

Intro

This week we will return to the issue of preferences

In particular, we'll look at the role of other-regarding preferences in determining behaviour.

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The traditional game-theoretic approach to modelling human behavior is to assume self-interest:

- ▶ Economic agents maximise their individual payoffs

Intro

This assumption had been questioned in some strands of literature

It was only when experimental economics research accumulated substantial evidence against the assumption of self-interest that theorists began working on alternative representations of behaviour.

The plan for today is to review some representative evidence and briefly overview some theories of other-regarding behaviour.

We'll focus on theories of *inequality aversion* and *reciprocity*.

Exhibit 1: The Ultimatum Game

Guth et al. (1982) presented the first experimental test of the ultimatum game.

2 players: Proposer and Responder

Proposer has a pie of size 1. She must propose a split of the pie between the two players $(1 - s, s)$

The Responder may:

- ▶ accept (in which case the split is executed)
- ▶ reject (in which case both players get zero)

Exhibit 1: The Ultimatum Game

The experiment was actually a test of a refinement of Nash equilibrium: the subgame-perfect Nash Equilibrium.

This game has as many Nash equilibria as there are possible splits of the pie.

In each of them, the Responder accepts whatever offer is put to him

- ▶ If the split is $(1, 0)$, the Responder is indifferent between accepting and rejecting
- ▶ That still means the Proposer offering $(1, 0)$ and the Responder accepting is a NE

Exhibit 1: The Ultimatum Game

The subgame-perfect Nash equilibrium is found by solving the game backwards:

- ▶ The Proposer (correctly) anticipates the Responder will accept any offer
- ▶ Therefore, she offers the lowest possible offer that guarantees an acceptance.
- ▶ This means the SPNE is $(1 - \varepsilon, \varepsilon)$

The evidence they found (and the evidence in subsequent studies) was not consistent with SPNE

TABLE I
PERCENTAGE OF OFFERS BELOW 0.2 AND BETWEEN 0.4 AND 0.5
IN THE ULTIMATUM GAME

Study (Payment method)	Number of observations	Stake size (country)	Percentage of offers with $s < 0.2$	Percentage of offers with $0.4 \leq s \leq 0.5$
Cameron [1995] (All Ss Paid)	35	Rp 40.000 (Indonesia)	0	66
Cameron [1995] (all Ss paid)	37	Rp 200.000 (Indonesia)	5	57
FHSS [1994] (all Ss paid)	67	\$5 and \$10 (USA)	0	82
Güth et al. [1982] (all Ss paid)	79	DM 4–10 (Germany)	8	61
Hoffman, McCabe, and Smith [1996] (All Ss paid)	24	\$10 (USA)	0	83
Hoffman, McCabe, and Smith [1996] (all Ss paid)	27	\$100 (USA)	4	74
Kahneman, Knetsch, and Thaler [1986] (20% of Ss paid)	115	\$10 (USA)	?	75 ^a
Roth et al. [1991] (random pay- ment method)	116 ^b	approx. \$10 (USA, Slovenia, Israel, Japan)	3	70
Slonim and Roth [1997] (random pay- ment method)	240 ^c	SK 60 (Slovakia)	0.4 ^d	75
Slonim and Roth [1997] (random pay- ment method)	250 ^c	SK 1500 (Slovakia)	8 ^d	69
Aggregate result of all studies ^e	875		3.8	71

Exhibit 2: The Voluntary Contributions Game (VCM)

Another widely-known game in the experimental economics literature is the VCM game.

This game is an example of a social dilemma, which is a game in which the incentives of the group run contrary to the interests of the individual(s)

Applications of this game (or variants like the Common Pool Resource game) range from fisheries, to taxpaying, and including several team production environments

Exhibit 2: The Voluntary Contributions Game (VCM)

There are $n \geq 2$ players, each of whom has an endowment y .

All players must decide (simultaneously) how much of their endowment to invest in the public good and how much to keep

Let the contribution level of player i be given by the following equation:

$$x_i(g_1, \dots, g_n) = y - g_i + a \sum_{j=1}^n g_j, 1/n < a < 1$$

Exhibit 2: The Voluntary Contributions Game (VCM)

$$x_i(g_1, \dots, g_n) = y - g_i + a \sum_{j=1}^n g_j, 1/n < a < 1$$

This game has a unique Nash equilibrium in pure strategies:

- ▶ Every player contributes nothing to the public good (i.e. $g_i = 0$)

To see why, compare the marginal cost of contribution (-1) to the marginal benefit of contribution ($a < 1$)

Exhibit 2: The Voluntary Contributions Game (VCM)

The typical pattern of behaviour in the VCM game is that initially, subjects make positive contributions

However, as the experiment progresses, contributions decline,

Exhibit 2: The Voluntary Contributions Game (VCM)

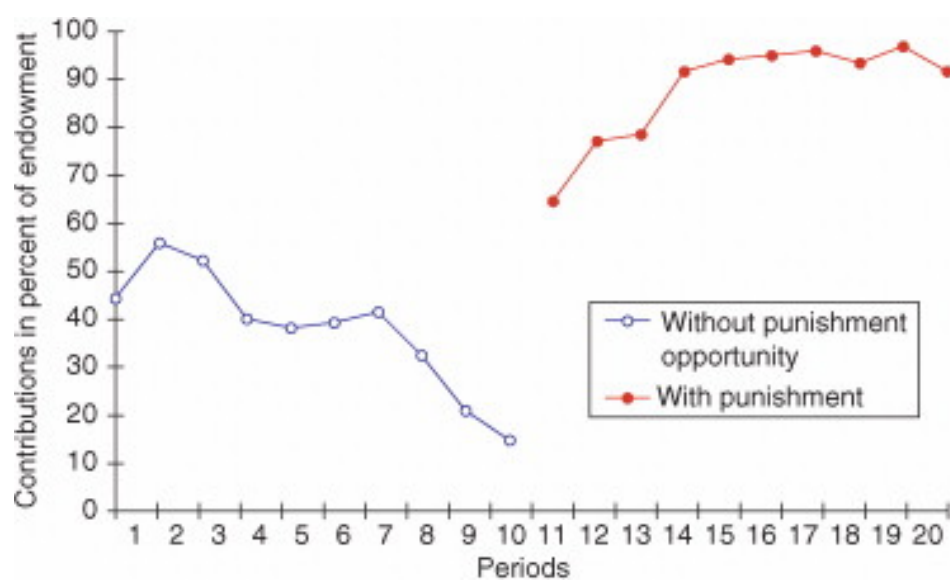


Exhibit 2: The VCM with punishment

To understand what mechanisms can drive cooperation in the real world, Ostrom et al. (1992) and Fehr and Gaechter (2000) looked at the effect of costly punishment mechanisms

In other words, players in the VCM could, after observing contributions, pay to punish free-riders.

This creates a second stage of the VCM game, in which a new type of action, punishment, is available to players

$$x_i(g_1, \dots, g_n) = y - g_i + a \sum_{j=1}^n g_j - \sum_{j=1}^n p_{ji} - c \sum_{j=1}^n p_{ij}$$

Exhibit 2: The VCM with punishment

$$x_i(g_1, \dots, g_n) = y - g_i + a \sum_{j=1}^n g_j - \sum_{j=1}^n p_{ji} - c \sum_{j=1}^n p_{ij}$$

From the standard self-interest point of view, the second stage is irrelevant.

Since punishment is costly and only affects someone else's payoffs, a self-interested agent would not want to spend any money punishing free-riders.

Exhibit 2: The VCM with punishment

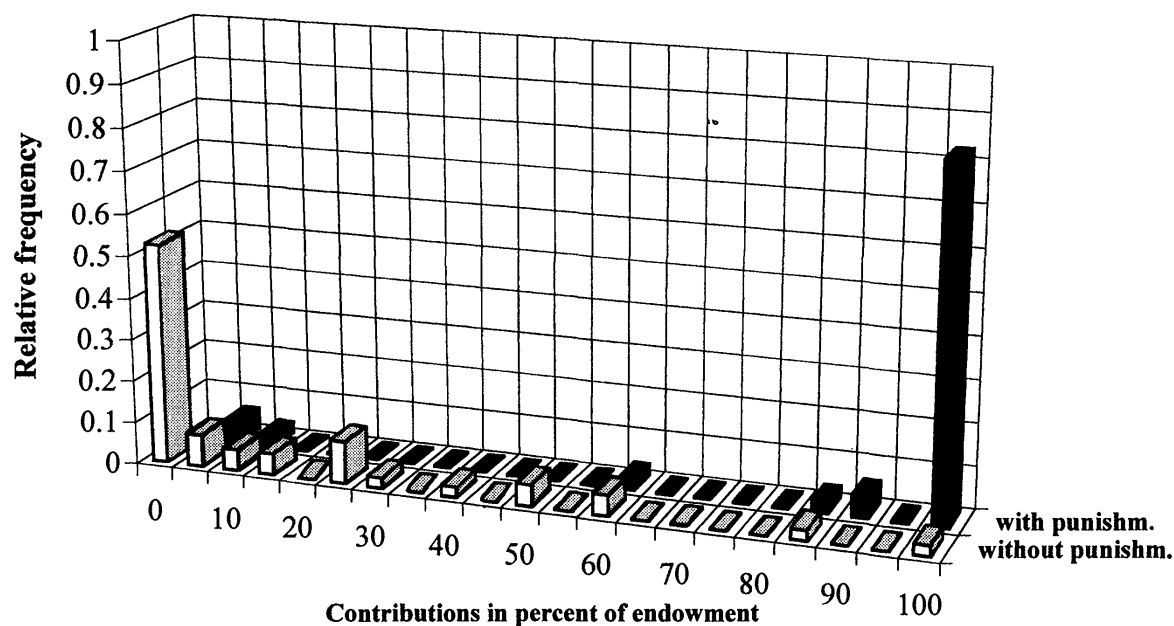


FIGURE II
Distribution of Contributions in the Final Period of the Public Good Game with Punishment (*Source: Fehr and Gächter [1996]*)

Exhibit 3: The Trust Game

The last game to be considered is the trust game (Berg, Dickhaut and McCabe (1995)). It is very similar to the Gift-Exchange game

There are 2 players: the Trustor/Principal/Firm and the Trustee/Agent/Worker

The Principal is endowed with a pie of size 10. He can send any part of the endowment (s) to the Agent

Whatever the Agent receives is tripled, and the Agent can then choose to send any part of it back.

Exhibit 3: The Trust Game

The SPNE of this game is that the Principal will send nothing to the Agent,

It anticipates (correctly) that the Agent will never send any amount back (as the game will be over)

This game captures elements of social dilemmas (the pie is maximised when the Principal sends all his endowment to the Agent)

It also measures trust, since in order for there to be any added-value, the Principal must engage in an exchange without the possibility of controlling what the Agent does.

Exhibit 3: The Trust Game

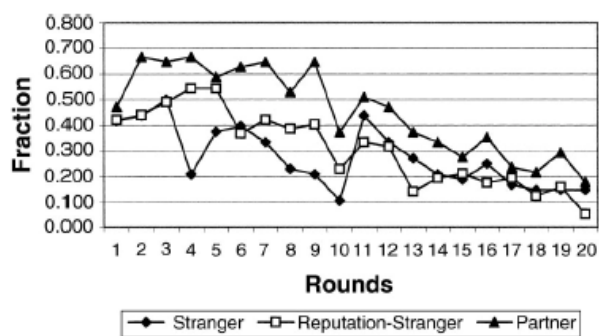


FIGURE 2. TRUST RATES

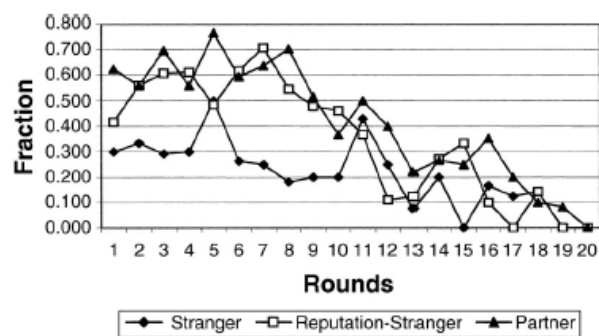


FIGURE 3. TRUSTWORTHINESS RATES

Theory #1: Inequality Aversion (Fehr and Schmidt, 1999)

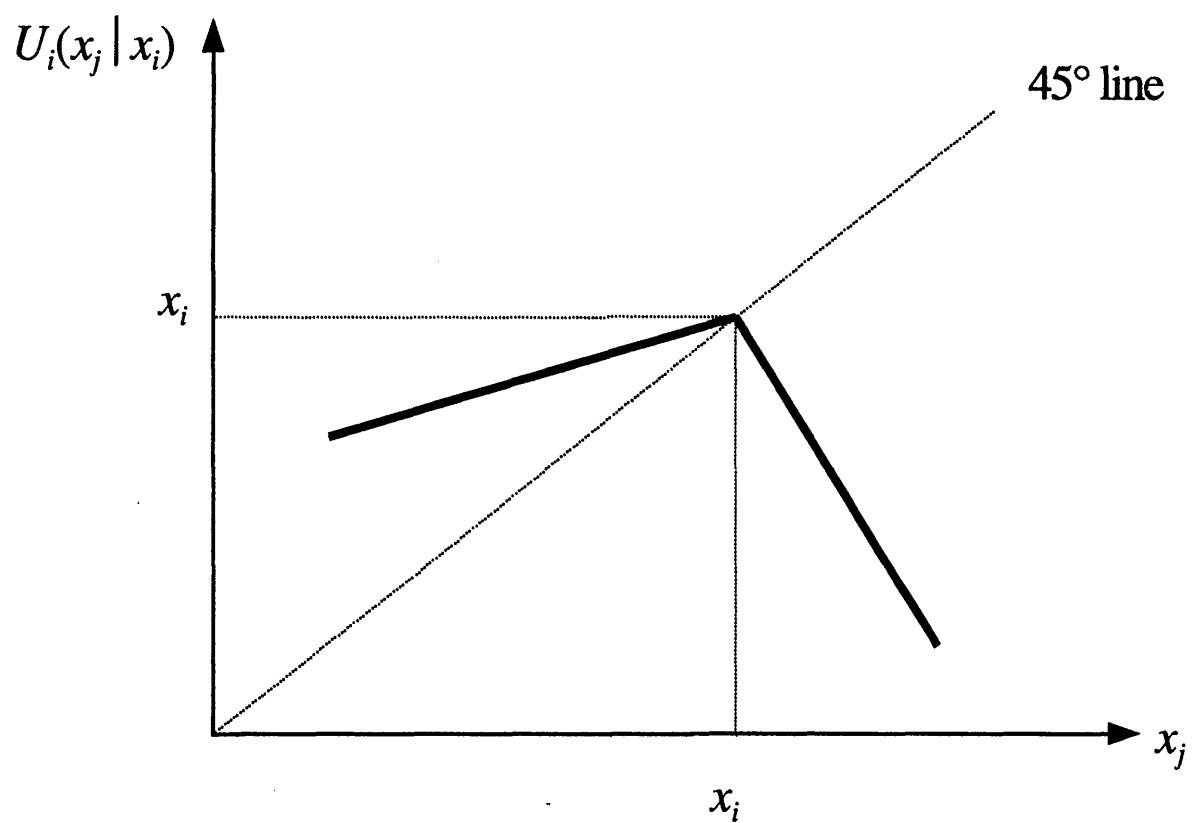
Fehr and Schmidt (1999) proposed the most widely used theory of inequality aversion.

It assumes players gain disutility from earning more or less than other people.

$$U(\pi_i, \pi_j) = \pi_i - \frac{\alpha_i}{n-1} \sum_{j \neq i} \max\{(\pi_j - \pi_i), 0\} - \frac{\beta_i}{n-1} \sum_{j \neq i} \max\{(\pi_i - \pi_j), 0\}$$

$$0 \leq \beta_i < 1, \text{ and } \beta_i < \alpha_i$$

Fehr-Schmidt Preferences



Theory #2: Inequality Aversion and Reciprocity (Charness and Rabin (2002))

Charness and Rabin (2002) consider a much more general model of behaviour which allows for a variety of different types of preferences, as well as inequality aversion.

In the two-player case, their utility function is given by:

$$U_B(\pi_A, \pi_B) = (\rho r + \sigma s + \theta q)\pi_A + (1 - \rho r - \sigma s - \theta q)\pi_B$$

where:

- ▶ $r = 1$ if $\pi_B > \pi_A$, and $r = 0$ otherwise;
- ▶ $s = 1$ if $\pi_B < \pi_A$, and $r = 0$ otherwise;
- ▶ $q = -1$ if A has misbehaved, and $q = 0$ otherwise.

Charness-Rabin Preferences

The parameters ρ , σ , and θ capture different aspects of social preferences.

ρ and σ capture distributional preferences,

If we want to capture competitive preferences (consistent with status-seeking individuals), we would assume $\sigma \leq \rho \leq 0$

- ▶ Such a player would want to minimise payoff differences when being the poorest of the two...
- ▶ ... and maximise those differences when being the richest!

Charness-Rabin Preferences

This model also allows us to capture “standard” inequality aversion by assuming $\sigma < 0 < \rho < 1$

- ▶ Such a player likes money...
- ▶ ... but also likes payoff equality.
- ▶ He would take away money from A when A is the richest

However, such a model would not be able to explain why you would give money to someone already earning more than you.

- ▶ For instance picking A over B:
- ▶ $A = (100, 200)$ and $B = (100, 4000)$

Charness-Rabin Preferences

By allowing $0 < \sigma \leq \rho \leq 1$, we allow for a more general case of preferences

In this case subjects:

- ▶ Always prefer more money for themselves and the other person
- ▶ But they are more in favour of getting more money for themselves when they are the poorest

This is close to the concept of maximin preferences (i.e. the desire to help the poorest in a distribution of income).

Some Data

TABLE I
GAME-BY-GAME RESULTS

Two-person dictator games		Left	Right
Berk29 (26)	B chooses (400,400) vs. (750,400)	.31	.69
Barc2 (48)	B chooses (400,400) vs. (750,375)	.52	.48
Berk17 (32)	B chooses (400,400) vs. (750,375)	.50	.50
Berk23 (36)	B chooses (800,200) vs. (0,0)	1.00	.00
Barc8 (36)	B chooses (300,600) vs. (700,500)	.67	.33
Berk15 (22)	B chooses (200,700) vs. (600,600)	.27	.73
Berk26 (32)	B chooses (0,800) vs. (400,400)	.78	.22

Some Data

TABLE 1—ALLOCATIONS (IN DM), PREDICTIONS BY ERC AND F&S, MAXIMIN AND EFFICIENT ALLOCATIONS, AND DECISIONS FOR THE TAXATION GAMES

Allocation	Treatment											
	F			E			F _x			E _x		
	A	B	C	A	B	C	A	B	C	A	B	C
Person 1	8.2	8.8	9.4	9.4	8.4	7.4	17	18	19	21	17	13
Person 2	5.6	5.6	5.6	6.4	6.4	6.4	10	10	10	12	12	12
Person 3	4.6	3.6	2.6	2.6	3.2	3.8	9	5	1	3	4	5
Total	18.4	18	17.6	18.4	18	17.6	36	33	30	36	33	30
Average 1, 3	6.4	6.2	6	6	5.8	5.6	13	11.5	10	12	10.5	9
Relative 2	0.304	0.311	0.318	0.348	0.356	0.364	0.278	0.303	0.333	0.333	0.364	0.4
Prediction												
Efficiency	A			A			A			A		
ERC			C	A					C	A		
F&S	A					C	A					C
Maximin	A					C	A					C
Choices												
Count	57	7	4	27	16	25	26	2	2	12	5	13
Percentage	83.8	10.3	5.9	39.7	23.5	36.7	86.7	6.7	6.7	40	16.7	43.3

What does the data say?

The data seems to argue that distributional preferences are a bit more complicated than just inequality aversion.

It may be that different setups “prime” people to exhibit different concerns

In some circumstances, like taxation decisions, we care about the welfare of the poorest

In other circumstances, like (unionised or not) wage negotiations, we may only care about disparity in salaries (e.g. CEO compensation debate).

Charness-Rabin Preferences

On particular type of behaviour these distributional preferences cannot explain very well is Pareto-damaging behaviour, like rejecting offers in the Ultimatum game.

Models of reciprocity propose that people are conditional cooperators:

- ▶ we are willing to reward those who treat us kindly/fairly,
- ▶ we are also willing to punish those who treat us unkindly.

Charness-Rabin Preferences

All reciprocity models need to define what 'kindly' means

In most cases this relies on assumptions about people's σ and ρ , and about people's beliefs about others' σ and ρ .

In Charness and Rabin's model θ captures reciprocity.

Whenever Player A violates the behaviour prescribed by social preferences, Player B lowers both σ and ρ by θ .

Reciprocity Preferences

These preferences may explain why individuals reject seemingly unfair offers

However, they are notoriously difficult to pin down, as they rely on beliefs about *intentions* of players

- ▶ i.e. the same action by one player could be perceived as kind or unkind depending on how much people care about payoff differences, which in turn may lead to very different predictions.

Non-financial incentives in the workplace: Gift-Exchange

One of the idiosyncrasies of labour markets is that, unlike other goods, prices are rigid downwards

- ▶ When faced with adverse conditions, managers would rather layoff some workers than cut wages

Bewley (1999) interviewed managers, who explained cutting wages would destroy workers' morale

Non-financial incentives in the workplace: Gift-Exchange

Akerlof (1982) proposed a novel explanation for this type of behaviour: firms pay higher than equilibrium wages as a gift to workers

Workers then reciprocate the gift by exerting higher-than-equilibrium effort.

Non-financial incentives in the workplace: Gift-Exchange

Fehr et al. (1993) put Akerlof's gift-exchange hypothesis to the test in the laboratory.

- ▶ In their experiment, they used undergraduate students at the University of Zurich as subjects
- ▶ Subjects were given the role of *firms* or *workers*

Their experiment consisted of two stages

Fehr et al. (1993)'s Gift-Exchange experiment

The first stage was a one-sided oral auction with firms as bidders

- ▶ For a maximum of three minutes, firms would call out wages offers in multiples of 5
- ▶ Offers were conveyed to workers in another room.
- ▶ Any worker could accept any offer
- ▶ Once a worker accepted an offer, that pair of subjects was removed from the auction
- ▶ Once all people were matched or 3 minutes had passed, the stage was over

Fehr et al. (1993)'s Gift-Exchange experiment

In the second stage, workers had to select the quality of the output they produced.

- ▶ This quality was not contracted upon
- ▶ The higher the quality, the bigger the profit for the firm...
- ▶ ... but also the higher the cost for the worker.

Payoffs

Firm i 's payoffs were equal to $\Pi_i = (v - p_i)e_i$

- ▶ v is a constant and p_i is the agreed price

Worker j 's payoffs were equal to $u_j = p_j - c - m(e_j)$

- ▶ c is a constant, p_j is the agreed price and $m(e_j)$ is given by the table below

e	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1
$m(e)$	0	1	2	4	6	8	10	12	15	18

Equilibrium

To figure out the equilibrium of this market, we must solve the second stage sub-game first.

This corresponds to determining the effort choice workers make, for *any* agreed price.

e	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1
$m(e)$	0	1	2	4	6	8	10	12	15	18

A profit maximising worker will select the action that minimises $m(e)$, which is $e = 0.1$

Equilibrium

Rational, profit-maximising firms should anticipate this and offer the lowest possible price.

Given that $v = 126$, $c = 26$ in the experiment, the lowest price workers would accept was 30.

Hypotheses

Hypothesis 1: The effort level is increasing in the wage.

Hypothesis 2: Average wages in the experiment are greater than the market-clearing wage.

Hypothesis 3: The average effort per period is above 0.

Results: The Wage-Effort Relationship

Wage	Average observed effort level	Median observed effort level
30-44	0.17	0.1
45-59	0.18	0.2
60-74	0.34	0.4
75-89	0.45	0.4
99-110	0.52	0.5

Results: The Wage-Effort Relationship

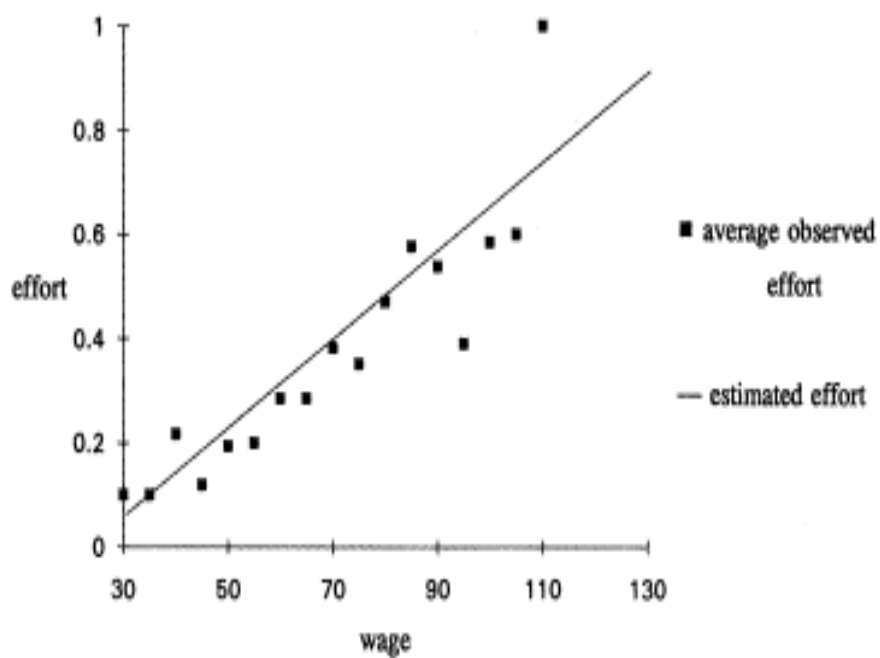


FIGURE I
The Wage-Effort Relation

Results: The Wage-Effort Relationship

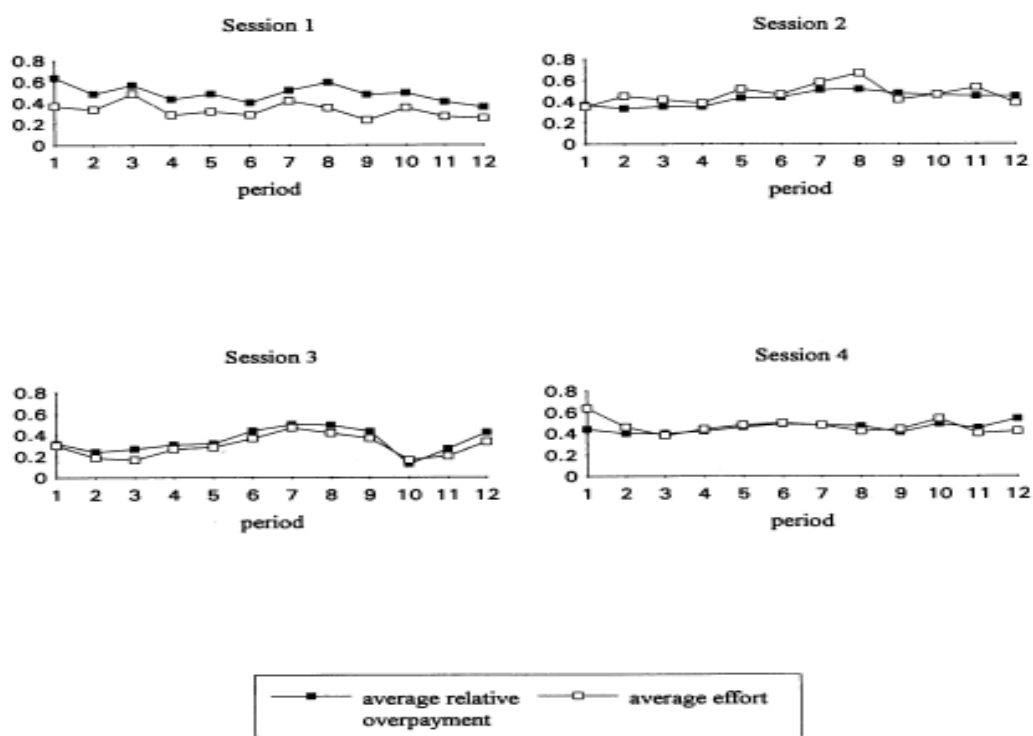


FIGURE II
Average Relative Overpayment and Average Effort per Period

Results: The Wage-Effort Relationship

TABLE III
RESULTS OF REGRESSION (5): $e = \alpha + \beta p + \mu$

	N	α	$t(\alpha)$	β	$t(\beta)$	R^2
S1-4	276	-0.18	-3.1	0.0078	9.6	0.25
SL1-4	23	-0.6	-2.2	0.0129	3.5	0.34
S1	72	-0.27	-2.8	0.0076	6.2	0.34
S2	72	-0.34	-2.3	0.0111	5.4	0.28
S3	72	-0.14	-1.6	0.0066	4.9	0.25
S4	60	-0.38	-1.7	0.0113	3.9	0.19

S#: Session#.

SL1-4: Results of the estimation with the last period data of all sessions.

N : number of observations.

$t()$: t -value of the relevant coefficients.

R^2 : Adjusted coefficient of determination.

The gift-exchange game literature

This experiment spawned a very large literature trying to understand the determinants of gift-exchange in labor markets and later on the very behavioural foundations of reciprocity.

- ▶ Those interested are referred to the long survey by Charness and Kuhn (2011) in the Handbook of Labor Economics

Would this result extend to *real* labour markets?

Gift-exchange game in the field

Gneezy and List (2006) designed a gift exchange experiment in a *naturalistic* setting.

- ▶ The task: to computerise the catalogue of a small library

Fliers were posted around the university that promised participants *one-time* work that would last six hours and would pay \$12 per hour (or \$72).

Participants **did not know** they were taking part in an experiment.

Gift-exchange game in the field

Baseline condition: As explained above

Treatment condition: Upon beginning the task, participants were told they would be paid \$20 per hour instead of the \$12 that had been promised.

Gift-exchange game in the field

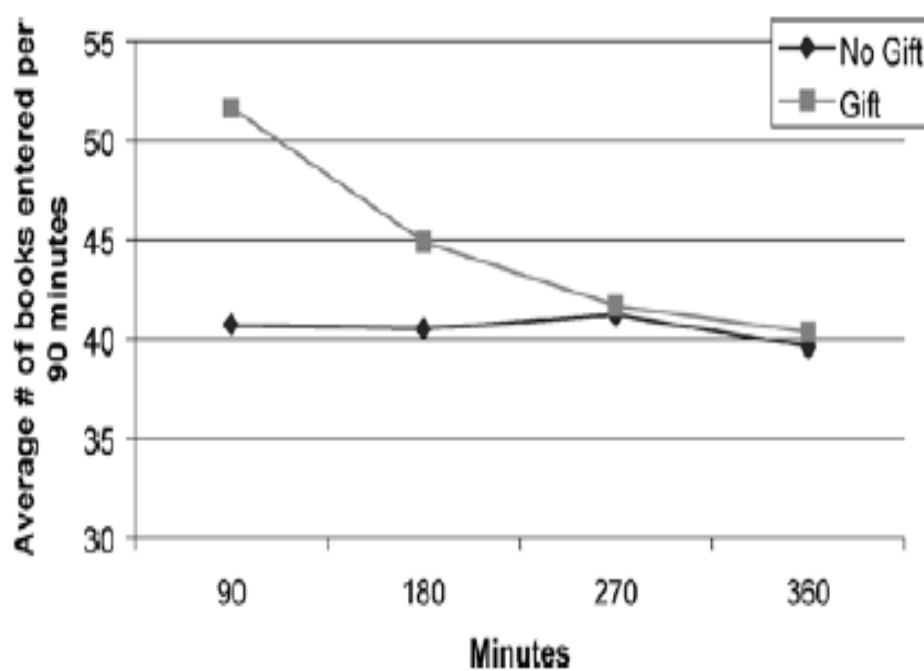


FIGURE 1.—Average books logged per time period.

Gift-exchange game in the field: Fundraising task

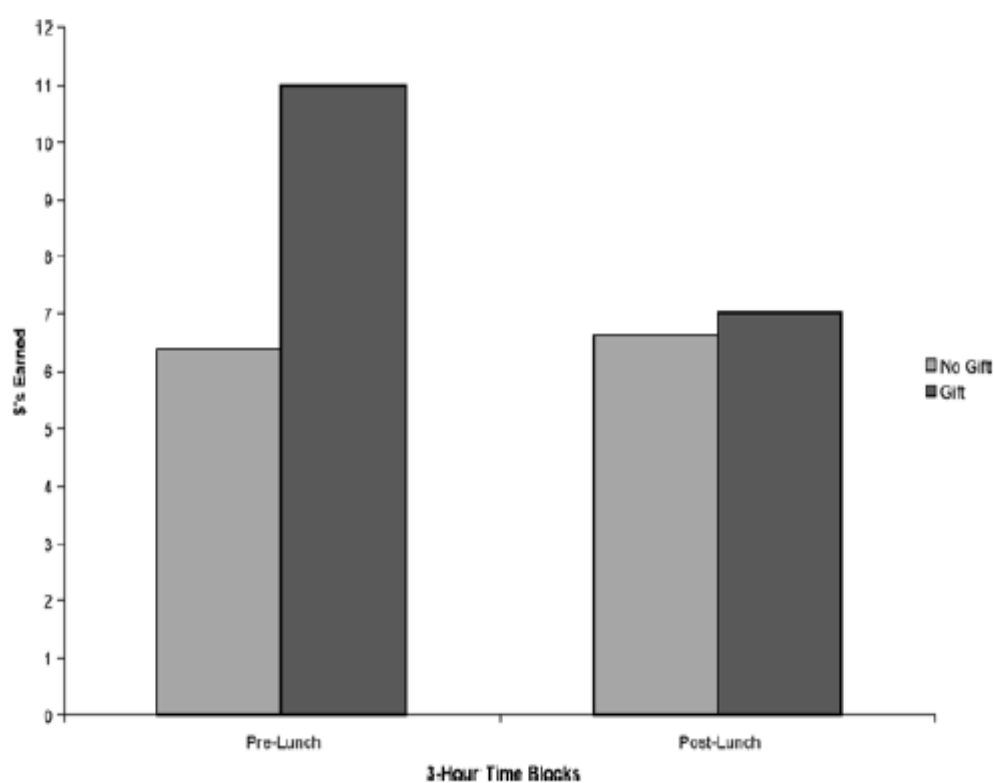


FIGURE 2.—Average earnings by 3-hour block.

Gift-exchange game in the field

In the Gneezy and List (2006) experiments, a higher wage did not lead to significant long-run increases in productivity.

- ▶ It would have been more profitable not to give any gift at all!

Kube, Marechal and Puppe (2012) show the nature of the gift may matter:

- ▶ In a similar “library task”, they replicate the G&L finding
- ▶ But they find that a real gift (e.g. a thermos bottle) has a positive and strong effect on behaviour

Are we really fairness-minded?

What if selfless actions may be driven by a *desire* to appear magnanimous to others?

In many situations we may have a preferred course of action, but our final decision may be in line with a prevailing social norm.

Violating such norms may give higher payoff now, but be damaging in the long-run.

- ▶ Violations of norms, when exposed can lead to drops in trust...
- ▶ And for very serious violations, ostracism.

Are we really fairness-minded?

As such, it is interesting to explore the extent to which our actions are driven by “intrinsic” preferences and norms.

In an experimental context, it is important to distinguish between two factors:

- ▶ Interactions between subjects;
- ▶ Interactions between subjects and the experimenter(s).
- ▶ In the latter case, you can think of it as a meta-game being played by the subjects with the experimenter

Social Distance and Fairness

Hoffman et al. (1996) explore the role of social distance, anonymity and observability in the dictator game.

They consider the following treatments:

- ▶ Double Blind 1 (DB1)
- ▶ Double Blind 2 (DB2)
- ▶ Single Blind 1 (SB1)
- ▶ Single Blind 2 (SB2)

Social Distance and Fairness: DB1 design

In each session, subjects were paid \$5 for showing up. 15 subjects go to room A and 14 subjects go to room B.

- ▶ One subject from room A is randomly picked to be the monitor and will be paid \$10.

There are 14 envelopes available to room A subjects.

- ▶ 12 envelopes contain 10 \$1 bills and 10 blank slips of paper.
- ▶ The other 2 envelopes contain 20 blank slips of paper.

Social Distance and Fairness: DB1 design

Room A subjects are asked one at a time to leave the room. Upon exiting, they pick up one envelope at random.

In a private area, subjects decide how many bills to take out of the envelope, and they replace them with an equal number of blank slips of paper.

The subject then re-seals the envelope and puts it in a box near the exit door and leaves the experiment.

Social Distance and Fairness: DB1 design

Once all room A subjects have made their decisions, the monitor and the experimenters go to room B and call subjects one-by-one.

The subject-monitor opens one envelope at random and gives its contents to the subject, who then leaves the experiment.

Social Distance and Fairness: DB1 design

This design maximises:

- ▶ Social distance (dictators are not in the same physical space as the recipients);
- ▶ Anonymity of decisions (even if all dictators leave with all the money, it is impossible to tell who did what because of the two envelopes with 20 blank slips of paper).
- ▶ Credibility (a neutral party was there to verify the procedure).

Social Distance and Fairness: DB2 design

To check for the importance of the degree of anonymity, the DB2 design eliminates the subject monitor as well as the two blank envelopes.

The authors note a marked difference in behaviour: those who took all the money tended to seal the envelope as requested, while those who left money behind did not!

Social Distance and Fairness: SB1 design

The SB1 design modified DB2 by allowing the experimenter to know what each room A subject decided.

This was implemented by:

- ▶ Having the subject return to the experimenter after deciding what to leave in the envelope and
- ▶ Having his unsealed envelope opened behind a box at the experimenter's desk.
- ▶ The envelope is then sealed, the subject drops it in the box by the door and leaves.

This preserves anonymity with regards to the other subjects but not the experimenter.

Social Distance and Fairness: SB2 design

The SB2 design modified SB1 by making the subjects write down their decision in a form in a private area.

- ▶ The subject then hands in his form to the experimenter,
- ▶ The experimenter pays the subject and fills in the envelope accordingly.
- ▶ The subject drops the envelope in the box on the way out.

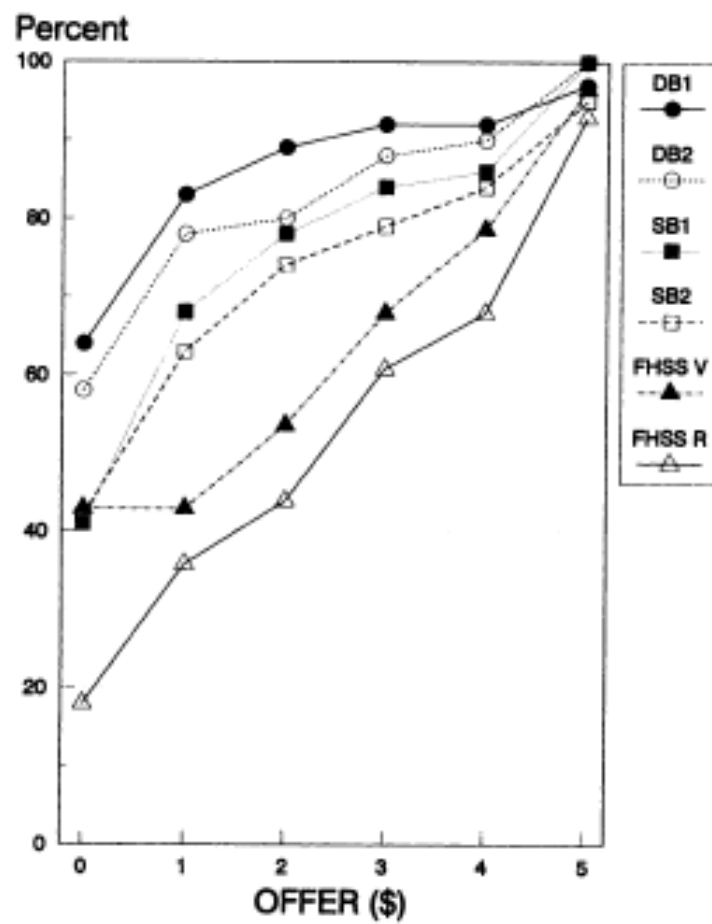
This is the way most experiments deal with cash payments.

Social Distance and Fairness: Hypothesis

The hypothesis for the paper is that if $F(X)$ is the population distribution of offers for treatment X , then:

$$F(DB1) > F(DB2) > F(SB1) > F(SB2)$$

Social Distance and Fairness: Hypothesis



Exploiting Moral Wriggle Room

Dana et al. (2007) study the extent to which individuals may make decisions consistent with fairness preferences in the dictator game because their decisions are too “transparent”.

They consider four treatments:

- ▶ Baseline
- ▶ Hidden Information
- ▶ Multiple Dictator
- ▶ Plausible Deniability

Exploiting Moral Wriggle Room: Baseline treatment

In the baseline condition, dictators had to choose between two allocations, X and Y.

- ▶ Allocation A gave the dictator (player X) \$6 and the recipient (player Y) \$1.
- ▶ Allocation B gave the dictator (player X) \$5 and the recipient (player Y) \$5.

The relationship between actions and outcomes is fully transparent.

Exploiting Moral Wriggle Room: Hidden Information treatment

Player X's choices

A	Y:1 X:6
B	Y:5 X:5

Fig. 1 Interface for baseline treatment

Exploiting Moral Wriggle Room: Hidden Information treatment

In this treatment, the dictator was ignorant of the precise consequences of his actions to the recipient:

The payoffs to the dictator remained the same: \$6 in A, and \$5 in B.

However, the payoffs to the recipient were determined by a coin flip *prior to the session*

- ▶ With 50% prob, they were the same as in Baseline
- ▶ With 50% prob, they were reversed (Allocation A gives \$5 and B gives \$1).

Four sessions were run, two for each case.

Exploiting Moral Wriggle Room: Hidden Information treatment

Subjects were told that the true payoffs would not be revealed publicly.

However, Player X could reveal them by clicking a button.

Subjects also knew Player X's decision *would be kept private* from player Y.

Exploiting Moral Wriggle Room: Hidden Information treatment

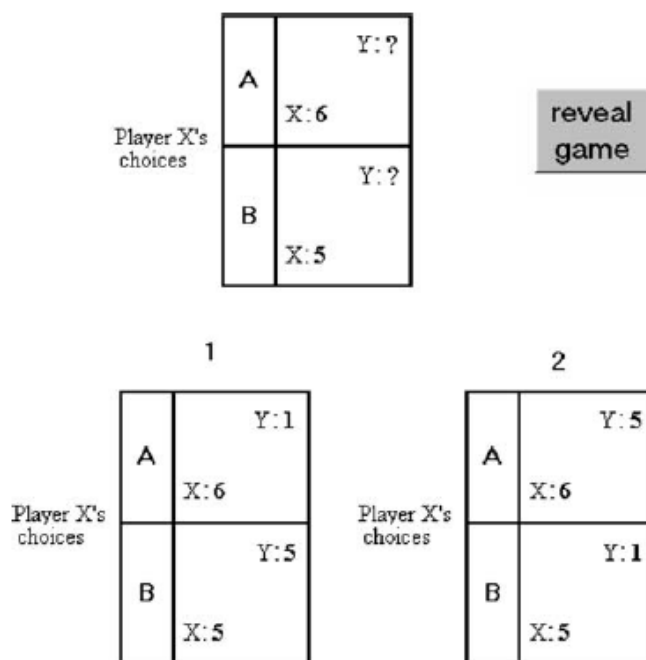


Fig. 2 Interface for hidden information treatment

Exploiting Moral Wriggle Room: Multiple Dictator treatment

In this treatment, another dictator was added to the baseline treatment.

- ▶ This eliminates each dictator's sole responsibility for the unfair outcome.

However, both dictators had to agree to obtain the unequal outcome (\$6, \$6, \$1)

Exploiting Moral Wriggle Room: Multiple Dictator treatment

		Player Y's choices			
		A		B	
Player X's choices	A	Y: 6		Y: 5	
		X: 6	Z: 1	X: 5	Z: 5
B		Y: 5		Y: 5	
		X: 5	Z: 5	X: 5	Z: 5

Fig. 3 Interface for multiple dictator treatment

Exploiting Moral Wriggle Room: Plausible Deniability treatment

The Plausible Deniability treatment modified the baseline treatment with a cutoff rule:

- ▶ Subjects had 10 seconds in which they had to choose between A and B.
- ▶ At some random point during those 10 seconds, the computer would cut them off and choose A
- ▶ Only the dictator would know whether the cutoff had occurred
- ▶ Receivers did not know whether an A choice resulted from the choice by the dictator or the computer.

Results: Comparison of baseline and hidden information treatments

Treatment	Proportion of A choices	Proportion Revealing True Payoffs
Baseline	26%	
Hidden Info (Baseline payoffs)	63%	50%
Hidden Info (Alternate payoffs)	81%	63%

Results: Comparison of baseline and hidden information treatments

The proportion of dictators choosing the unfair option when recipient payoffs are hidden (keeping those payoffs constant) more than doubles (26% to 67%).

A large proportion of dictators chose not to reveal the true payoffs, even when that was costless.

Results: Allocation choices by information acquisition

Actual payoffs	Information acquisition choice	Proportion Choosing A
Matrix 1 (baseline payoffs)	Chose to reveal: 50%	25%
	Chose not to reveal 50%	100%
Matrix 2 (alternate payoffs)	Chose to reveal: 63%	90%
	Chose not to reveal 38%	67%

Results: Allocation choices by information acquisition

If dictators are motivated by a preference for socially desirable outcomes, they should reveal the true payoffs and act fairly.

However, only a very small proportion chose to reveal payoff AND chose allocation B (7/32 or 22%)

It appears dictators exploit payoff uncertainty as an excuse for behaving self-interestedly.

Results: Choices by dictators in baseline and multiple dictator treatments

Treatment	Proportion of A choices
Multiple dictator	65%
Baseline	26%

Results: Plausible Deniability treatment

	Dictators
Proportion cutoff	24%
Average cutoff time if cutoff	4.30"
Proportion of A choices if not cutoff	55%
Total # of A outcomes	17/29
Proportion of those cutoff stating they would have chosen A	14%

Results: Proportion of dictators implementing fair outcome across treatments

Treatment	Proportion implementing fair outcome
Baseline	14/19 (74%)
Hidden Info (Baseline Payoffs)	6/16 (38%)
Multiple Dictators	7/20 (35%)
Plausible Deniability	10/29 (34%)

Fairness: Norms or Preferences?

Ultimately, these two experiments demonstrate that our behaviour is as much driven by norms as by preferences.

(Enforceable) Norms are useful because they promote highly adaptive behaviour: they put “meat” to the adage that *No person is an island*.

Lab experiments are useful and powerful tools to be able to distinguish between the role of norms and the nature of preferences.