

Experimental Perspectives on Norm Conflicts

Venice International University

Fabian Winter*, Heiko Rauhut† and Dirk Helbing†
fwinter@sozio.uni-leipzig.de

*Institut für Soziologie
Universität Leipzig

†Professur für Soziologie, insbesondere Modellierung und Simulation
ETH Zürich

1st December 2008

Introduction

Social Norms can promote Cooperation

Social Norms can create Conflicts

An Experiment on Norm Conflicts

Experimental Design

Results

Future Research

Dynamic effects of conflicting norms

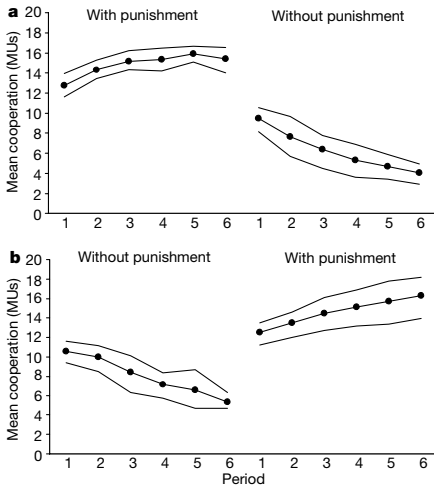
The problem of cooperation among rational egoists.

Social Sciences have made strong advances in explaining cooperation among rational egoists.

- ▶ Leviathan (Hobbes 1651)
- ▶ Shadow of the Future (Axelrod 1981;1984)
- ▶ Internalization of Social Norms (Parsons 1937, Coleman 1990, Fehr & Schmidt 1999)



Social Norms can promote Cooperation



Social Norms and Sanctions can promote Cooperation (Figure from Fehr & Gächter 2002)

Normative behavior := cooperation?

However: Is obedience to norms a guarantee for cooperation?

- ▶ *Omertà*: Norm within mafia to remain silent when questioned by the police.
- ▶ Norms of reduced work speed in work groups
- ▶ Dressing norms in youth groups
- ▶ Different norms for the allocation or distribution of scarce goods

Only little attention has been paid to conflicts *caused* or *enforced* by differing norms.

Closer looks on differing fairness norms

There are *two* major conceptions of fairness in economic and social psychological literature. Both share a common idea:

$$U(x) = x - \text{stress}(\text{unfair distribution})$$

- ▶ *Theories of equality* (Fehr & Schmidt 1999, Bolton & Ockenfels 2000)

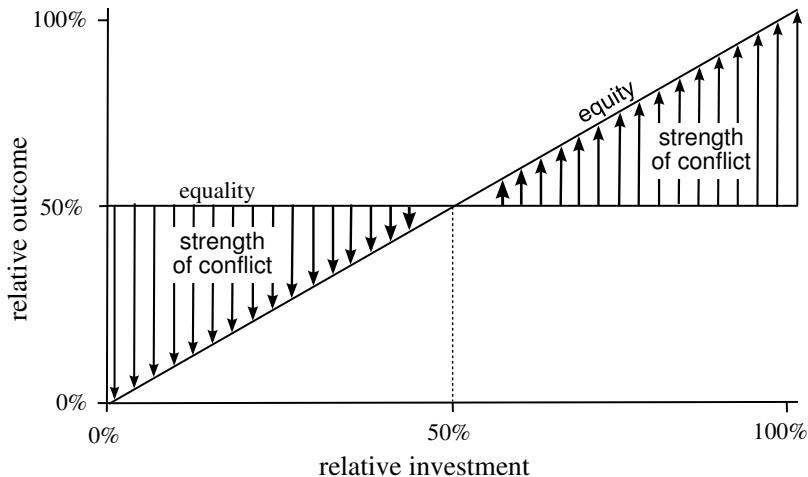
$$\text{my outcome} = \text{your outcome}$$

- ▶ *Theories of equity* (Adams 1965, Selten 1978, Gantner et al. 2003, formalization in Winter 2008)

$$\frac{\text{my outcome}}{\text{my investment}} = \frac{\text{your outcome}}{\text{your investment}}$$



Social Norms can create Conflicts



An Experiment on Norm Conflicts

Research questions:

- ▶ *external validity*: What happens, if subjects *earn* money by investing own efforts and not as mere presents?
- ▶ Do investments matter?
- ▶ Which fairness norms are applied?
- ▶ What happens if people with different fairness norms interact?

Design

Recruitment:

- ▶ Participants received a 7 pages long Wikipedia article about the Westminster Palace *five days in advance*
- ▶ Participants were informed that their chance to earn money also depends on how well they prepare this text

In the lab:

- ▶ 20 question quiz on the Westminster Palace
- ▶ 1 Euro for each question

Experimental design

- ▶ 92 undergraduate students participated in 5 sessions
- ▶ two participants bargained over the money they earned in the quiz.
- ▶ we linked Selten's „Strategie Methode“ (1967) with the Ultimatum Game

The Ultimatum Game

Rules

- ▶ Proposer is asked to divide a pie
- ▶ Responder can decide whether to accept or to reject
- ▶ If responder rejects, both receive nothing, otherwise the pie is shared according to the proposal

Results

- ▶ The median of offers is between 40% and 50%
- ▶ There are virtually no offers below 20%
- ▶ Offers below 20% are frequently rejected

Bildschirm 9 2

Sie haben 12 € im Quiz verdient.

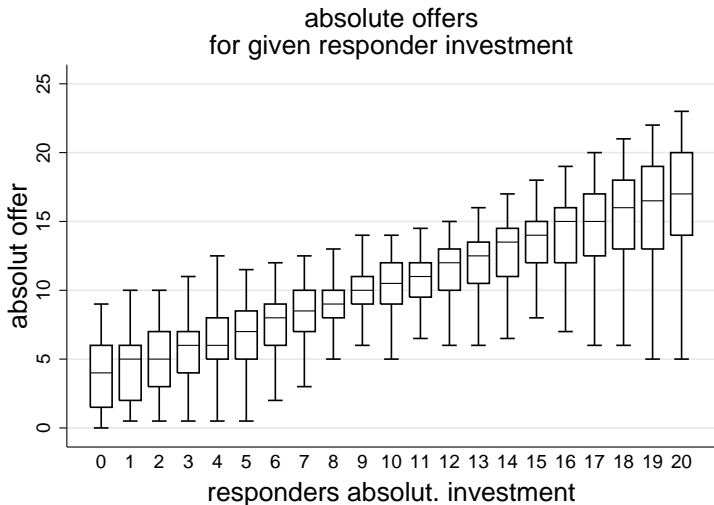
Sie haben gemeinsam verdient:	Wenn ich in der Rolle des Anbieters bin, dann werde ich folgendes Angebot machen:	Sie haben gemeinsam verdient:	Wenn ich in der Rolle des Anbieters bin, dann werde ich folgendes Angebot machen:	Sie haben gemeinsam verdient:	Wenn ich in der Rolle des Anbieters bin, dann werde ich folgendes Angebot machen:
12	<input type="text"/>	19	<input type="text"/>	26	<input type="text"/>
13	<input type="text"/>	20	<input type="text"/>	27	<input type="text"/>
14	<input type="text"/>	21	<input type="text"/>	28	<input type="text"/>
15	<input type="text"/>	22	<input type="text"/>	29	<input type="text"/>
16	<input type="text"/>	23	<input type="text"/>	30	<input type="text"/>
17	<input type="text"/>	24	<input type="text"/>	31	<input type="text"/>
18	<input type="text"/>	25	<input type="text"/>	32	<input type="text"/>

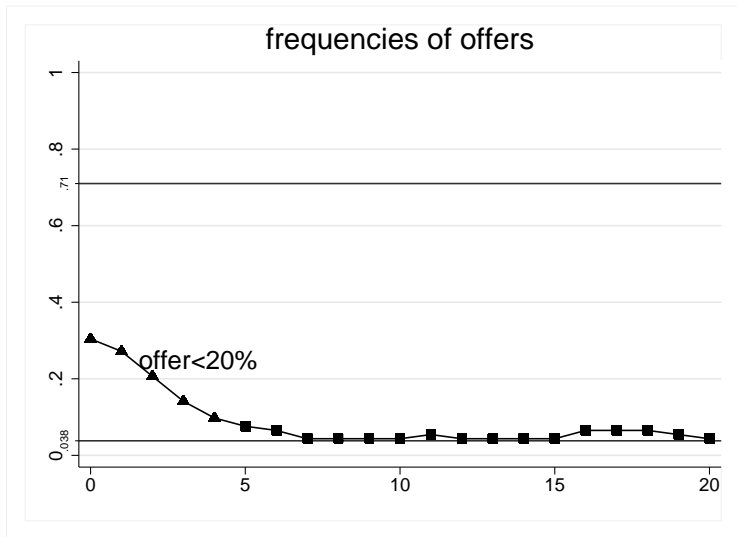
Hilfe

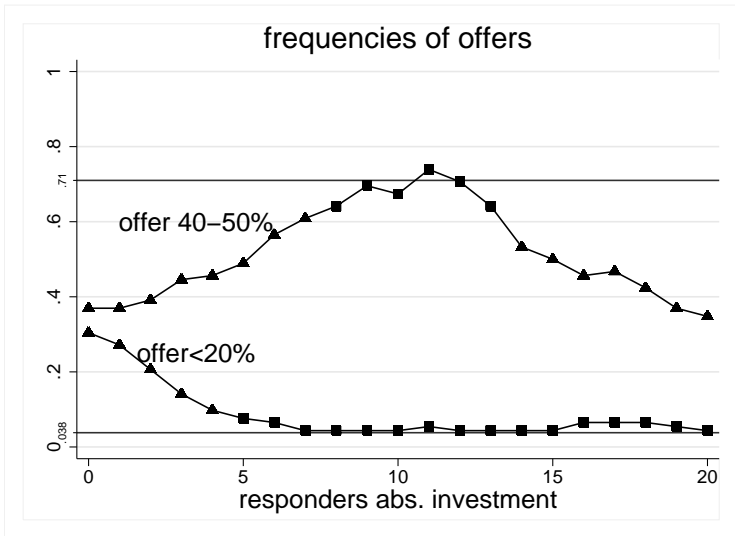
Bitte tragen Sie jetzt Ihre Angebote ein, für den Fall, dass Sie in der Rolle des **Anbieters** sind.
50 Cent-Schritte sind möglich.

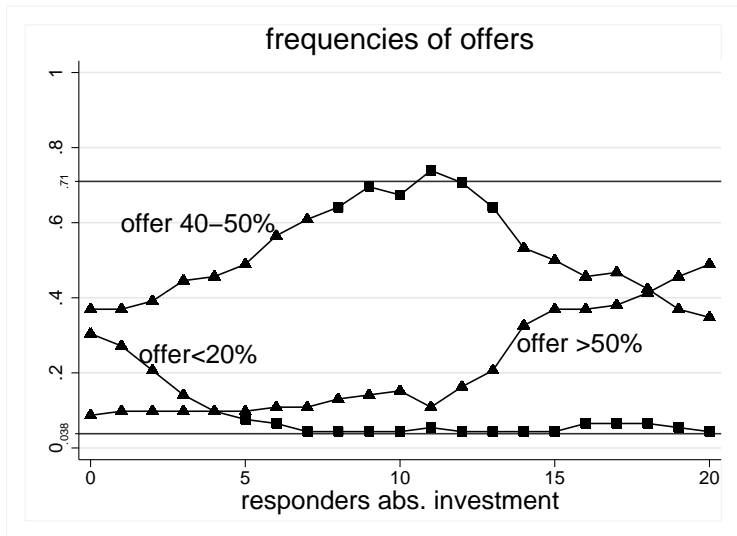
- ▶ the game was one-shot, stranger matching, anonymous (2 separated PC-labs) and with incomplete information.
- ▶ roles were assigned *at random* after filling out the tables.
- ▶ computer compared the proposers offer for the „real cake“ with the responders acceptance threshold

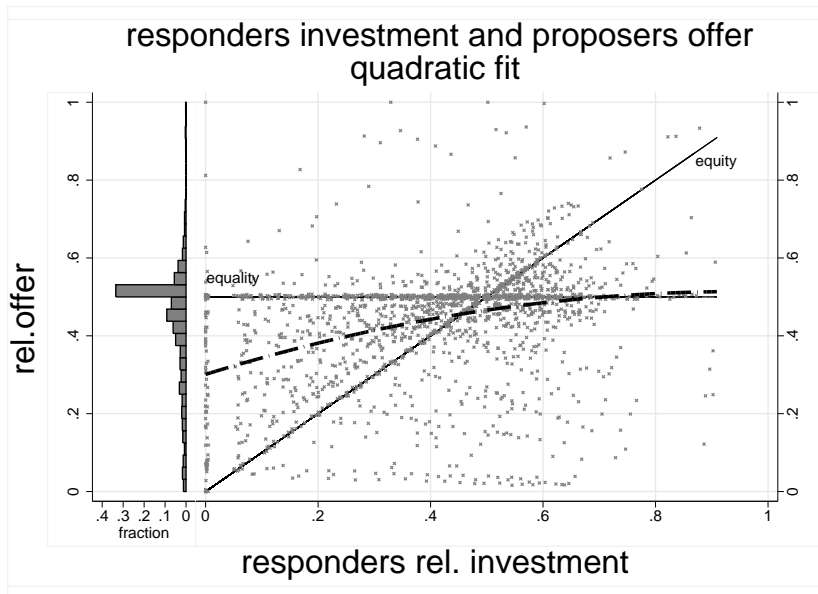
Results



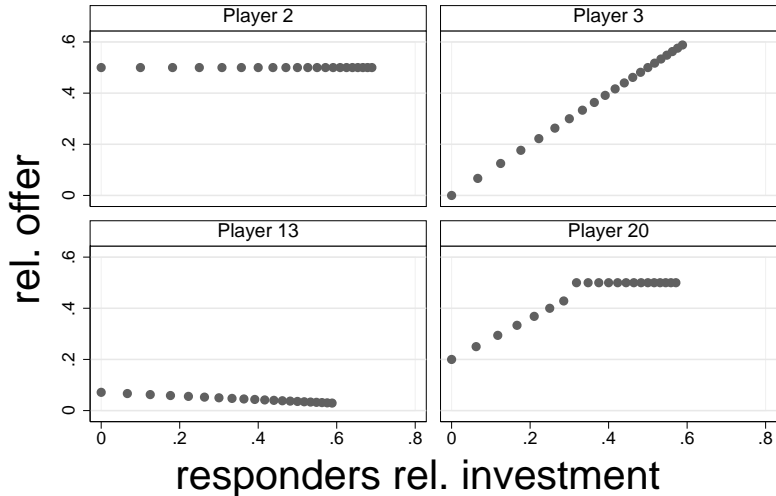




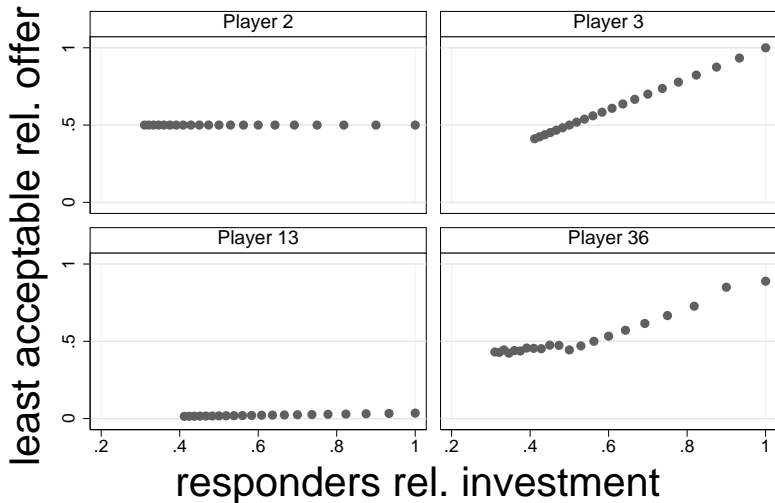




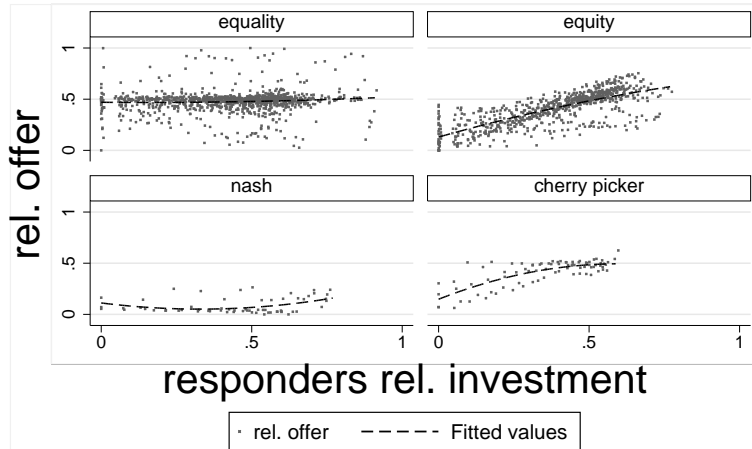
some proposer types

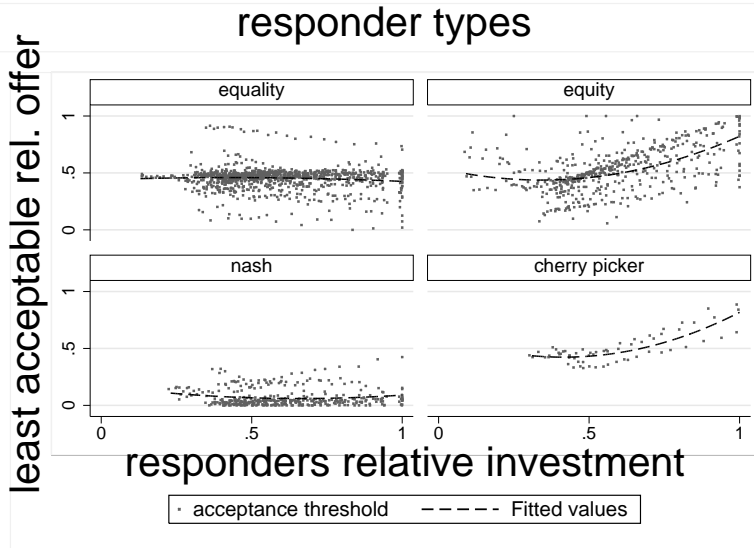


some responder types



proposer types





		RESPONDER				
		equity	equality	cherry	nash	total
PROPOSER	equity	16 (8,21)	12 (9,29)	2 (5,50)	5 (8,20)	36 (8,19)
	equality	7 (5,64)	35 (7,05)	- (-)	8 (13,56)	49 (8,06)
	cherry	- (-)	1 (0,00)	1 (14,00)	2 (7,00)	3 (7,00)
	nash	- (-)	- (-)	- (-)	3 (7,00)	3 (7,00)
	total	23 (7,43)	47 (7,62)	3 (8,33)	18 (10,25)	91 (8,12)

mean final income in brackets

- ▶ Subjects earned 12.30 Euro in the quiz
- ▶ Subjects earned 8.12 Euro in the experiment
- ▶ 45 interactions, 28 cooperation, 17 conflict

Conclusions

- ▶ investments matter, they create new focal points
- ▶ people apply differing fairness norms
- ▶ people might be motivated by „meta norms“
- ▶ meta norms: „follow *a* norm.“
- ▶ does not specify *which* norm to follow.

Future Research

Some questions have been puzzling me for some time

- ▶ How can we observe the endogenous emergence of social norms in the lab?
- ▶ Which effects can different concepts of justice have on social structure?
- ▶ Do different norms give rise to different social structures?
- ▶ Do different social structures give rise to different social norms?
- ▶ Do these meta norms have an effect on norm selection with increasing opportunity costs (low cost hypothesis)?

Dynamic effects of conflicting norms

Proposed experimental design:
radical simplification of the „Strategy Ultimatum Game“

- ▶ individual productivity function
- ▶ iterated ultimatum game with investments and fixed roles
- ▶ first phase: investment choice how much to invest to a common project.
- ▶ two players produce the pie by their investments
- ▶ Ultimatum Game with complete information
- ▶ 100 periods
- ▶ stranger treatment and partner treatment



Thank you very much,
I would be happy to answer your questions