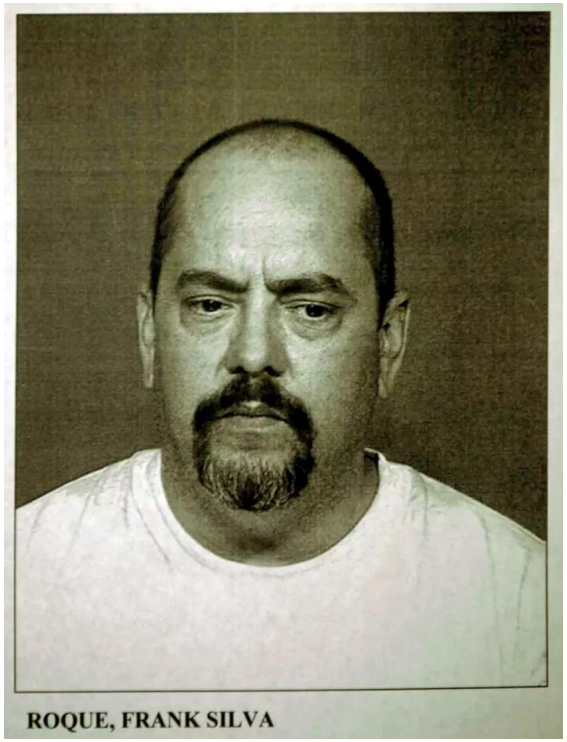
Venice

Outline

- Introduction
- Theory
- Experimental design
- Pilot results

Outgroup entitativity and punishment

Entitativity: “the perception of a group as pure entity (an entitative group), abstracted from its attendant individuals” *(Campbell 1958)*



Random vs. collective sanctions

"[i]n general, so long as groups are sufficiently solidary, group incentives will be the same whether collective sanctions are lumped on one member of the group chosen at random or spread evenly among all group members"

(Levinson 2003)

"Potential applicants to enter the US from disfavored classes would have to apply as a small group, called a trust circle. …if anyone within a trust circle became involved in hostile or criminal activities, every member of the trust group would summarily lose their privileges. Knowing this, potential migrants will only associate with others they know to be trustworthy, and would have incentives to expose others in the group who adopt bad behaviors post-entry."

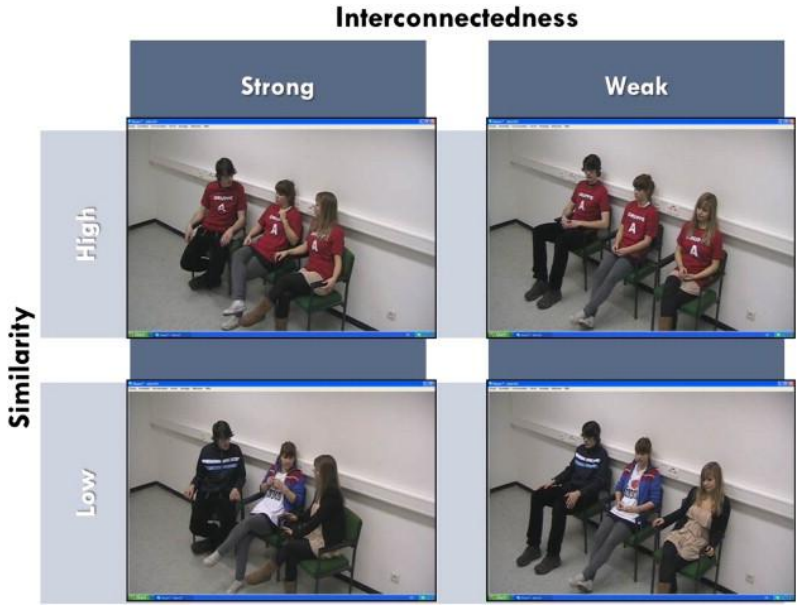
(Ginsburg and Simpser 2017)

Fatas, Morales, and Ubeda 2010 experiment: random sanctioning in PGG. Effective but perceived as unfair

Why random sanctioning? Two explanations

Functionalist: That increases intergroup cooperation. *(Fearon and Laitin 1996)*

Psychological: With the growth of entitativity (the degree to which we cannot distinguish the different members), the sense of justice of punishing the random member reaches the similar level as you punish the real perpetrator, but the costs are lower. *(Sjöström and Gollwitzer 2015)*



Research question

Can stereotyping and random punishment be beneficial for intergroup cooperation?

Two counterbalancing forces

- Outgroup entitativity increases the chance for in-group sanctioning: **cooperation grows**
- Outgroup entitativity produces a mixed signal to those outgroup cooperators who got punished randomly: **cooperation declines**

Hypotheses

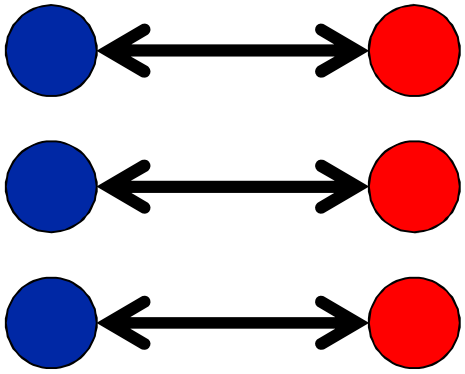
- **H1: Collective sanctions will result in higher intergroup cooperation (via H2a)**
- **H2a. Collective sanctions will increase ingroup punishment of non-cooperators**
- **H2b. Collective sanctions will decrease ingroup bias in punishment**

- **Ingroup bias in peer punishment:**
  - **+**: Black sheep effect (Shinada, Yamagishi, and Ohmura 2004)
  - **−**: Ingroup leniency effect: (Lieberman and Linke 2007).

Experimental design

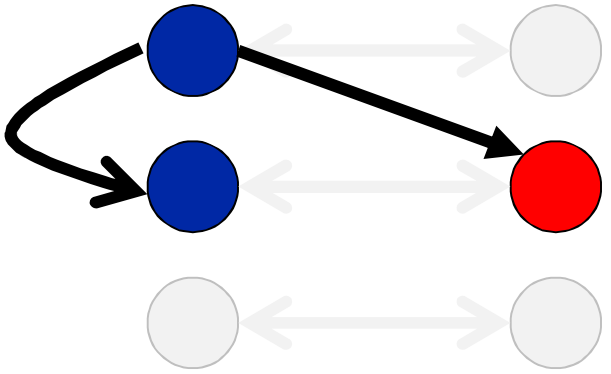
Baseline: Kandori social matching game for 2 groups (1992)
Fearon and Laitin (1996): collective sanctions of outgroup defectors will result in higher intergroup cooperation rate
Stoff (2006): Combination of collective sanctions of outgroup defectors and ingroup peer punishment will drive intergroup cooperation rate faster than just outside collective sanctions

Stage 1



Prisoner's Dilemma

Stage 2



Sanctioning

Experimental design

Stage 1: Continuous PD for randomly picked pair A-B (Capraro, Jordan, Rand 2014)

Stage 2: Third party punishment stage (Fehr and Fischbacher 2004 ,WP 106)

1. Randomly chosen pair A_j-B_j is shown
2. Outgroup punishment:
   - Treatment IS: B_j is punished
   - Target: CS: Randomly chosen B is punished
3. Ingroup: A_j is punished
4. N = 138(60 CS, 54 IS, 24 Baseline), Amazon Mechanical Turk, US participants only

	No punishment	**Combined**
IS	Baseline	IS_{OUT+IN}
CS		CS_{OUT+IN}

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Your endowment
You have **10 points** at the beginning of this round.

You belong to the group A.
You are matched with a random participant from group B.

Sending points to another participant
You can send from 0 to 10 points to the participant of group B, with whom you are matched in this round.

Receiving points from another participant
At the same time participant with whom you are matched **will also take the decision** about sending points to you.

Multiplication of points
Each point you send to another participant is multiplied by **2**. So if you send him or her 1 point, the participant will receive 2 points.
Each point another participant sends to you is multiplied by **2**. So if he or she sends you 1 point, you will receive 2 points.

Insert the amount of points you want to transfer to the other participant :

2

The other participant from group B will receive **4** points.

You will have **8** points left out of your initial endowment.

Next

Show instructions:

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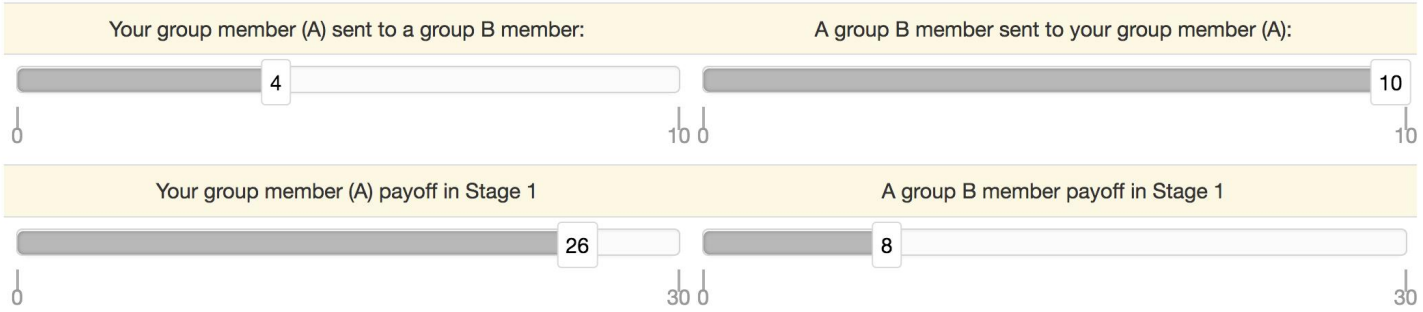
If you decide to send 1 deduction point to a member of the other group, the income of a **randomly** chosen member of the other group will be decreased by 3 points. If you decide to send 1 deduction point to a member of your own group, the income of the participant, **whose decision you see**, will be decreased by 3 points.



How many deduction points you send to your group member (A):

1

How many deduction points you send to a random group B member:

2

If you send deduction points to a Participant of another group (B), an income of a **random** participant from group B will be decreased.

Remember that deduction points you send, are multiplied by 3, i.e. if you send 2 deduction points, the income of the other participant will be decreased by 6 points

Next

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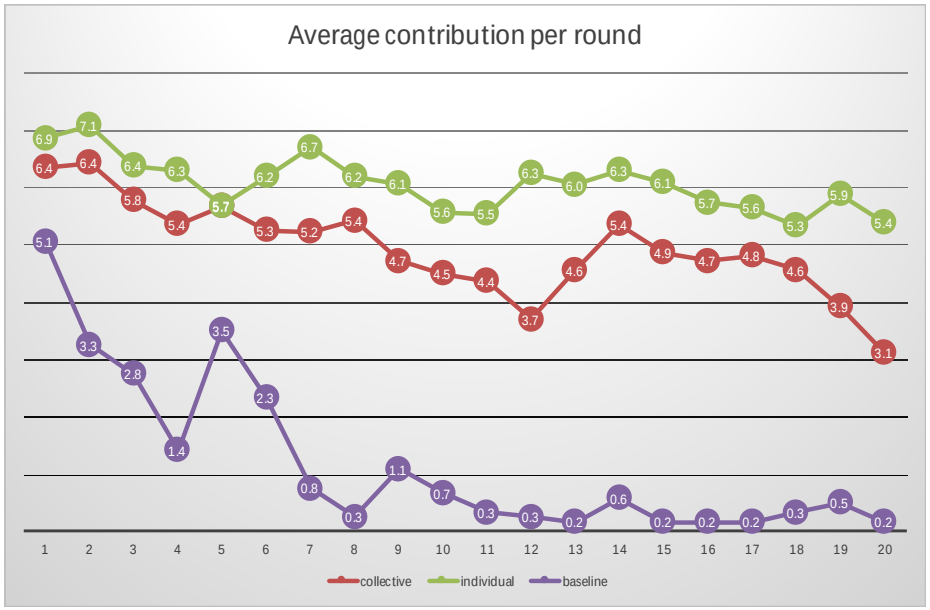
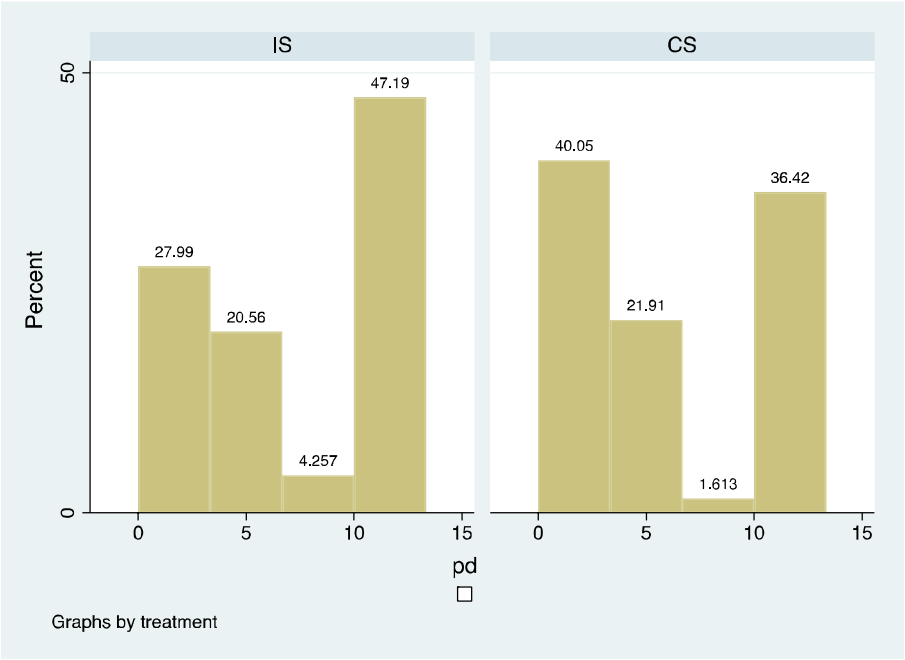
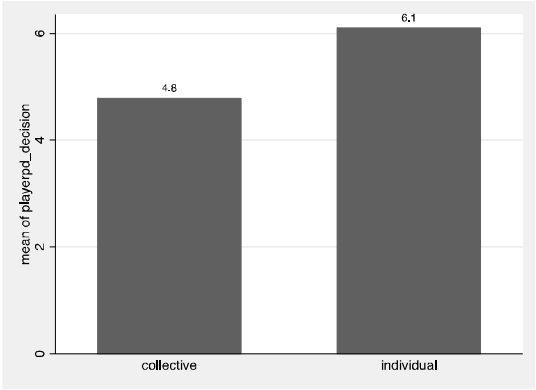
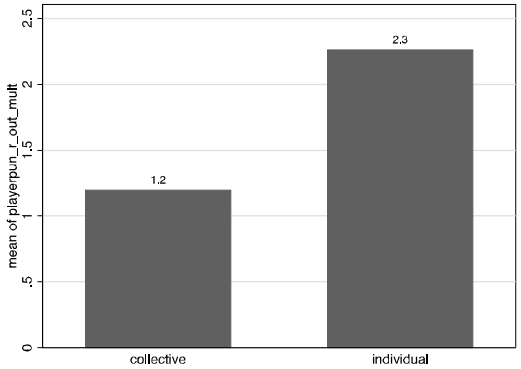
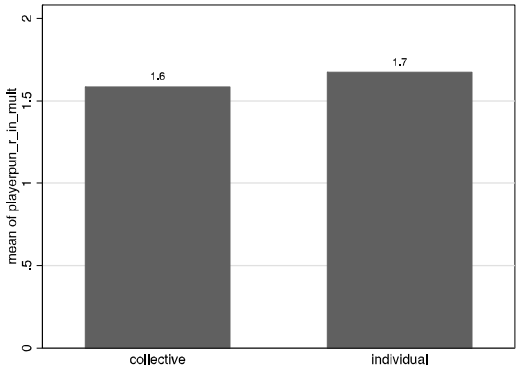

Average contribution per round
collective
individual
baseline


IS
CS
Percent
pd
Graphs by treatment
47.19
27.99
20.56
4.257
40.05
21.91
1.613
36.42







Treatment	N	Average contribution:	Average ingroup punishment received	Average outgroup punishment
Collective	60	4.8	1.8	1.2
Individual	54	6.1	1.7	2.3

Frequency of ingroup/outgroup punishment

Collective sanctions – ingroup punishment

PUNISHER	*Total*	*If partner cooperates*	*If partner defects*
DEFECTOR	4.5%	6.3%	3.8%
COOPERATOR	**28.2%**	34%	17.3%

Individual sanctions – ingroup punishment

PUNISHER	*Total*	*If partner cooperates*	*If partner defects*
DEFECTOR	17.1%	22.7%	10.5%
COOPERATOR	**34.6%**	40.9%	25%

Collective sanctions – outgroup punishment

PUNISHER	*Total*	*If partner cooperates*	*If partner defects*
DEFECTOR	7.3%	11.9%	3.8%
COOPERATOR	**17.5%**	21.2%	11.5%

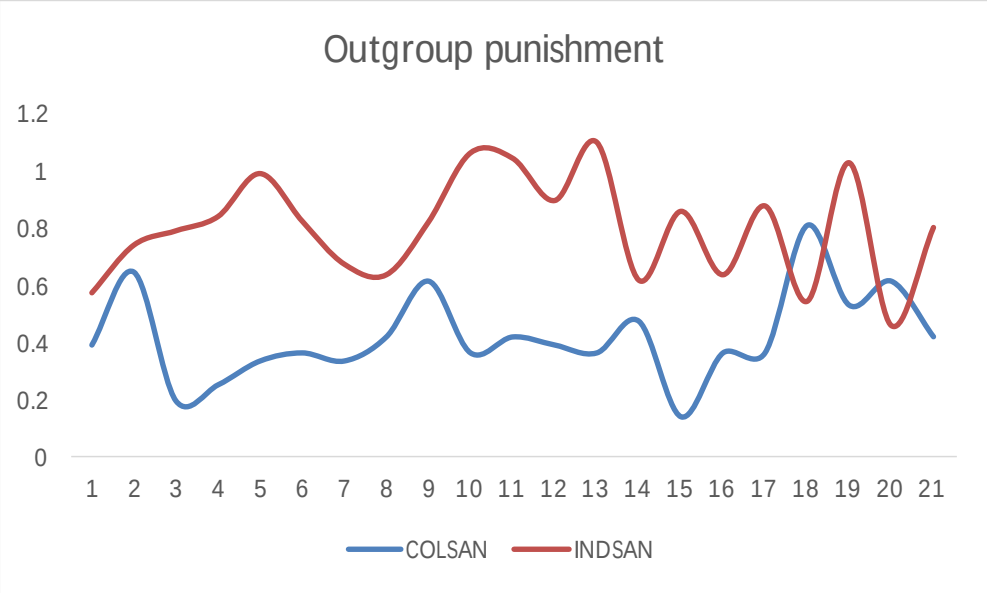
Individual sanctions – outgroup punishment

PUNISHER	*Total*	*If partner cooperates*	*If partner defects*
DEFECTOR	10.1%	10%	10.5%
COOPERATOR	**41.3%**	52.6%	26.4%

Black-sheep effect for collective sanctions
Ingroup lenience for individual sanctions
(both effects are stronger for cooperative partners)

all differences in frequency between IS and CS are significant (<0.01) in Fisher's exact test
all differences in punishment size between IS and cS are significant (<0.01) in Mann Whitney tests

PD Reaction on unfair punishment under IS/CS



	(1) PD - IS	(2) PD - CS
unfair_in $_{t-1}$	-0.714*	0.668
	(-2.06)	(1.29)
unfair_out $_{t-1}$	-0.368	-1.408**
	(-1.26)	(-3.24)
rec_p_in $_{t-1}$	0.151**	-0.0767
	(2.91)	(-1.12)
rec_p_out$_{t-1}$	0.0723	0.0165
	(1.85)	(0.21)
inpun$_{t-1}$	0.0720	-0.143
	(1.22)	(-1.80)
outpun$_{t-1}$	0.00733	0.183
	(0.15)	(1.76)
period	-0.0474**	-0.106***
	(-3.21)	(-5.58)
_cons	6.759***	5.929***
	(18.05)	(11.16)
N	1044	690

t statistics in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Conclusions

- **No**, collective (or random) sanctioning does not increase intergroup cooperation
- **No**, collective sanctioning does not increase ingroup peer punishment
- **Yes**, unfair punishment under collective sanctions reduce the cooperation level

Further development

Option not to cooperate (avoid the stage 1) with outgroup members

The selection effect – choosing whether to play with ingroup or outgroup

The minimum group paradigm – assigning group membership not randomly but through mechanism producing ingroup entitativity

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Thank you for your attention!