

Non-standard Preferences

Social preferences

Advanced course in Behavioural and Psychological Economics

Tampere University

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[Link to updated version](#)

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Topics

Introduction

Altruism

Reciprocity

Distributional Preferences

Fairness Preferences

Introduction

Standard theory poses:

$$\max_{x_t^i \in X_t} \sum_{t=0}^{\infty} \delta^t \sum_{s_t \in S_t} p(s_t) U(x_t^i | s_t) \quad (1)$$

- $U(x | s)$: utility
- x^t : period t payoffs
- $p(s)$: probability of state s
- δ : (time-consistent) discount factor

Introduction

Standard theory poses:

$$\max_{x_t^i \in X_t} \sum_{t=0}^{\infty} \delta^t \sum_{s_t \in S_t} p(s_t) U(x_t^i | s_t) \quad (1)$$

- $U(x | s)$: utility
- x^t : period t payoffs
- $p(s)$: probability of state s
- δ : (time-consistent) discount factor

... but utility is **not standard**

Social Preferences

Theory:

- Standard model assumes individuals are purely self-interested:
 - i.e., others' payoffs/utility do not affect decisions

Empirical Evidence:

- People care about others' payoffs

Ultimatum Game

Guth et al. (1982):

- Setup:
 - Proposer is endowed with \$10
 - Chooses **how much to offer** an anonymous receiver
 - Receiver chooses whether to accept or reject the offer
 - **Accept:** each participants gets as decided by the proposer
 - **Reject:** both participants get \$0
- *Standard theory* predicts:
 - Receiver to accept any offer > 0
 - Proposer (anticipating response) to offer as minimum as possible

Ultimatum Game

Guth et al. (1982):

- Evidence (reviewed in Drouvelis, 2021):
 - Proposers tend to **offer positive amounts**
 - Offer, on average, slightly below 50% of the initial endowment
 - Rarely above 50% of the initial endowment
 - Receivers **do not accept all offers**
 - Receivers reject half of the offers below 20% of the initial endowment
 - Lower offers are more rejected

Dictator Game

Forsythe et al. (1994):

- Setup:
 - A participant (dictator) is endowed with \$10
 - Can choose how much to transfer to an anonymous partner
 - *Standard theory* predicts a transfer of \$0
- Evidence:
 - 60% of dictators transfer a positive amount
- Review by Camerer (2011):
 - Aggregated data from ~80 studies: ~20,000 decisions under ~600 treatment arms
 - 64% of dictators transfer a positive amount
 - 28% of initial endowment is shared by dictators

Gift Exchange Game

Fehr, Kirchsteiger, & Riedl (1993):

- Setup:
 - A participant (firm) decides a wage
 - A participant (worker) decides a costly effort
 - Worker payoff decreases with effort
 - Firm payoff increases with effort
 - *Standard theory* predicts:
 - Firm sets minimum wage (\$30)
 - Worker sets minimum effort
- Evidence:
 - Workers respond to higher wages with higher effort
 - Firms anticipate this and offer higher wages (average \$72)

Theoretical Framework

Following Charness & Rabin (2002) which is based in Fehr & Schmidt (1999)

Suppose that an individual i considers her utility:

$$U_i(x_i, x_j) = \begin{cases} (1 - \alpha)x_i + \alpha x_j & \text{if } x_i < x_j \\ (1 - \beta)x_i + \beta x_j & \text{if } x_i \geq x_j \end{cases} \quad (7)$$

- x_i : individual i payoff (own payoff)
- x_j : individual j payoff (other's payoff)
- α : other-regarding preferences under disadvantageous inequality
- β : other-regarding preferences under advantageous inequality

Both α and β restricted to $\in [-1, 1]$

Theoretical Framework

- For $\alpha = 0, \beta = 0$

$$U_i(x_i, x_j) = \begin{cases} (1 - (0))x_i + (0)x_j = x_i & \text{if } x_i < x_j \\ (1 - (0))x_i + (0)x_j = x_i & \text{if } x_i \geq x_j \end{cases}$$

$$U_i(x_i, x_j) = x_i \quad \forall x_j \in \mathbb{R} \quad \Rightarrow \frac{\partial U_i(x_i, x_j)}{\partial x_j} = 0$$

- Individual i only cares about own payoffs: **purely self-interested**

Theoretical Framework

- For $\alpha = 0, \beta = 0$

$$U_i(x_i, x_j) = \begin{cases} (1 - (0))x_i + (0)x_j = x_i & \text{if } x_i < x_j \\ (1 - (0))x_i + (0)x_j = x_i & \text{if } x_i \geq x_j \end{cases}$$

$$U_i(x_i, x_j) = x_i \quad \forall x_j \in \mathbb{R} \quad \Rightarrow \frac{\partial U_i(x_i, x_j)}{\partial x_j} = 0$$

- Individual i only cares about own payoffs: **purely self-interested**
 - Standard behavior model

Theoretical Framework

- For $\alpha \neq 0, \beta \neq 0$

$$\frac{\partial U_i(x_i, x_j)}{\partial x_j} = \begin{cases} \alpha \neq 0 & \text{if } x_i < x_j \\ \beta \neq 0 & \text{if } x_i \geq x_j \end{cases}$$

- Individual i experiences utility from individual j payoffs

Theoretical Framework

- à la Fehr & Schmidt ($\alpha < 0, \beta > 0$)

$$\frac{\partial U_i(x_i, x_j)}{\partial x_j} = \begin{cases} \alpha & \text{if } x_i < x_j \\ \beta & \text{if } x_i \geq x_j \end{cases}$$

$$\frac{\partial U_i(x_i, x_j \mid x_i \geq x_j)}{\partial x_j} = \beta > \alpha = \frac{\partial U_i(x_i, x_j \mid x_i < x_j)}{\partial x_j}$$

- Individual i experiences utility from individual j payoffs
 - ... but cares more for others when their payoffs are lower than own payoffs

Dictator Game

Consider individuals with *standard* preferences ($\alpha = 0, \beta = 0$)

- Giving \$0:

$$U_i(10, 0) = \boxed{10}$$

- Giving \$5:

$$U_i(5, 5) = \boxed{5}$$

- Giving \$0 is always preferred to giving \$5

$$U_i(10, 0) \geq U_i((10 - x_j), x_j) \quad \forall x_j \in [0, 10]$$

Dictator Game

Consider individuals with altruistic preferences ($\alpha > 0, \beta > 0$)

- Giving \$0:

$$U_i(10, 0) = (1 - \beta)(10) + \beta(0) = \boxed{(1 - \beta)(10)}$$

- Giving \$5:

$$U_i(5, 5) = (1 - \beta)(5) + \beta(5) = \boxed{5}$$

- Indifference between giving \$0 and \$5:

$$(1 - \beta)(10) = 5$$

$$\Leftrightarrow \beta = 1 - \frac{5}{10} \Rightarrow \boxed{\beta = \frac{1}{2}}$$

Dictator Game

Consider individuals with altruistic preferences ($\alpha > 0, \beta > 0$)

- Giving \$0:

$$U_i(10, 0) = (1 - \beta)(10) + \beta(0) = \boxed{(1 - \beta)(10)}$$

- Giving \$5:

$$U_i(5, 5) = (1 - \beta)(5) + \beta(5) = \boxed{5}$$

- Indifference between giving \$0 and \$5:

$$(1 - \beta)(10) = 5$$

$$\Leftrightarrow \beta = 1 - \frac{5}{10} \Rightarrow \boxed{\beta = \frac{1}{2}} \Rightarrow U_i(x_i, x_j) = \begin{cases} (1 - \alpha)x_i + \alpha x_j = x_i & \text{if } x_i < x_j \\ (.5)x_i + (.5)x_j = x_i & \text{if } x_i \geq x_j \end{cases}$$

Dictator Game

- Prefer giving \$5 to giving \$0:

$$U_i(5, 5) > U_i(10, 0) \Leftrightarrow 5 > (1 - \beta)(10) \Leftrightarrow \boxed{\beta > .5}$$

Dictator Game

- Prefer giving \$5 to giving \$0:

$$U_i(5, 5) > U_i(10, 0) \Leftrightarrow 5 > (1 - \beta)(10) \Leftrightarrow \boxed{\beta > .5}$$

- Would individual i give more than \$5?

$$U_i(0, 10) = (1 - \alpha)(0) + \alpha(10) = \boxed{\alpha(10)}$$

$$U_i(5, 5) = (1 - \alpha)(5) + \alpha(5) = \boxed{5}$$

→ For $\alpha \geq .5$:
$$\boxed{U_i(0, 10) = \alpha(10) \geq 5 = U_i(5, 5)}$$

→ For $\alpha < .5$:
$$\boxed{U_i(0, 10) = \alpha(10) < 5 = U_i(5, 5)}$$

Cases

- ① Altruism
- ② Reciprocity (Positive and Negative)
- ③ Distributional Preferences
- ④ Fairness Preferences

Topics

Introduction

Altruism

Reciprocity

Distributional Preferences

Fairness Preferences

Altruism

Motivation:

- Substantial share of production reflects other-regarding concerns (Andreoni, 2006):
 - Charitable giving represents ~2% of US GDP
 - 44% of the population engages in volunteer work (~15 hours/month)
 - But social preferences may not fully explain giving

Instrumental Reasons for Giving:

- Giving increases with seed money (List & Lucking-Reiley, 2002)
 - Signals the quality of the charity
- Attractiveness of solicitor impacts giving (Landry, 2006)
 - Suggests altruism is not the sole source of giving

Altruism

DellaVigna, List, & Malmendier (2012):

Door-to-door fund-raising campaign in Chicago, IL and Greenville, NC



Altruism

DellaVigna, List, & Malmendier (2012):

Door-to-door fund-raising campaign in Chicago, IL and Greenville, NC

- Setup:
 - T0: Surprise visit
 - T1: Upcoming visit notified by flyer
- Evidence:
 - 36% open door in T1 vs. 42% open door in T0
 - Fund-raising decreases among those giving less than \$10
 - Driven by social pressure
 - Fund-raising unaffected among those giving more than \$10
 - Reflects altruism-driven giving

Topics

Introduction

Altruism

Reciprocity

Distributional Preferences

Fairness Preferences

Reciprocity

- Long-standing history in economics, connected to self-interest
 - Standard theory:
 - Contractual nature
 - Based on market exchange
 - e.g., *I perform a service, I get paid for the service performed*
 - Game theory:
 - Reciprocity sustains cooperation in indefinitely repeated interactions (Dal Bó & Fréchette, 2018)
 - e.g., sharing duties: *cleaning, sharing class notes, watering plants, caring about pets*
 - ... but **cooperation present even in one-shot interactions**

Reciprocity

Rabin (1993):

'People may care not only about their own well-being, but also about the well-being of others.

Yet psychological evidence indicates that most altruistic behaviour is more complex: people do not seek uniformly to help other people; rather, they do so according to how generous these other people are being.'

Reciprocity

Rabin (1993):

- Agents are generous (or non-generous)
 - Showing conditionality and selectivity in reciprocity
- People react in different ways to others' behavior
 - Depending on the **intentions** they attach to it
 - **Positive reciprocity:** kind response to a kind action
 - **Negative reciprocity:** hostile response to a hostile action
- Same behavior can be read as *helping* or *hurting*
 - Depending on alternatives available when the choice is made

Reciprocity

- Social Behavior Distinction
 - Unconditional
 - Altruism
 - Spitefulness
 - Forward-looking
 - Cooperation
 - Retaliation
 - Backward-looking
 - Positive Reciprocity
 - Negative Reciprocity

Theoretical Framework

Falk & Fischbacher (2006):

- Intentions matter
 - ... but they cannot be the whole story
- Utility depends on consequences and intentions of other's actions
 - Even in situations where intentions are absent, most people **still show reciprocal behavior**
 - Second movers in UG with random offers still punish extremely unfair offers / reward very advantageous offers (Falk, Fehr & Fischbacher, 2000)
 - When intentions are absent, reciprocity is weak but still present (Charness, 1996)

Theoretical Framework

Following Falk & Fischbacher (2006):

$$U_i = (1 - \rho_i)x_i + (\rho_i)\varphi_j\sigma_i \quad (8)$$

- x_i : individual i payoff (*own payoff*)
- ρ_i : reciprocity parameter (*strength of reciprocal preferences*), restricted to $\rho \in [0, 1]$
- φ_j : kindness term (*how kind is j action perceived*), depends on intentions (ϑ_j)
- σ_i : reciprocity term (*responses to perceived kindness*)
 - $\sigma_i > 0$: Kind Responses
 - $\sigma_i < 0$: Hostile Responses

Theoretical Framework

- For $\rho = 0$

$$U_i = (1 - (0))x_i + (0)\varphi_j\sigma_i = x_i$$

$$U_i = x_i \quad \forall \sigma_i \in \mathbb{R} \quad \Rightarrow \frac{\partial U_i}{\partial \sigma_i} = 0$$

- Individual i only cares about own payoffs: **purely self-interested**

Theoretical Framework

- For $\rho = 0$

$$U_i = (1 - (0))x_i + (0)\varphi_j\sigma_i = x_i$$

$$U_i = x_i \quad \forall \sigma_i \in \mathbb{R} \quad \Rightarrow \frac{\partial U_i}{\partial \sigma_i} = 0$$

- Individual i only cares about own payoffs: **purely self-interested**
→ *Standard behavior model*

Theoretical Framework

- For $\rho > 0$

$$\frac{\partial U_i}{\partial \sigma_i} = \rho_i \varphi_j$$

- Individual i can yield utility from reciprocation
- The reciprocation that yields positive utility depends on the kindness of j action

→ For $\varphi_j = 0$: $\frac{\partial U_i}{\partial \sigma_i} = 0$ Reciprocating neutral actions does not affect utility

→ For $\varphi_j > 0$: $\frac{\partial U_i}{\partial \sigma_i} > 0$ Kind Responses ($\sigma_i > 0$) increase utility: **Positive Reciprocity**
Hostile Responses ($\sigma_i < 0$) decrease utility

→ For $\varphi_j < 0$: $\frac{\partial U_i}{\partial \sigma_i} < 0$ Kind Responses ($\sigma_i > 0$) decrease utility
Hostile Responses ($\sigma_i < 0$) increase utility: **Negative Reciprocity**

Negative Reciprocity

Krueger & Mas (2004):

Bridgeston-Firestone tyre production plant



Negative Reciprocity

Krueger & Mas (2004):

Bridgeston-Firestone tyre production plant

- Setup:
 - Three-year unrest at a unionized tire plant:
 - Jul 1994: Workers on strike were replaced by substitutes
 - May 1995: Union accepted the company proposal; workers reintegrated
 - Dec 1996: Agreement reached
- Evidence from tyre complaints (matching ID with production date):
 - Tires produced in 1994–1996 were 10 times more defective
 - Higher defect rates in:
 - Months preceding the strike
 - Months after worker reintegration
 - Not reflective of substitute workers' quality

Negative Reciprocity

Bandiera, Barankay, & Rasul (2007):

Fruit farm in the UK



Negative Reciprocity

Bandiera, Barankay, & Rasul (2007):

Fruit farm in the UK

- Setup:
 - T0: Piece-rate decreasing with average productivity:
 - Incentive to decrease productivity:
 - Effort is costly
 - Other-regarding preferences
 - T1: Flat piece-rate:
 - Lower than average piece-rate in T0
 - Announced on the same day (8 weeks after T0)

Negative Reciprocity

Bandiera, Barankay, & Rasul (2007):

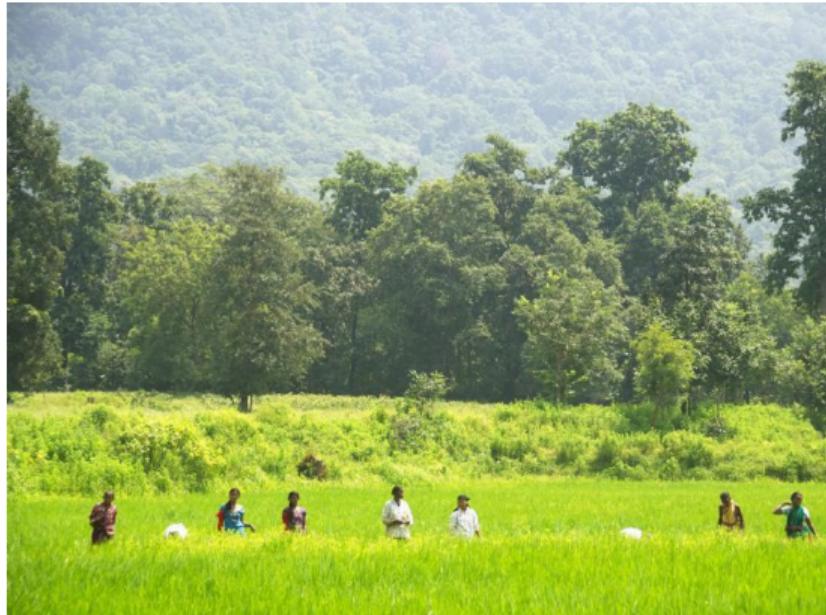
Fruit farm in the UK

- Evidence:
 - Productivity in T1 ~50% higher vs. T0
- Interpretation:
 - Altruism or collusion/reciprocity:
 - Workers monitor each other
- Different farm (plant height impedes monitoring):
 - Evidence: Productivity equal between T0 and T1
 - Interpretation: Changes driven by collusion or (fear of) negative reciprocity

Negative Reciprocity

Breza, Kaur & Krishnaswamy (2021):

Agricultural workers in 183 villages in Odisha, India



Negative Reciprocity

Breza, Kaur & Krishnaswamy (2021):

Agricultural workers in 183 villages in Odisha, India

- Setup (2x2 design):
 - Offered wage
 - H: Village-task prevailing wage
 - L: 10% below the prevailing wage
 - Offer observability
 - PRI: Inside worker's home
 - PUB: Outside on the street: can be overheard by neighbors

Negative Reciprocity

Breza, Kaur & Krishnaswamy (2021):

Agricultural workers in 183 villages in Odisha, India

- Evidence:
 - Offer take-up in H ~ 26%
 - No significant difference between PRI (~ 24%) and PUB (~ 29%)
 - Offer take-up in L falls ~ 75% in PUB compared to PRI (from ~ 18% to ~ 5%)
 - No relevant outside options:
 - Employment in L-PRI is ~ 60% lower than L-PUB the following week
 - Effect is stronger in villages with stronger information diffusion
 - As stated in surveys to untreated participants
- Interpretation:
 - Social considerations impact labor supply

Negative Reciprocity

Breza, Kaur & Krishnaswamy (2021):

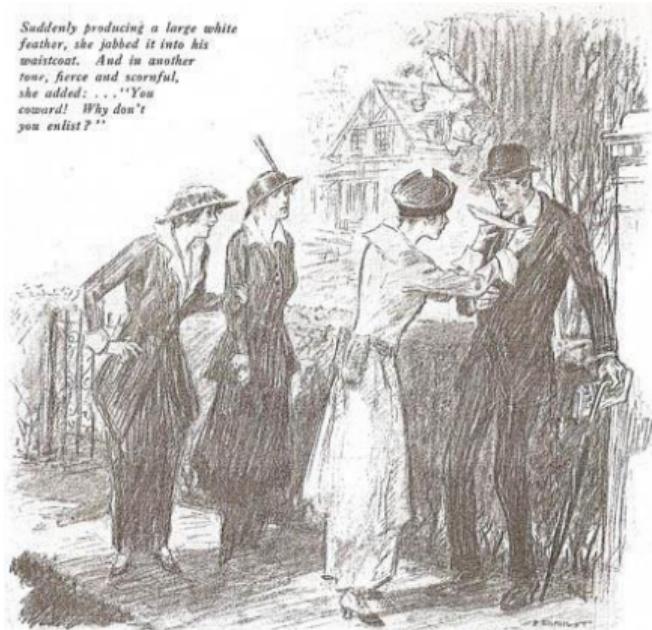
Agricultural workers in 183 villages in Odisha, India

- Is there negative reciprocity to those who take-up?
 - Few cases to provide robust answers within experiment
 - Independent survey
 - 25% state low wage is not enough
 - 30% state other's would get angry
 - 45% state not wanting to go against collective workers
- Independent lab-on-the field experiment in other villages
 - Participants offer possibility of costly punishment
 - 43% punish workers accepting wage below prevailing one (1% for those accepting prevailing wage)

Negative Reciprocity

Becker (2022):

WWI voluntary recruitment in United Kingdom



Negative Reciprocity

Becker (2022):

WWI voluntary recruitment in United Kingdom

- Setup:
 - 'White Feather Brigade'
 - 1 Young women approaching men not wearing a uniform in the streets
 - 2 Present them with a white feather: a symbol of cowardice

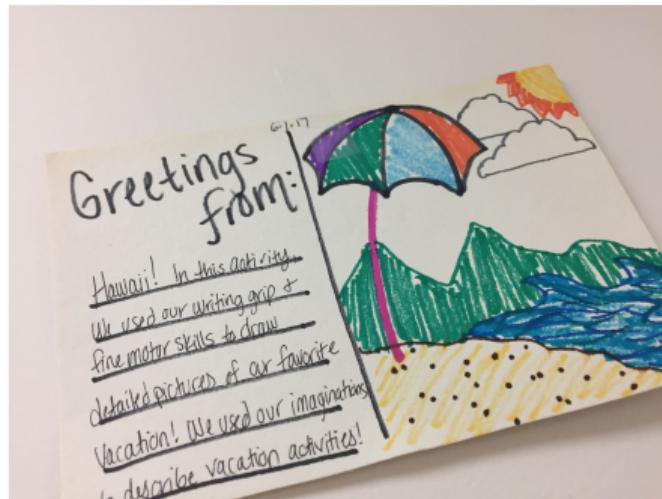
→ Newspaper articles cover staggered expansion across ~120 cities in the country
 - Evidence:
 - Recruitment increases by 36% on the 10 days following the first mention of 'White Feather Brigade' in local newspapers

→ Effect does not reversed in following weeks

Positive Reciprocity

Falk (2007):

Fundraising for schools in Bangladesh



Positive Reciprocity

Falk (2007):

Fundraising for schools in Bangladesh

- Setup:
 - Solicitation letters to Swiss households:
 - T0: Just a letter
 - T1: Letter + 1 postcard (designed by students)
 - T2: Letter + 4 postcards (designed by students)
- Evidence:
 - T0: ~12% donate
 - T1: ~14% donate
 - T2: ~21% donate

Positive Reciprocity

Gneezy & List (2006):

Data entry in library and door-to-door fundraising jobs



Positive Reciprocity

Gneezy & List (2006):

Data entry in library and door-to-door fundraising jobs

- Setup:
 - T0: Paid as promised (\$12/hour)
 - T1: Announced pay increase (e.g., *from \$12/hour to \$20/hour*)
- Evidence:
 - +20% books entered / +80% money raised in T1 vs. T0
 - Effect short-lived
 - Only observed in morning shift
 - Afternoon shift not different between T1 vs. T0

Positive Reciprocity

Kube, Maréchal, & Puppe (2012):

Data entry in library



Positive Reciprocity

Kube, Maréchal, & Puppe (2012):

Data entry in library

- Setup:
 - T0: Paid as promised (\$12/hour)
 - T1: Pay increase (\$20/hour)
 - T2: Gift a \$8 thermo
- Evidence:
 - +6% books entered in T1 vs. T0
 - +30% books entered in T2 vs. T0
- Interpretation:
 - Thermos is not perceived as higher value (independent survey: majority prefers \$8 over thermo)
 - Gifts convey kinder signals than pay increases (employers in T2 perceived as more kind)

Positive Reciprocity

Kube, Maréchal, & Puppe (2013):

Data entry in library

- Setup:
 - T0: Paid as promised (\$15/hour)
 - T1: Pay increase (\$20/hour)
 - T2: Pay decrease (\$10/hour)
- Evidence:
 - +5% books entered in T1 vs. T0
 - -25% books entered in T2 vs. T0
- Interpretation:
 - Negative reciprocity is stronger than positive reciprocity

Positive Reciprocity

List (2006):

Buyers at sport cards fair



Positive Reciprocity

List (2006):

Buyers at sport cards fair

- Setup:
 - T0: Instructed to offer \$20 for a 9-grade card
 - T1: Instructed to offer \$65 for a 10-grade card
 - Card quality can be verified by expert, but is not apparent to laypeople
- Evidence:
 - Local dealers offer higher card quality in T1 vs. T0
 - Non-local dealers offer same card quality in T1 and T0
 - Difference in behavior may be due to reputation concerns
 - Dealers who do not display positive reciprocity in the market, do show it in the lab
- Interpretation:
 - Market norms may override gift exchange norms

Positive Reciprocity

Finan & Schechter (2012):

Vote buying in municipal elections in Paraguay



Positive Reciprocity

Finan & Schechter (2012):

Vote buying in municipal elections in Paraguay

- Setup:
 - The *problem* of vote-buying when voting is secret
 - Selfish voters cannot credibly commit to vote for the candidate who tries to buy their vote
 - Voter can take the bribe and claim having voted for bribing politician

Positive Reciprocity

Finan & Schechter (2012):

Vote buying in municipal elections in Paraguay

- Data:
 - Merged data:
 - Survey information on vote-buying experienced in a 2006 municipal election
 - Experimental data on individual intrinsic reciprocity
- Evidence:
 - Politicians hire community leaders in each municipality to interact with voters
 - Offer voters with money and other forms of aid for the promise of their vote
 - Community leaders have good knowledge of voter's reciprocity preferences
 - Preferentially target reciprocal voters for vote-buying
 - 1 SD increase in reciprocity increases the likelihood of being targeted for vote-buying by 44%

Topics

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Theoretical Framework

Remember Charness & Rabin (2002) which is based in Fehr & Schmidt (1999)

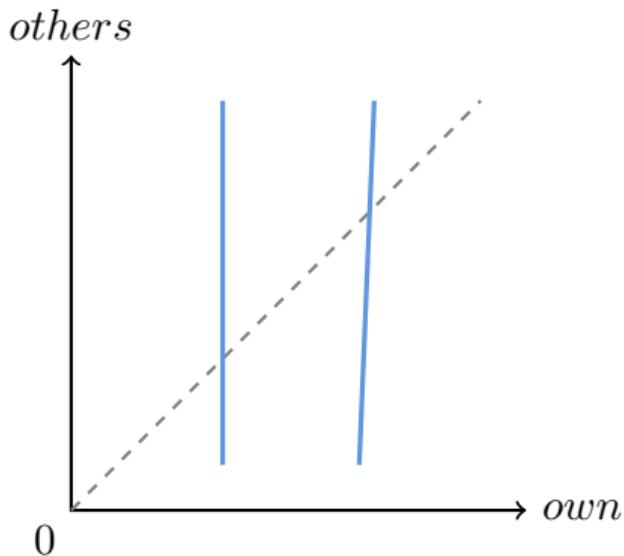
Suppose that an individual i considers her utility:

$$U_i(x_i, x_j) = \begin{cases} (1 - \alpha)x_i + \alpha x_j & \text{if } x_i < x_j \\ (1 - \beta)x_i + \beta x_j & \text{if } x_i \geq x_j \end{cases} \quad (7)$$

- x_i : individual i payoff (own payoff)
- x_j : individual j payoff (other's payoff)
- α : other-regarding preferences under disadvantageous inequality
- β : other-regarding preferences under advantageous inequality

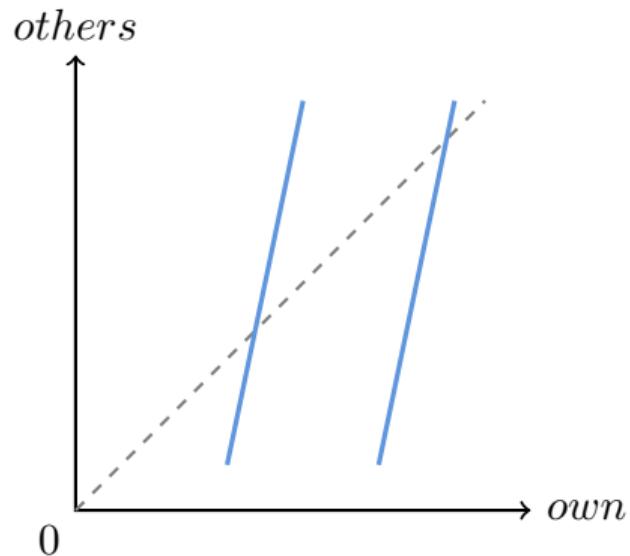
Both α and β restricted to $\in [-1, 1]$

Types of Distributional Preferences



A. Selfish

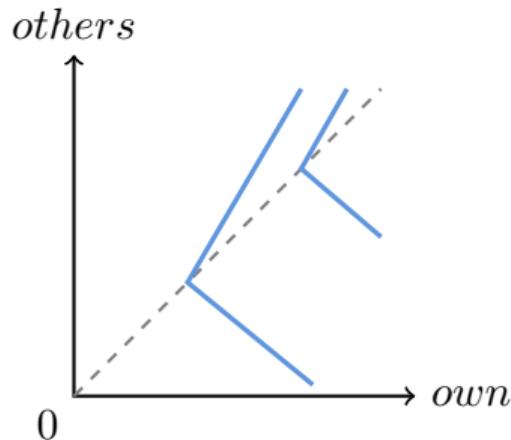
$$(\alpha = 0, \beta = 0)$$



B. Spiteful

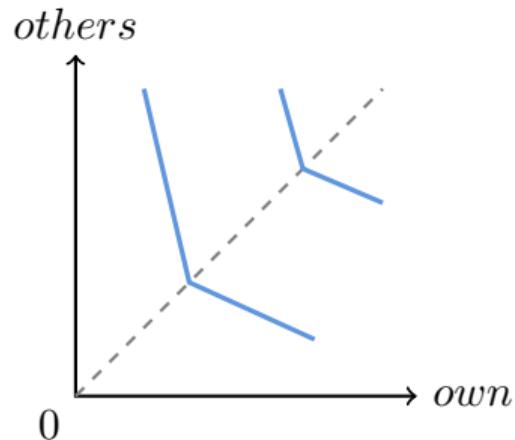
$$(\alpha < 0, \beta < 0)$$

Types of Distributional Preferences



C. Inequality averse

$$(\alpha < 0, \beta > 0)$$



D. Altruistic

$$(\alpha > 0, \beta > 0)$$

Distributional Preferences

Kerschbamer (2015):

Equality Equivalence Test (EET)

- Goal:
 - Producing a systematic approach to measuring distributional preferences prevalence
 - Need to observe individual behavior in different relative income contexts

Distributional Preferences

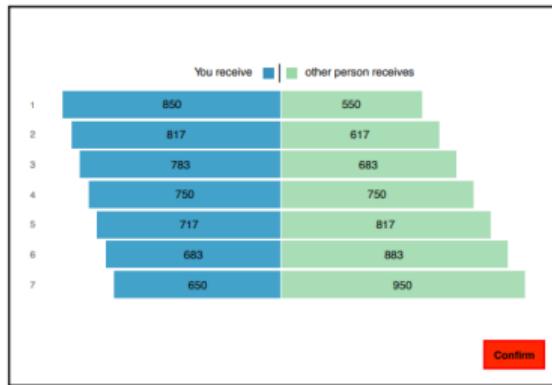
Kerschbamer (2015):

Equality Equivalence Test (EET)

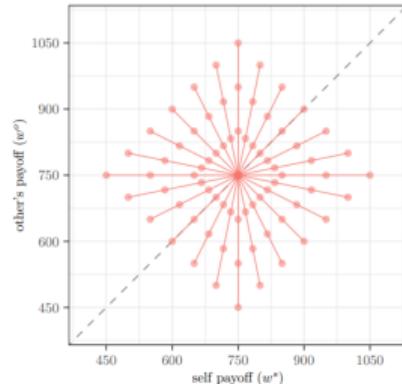
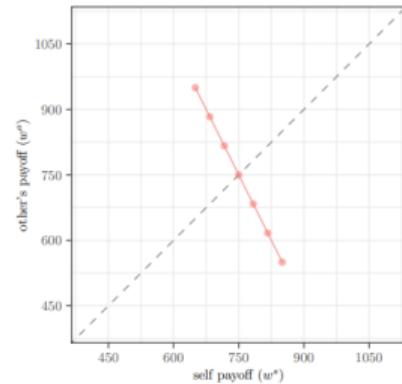
- Setup:

- Set of **Dictator Games with different redistribution costs** is sufficient

(a) Decision screen



(b) Budget line



Distributional Preferences

Kerschbamer (2015):

Equality Equivalence Test (EET)

- Empirical Evidence:
 - For initial test on student sample in Austria
- | | | |
|---|---|-------------|
| 1 | Selfish ($\alpha = 0, \beta = 0$): | $\sim 50\%$ |
| 2 | Spiteful ($\alpha < 0, \beta < 0$): | $\sim 3\%$ |
| 3 | Inequality averse ($\alpha < 0, \beta > 0$): | $\sim 12\%$ |
| 4 | Altruistic ($\alpha > 0, \beta > 0$): | $\sim 35\%$ |

Distributional Preferences

Fehr et al. (2023):

Equality Equivalence Test on Swiss sample

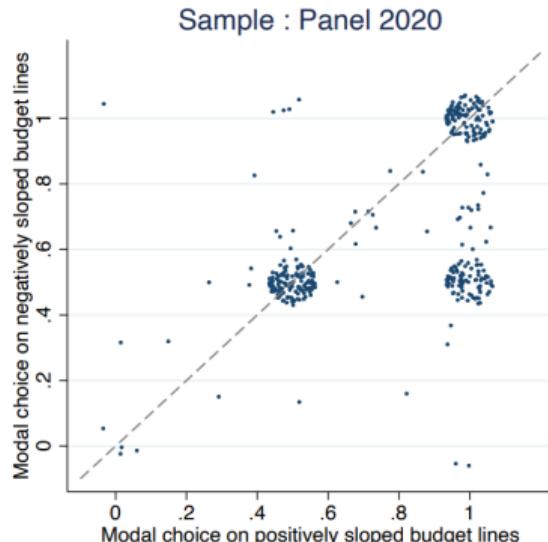
- Motivation:
 - Previous studies relied on student samples
 - Advances made with German and American data
 - Previous studies relied on predefined preferences categories
 - Might impose constraints on results if other preferences exists
- Setup:
 - EET (with 7 distinctive redistribution costs) on representative Swiss sample
 - Non-parametric clustering technique to categorize population

Distributional Preferences

Fehr et al. (2023):

Equality Equivalence Test on Swiss sample

- Empirical Evidence:



- Modal choice when paying to increase other's income (y-axis) or to decrease other's income (x-axis)
- 1 means keeping all; 0 means giving away all
- .5 means dividing equally

Distributional Preferences

Fehr et al. (2023):

Equality Equivalence Test on Swiss sample

- Empirical Evidence:
 - 3 preference types optimize the trade-off between parsimony and descriptive accuracy
- | | |
|---|------|
| ① Selfish ($\alpha = 0, \beta = 0$): | ~15% |
| ② Inequality averse ($\alpha < 0, \beta > 0$): | ~45% |
| ③ Altruistic ($\alpha < 0, \beta < 0$): | ~40% |

Distributional Preferences

Kerschbamer & Muller (2020):

Relevance of distributional preferences in voting decisions in Germany



Distributional Preferences

Kerschbamer & Muller (2020):

Relevance of distributional preferences in voting decisions in Germany

- Setup:
 - Included EET on a wave in a German survey panel
 - Representative sample of ~3,000 individuals
 - Containing data from 2012 to 2017
 - Assessed support for redistribution
 - Party voted in elections
 - Declared attitudes on inequality, taxation, and welfare

Distributional Preferences

Kerschbamer & Muller (2020):

Relevance of distributional preferences in voting decisions in Germany

- Empirical Evidence:
 - Distributional preferences prevalence
 - Wide variance across socio-economic characteristics
 - Majority are benevolent facing advantageous inequality ($\beta > 0$)
 - Majority are malevolent facing advantageous inequality ($\alpha < 0$)
 - Distributional preferences matter
 - Selfish individuals ($\alpha = 0, \beta = 0$) support less redistribution and vote more right-wing
 - Those benevolent towards poorer ($\beta > 0$) support redistribution and vote more left-wing

Distributional Preferences

Fehr, Epper & Senn (2024):

Relevance of distributional preferences in referendum voting in Switzerland



Distributional Preferences

Fehr, Epper & Senn (2024):

Relevance of distributional preferences in referendum voting in Switzerland

- Setup:
 - Survey on ~800 Swiss citizens, including EET
 - Assessed support for redistribution through referendum voting on:
 - 1 Fair Tax Code: increase marginal tax rates for the rich in 'tax havens' cantons
 - 2 1-to-12 Initiative: limit top salary in company to 12 times its lowest salary
 - 3 National Minimum Wage: introduce minimum wage at National level
 - 4 Unconditional Basic Income: introduce a transfer to be received by all Swiss citizens

Distributional Preferences

Fehr, Epper & Senn (2024):

Relevance of distributional preferences in referendum voting in Switzerland

- Empirical Evidence:
 - Distributional preferences prevalence
 - **Selfish** ($\alpha = 0, \beta = 0$): ~15%
 - **Inequality averse** ($\alpha < 0, \beta > 0$): ~50%
 - **Altruistic** ($\alpha > 0, \beta > 0$): ~35%
 - Distributional preferences (*in conjunction with income levels*) matter
 - Income levels broadly explain voting behavior (à la Meltzer & Richards, 1981)
 - Richer individuals demand less redistribution
 - Distributional preferences are relevant to distinguish within richer individuals
 - Rich who are inequality averse or altruistic, vote closer to poorer individuals

Distributional Preferences

Schneider, Brun & Weber (2024):

Social preferences matter on job sorting



Distributional Preferences

Schneider, Brun & Weber (2024):

Social preferences matter on job sorting

- Motivation:
 - Different studies show that social preferences differ across jobs
 - Public sector workers are more likely to make donations (Buurman et al., 2012)
 - More pro-social workers tend to sort into non-profit sector (Gregg et al., 2011)
- Setup:
 - Merge administrative work data with survey data on moral perceptions of jobs

Distributional Preferences

Schneider, Brun & Weber (2024):

Social preferences matter on job sorting

- Evidence:
 - Industries generally perceived as more immoral pay higher wages to their workers
 - In line with social preferences augmented labor model: companies need to compensate workers with wage differential for making them involve in social disutility
 - e.g., *tobacco, gun manufacturing*
- Experimental extension:
 - 1 Prosociality measurement in lab
 - 2 In-lab moral (immoral) activities that increase (decrease) others payoff for money
 - Demanded money is higher for immoral activities, resulting in higher reservation wage
 - Less prosocial participants participate more in immoral activities

Topics

Introduction

Altruism

Reciprocity

Distributional Preferences

Fairness Preferences

Fairness Preferences

Distributional Preferences:

- Agents divide **windfall income** among **anonymous participants**
 - Reasonable that no participant has a clear normative claim on the income
 - **Equality** appears as a natural reference point for **assessing fairness**

Extensions:

- Social proximity
 - Participants are not always anonymous
 - People value more the utility of those with whom they *feel closer*
 - See Shayo (2020) review on social identity
- Entitlements
 - Participants contribute on generating the available resource
 - Through a combination of luck and effort

Fairness Preferences

Equity:

- Equality is not the same as Equity
 - **Equality:**
 - Distribute the same outcome to each participant
 - **Equity:**
 - Distribute accounting for individual differences to achieve fair outcomes

Fairness Preferences

Philosophical Theory

- Equality of Opportunity (*á la Romer*)
 - Individuals should
 - Be held responsible for factors under their own control (**choices**)
 - Not be held responsible for factors beyond their control (**luck**)
- Responsibility for Preferences and Choices (*á la Dworkin*)
 - Individuals are responsible for their choices
 - Even if they respond to circumstances beyond their control
- Self-Ownership (*á la Nozick*)
 - Individuals are entitled to the products of all personal characteristics
- Hard Determinism
 - All choices are a product of circumstances
 - The set of responsibility is empty

Fairness Preferences

Cherry et al. (2002):

Relevance of entitlement in Dictator Games in Orlando, FL

- Motivation:
 - Previous studies already show behavior in DG takes into account entitlements
 - Participants keep more when they earn the role of dictator in a contest (Hoffman et al., 1994)
- Setup:
 - ① Participants earn money by answering a knowledge quiz (17 questions)
 - ② Participants are separated into 2 rooms
 - A. High earners (answered at least 10 questions correct, \$40)
 - B. Low earners (answered less than 10 questions correct, \$10)
 - ③ Dictator Game, in which participants in room A act as Dictators

Fairness Preferences

Cherry et al. (2002):

Relevance of entitlement in Dictator Games in Orlando, FL

- Setup:
 - T0: Classical Dictator Game
 - Skipped step 1
 - Room assignment is random
 - T1: Room B composed of random participants
 - High earners still go to Room A
 - Room B composed of participants that skipped step 1
 - T2: As stated in Setup
- Evidence:
 - 'Zero offer' in 19% of cases in T0 vs. 79% of cases in T1
 - 'Zero offer' in 95% of cases in T2

Fairness Preferences

Konow (2000):

Entitlement in Dictator Games with 360 university students in Chicago, IL

- Setup:
 - ① Participants are separated into 3 rooms
 - A. High earners (fold letters and stuff them into envelopes for >\$.50 per letter)
 - B. Low earners (fold letters and stuff them into envelopes for <\$.50 per letter)
 - C. Spectators (do not perform effort task)
 - ② Participants from Room A and B are matched in pairs
 - Payoffs are aggregated within pair

Fairness Preferences

Konow (2000):

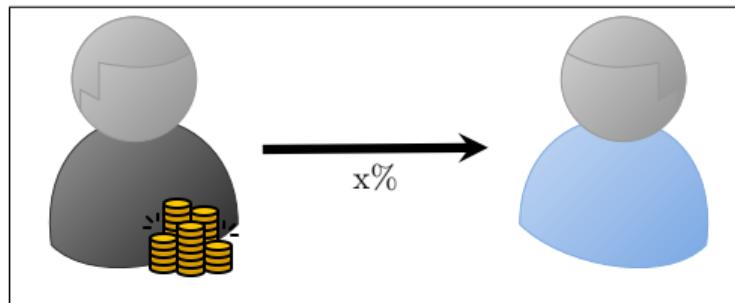
Entitlement in Dictator Games with 360 university students in Chicago, IL

- Dictator Game:
 - Participant in Room A decide as dictator
 - T0: Randomly matched pairs
 - T1: Pairs matched based on performance: high-ranked with low-ranked
 - Participant in Room C decide as impartial dictator (spectator)
 - T2: Randomly matched pairs
 - T3: Pairs matched based on performance: high-ranked with low-ranked

Fairness Preferences

Konow (2000):

Entitlement in Dictator Games with 360 university students in Chicago, IL

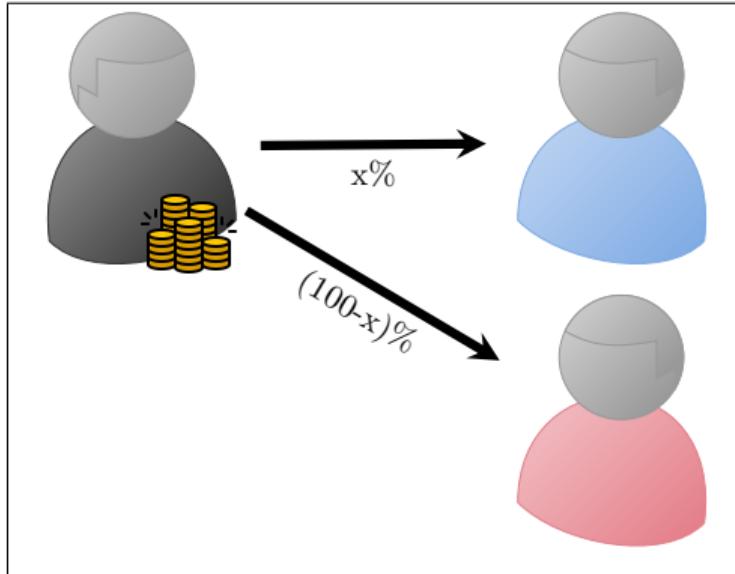


Classical Dictator Game

Fairness Preferences

Konow (2000):

Entitlement in Dictator Games with 360 university students in Chicago, IL



Modified Dictator Game

Fairness Preferences

Konow (2000):

Entitlement in Dictator Games with 360 university students in Chicago, IL

- Evidence:
 - Impartial dictators equalize payoffs
 - Assignment to participant in Room A is ~50% in T2 and T3
 - Self-interested dictators take more for themselves
 - Own assignment is >50% in T0 and T1
 - Entitled dictators take even more for themselves
 - Own assignment is ~65% in T1 vs. ~60% in T0

Theoretical Framework

Following Cappelen et al. (2013)

Suppose that an individual i considers her utility:

$$U_i(x_i, x_j) = x_i - \gamma_i \Omega_i \quad (9)$$

- x_i : individual i payoff (*own payoff*)
- γ : weight put into fairness concerns, restricted to $\gamma \geq 0$
- Ω : fairness concerns, with $\Omega = \sum_{\forall j} h(x_j - m_j^i)$
 - h : cost function from deviations from fairness
 - m_j : payoff for individual j considered to be fair

Theoretical Framework

- For $\gamma = 0$

$$U_i = x_i - (0)\Omega_i = x_i$$

$$U_i = x_i \quad \forall x_j \in \mathbb{R} \quad \Rightarrow \frac{\partial U_i}{\partial x_j} = 0$$

- Individual i only cares about own payoffs: **purely self-interested**

Theoretical Framework

- For $\gamma = 0$

$$U_i = x_i - (0)\Omega_i = x_i$$

$$U_i = x_i \quad \forall x_j \in \mathbb{R} \quad \Rightarrow \frac{\partial U_i}{\partial x_j} = 0$$

- Individual i only cares about own payoffs: **purely self-interested**
→ Standard behavior model

Theoretical Framework

- For $\gamma > 0$

$$\frac{\partial U_i}{\partial x_j} = -\gamma h'(x_j - m_j^i)$$

- Individual i can yield disutility from fairness concerns
- For $h(y) = \frac{y^2}{2}$: $\frac{\partial U_i}{\partial x_j} = -\gamma(x_j - m_j^i)$
- The main focus point is what is the difference between the value of x_j and m_j^i
 - Difference between what individual j gets and what individual i considers individual j should get

Types of Fairness Preferences

Following Cappelen et al. (2007)

- Focus on specific fairness views, related to normative theories of justice

Consider $N = 2$, $\sum_{\forall j} x_j = X$, x_j^{PRE} the initial payoff and p_j production by individual j

- **Egalitarianism** ($m_j = X/2$)

→ Everybody should get the same

- **Libertarianism** ($m_j = x_j^{PRE}$)

→ Everybody should keep what they initially have

- **Meritocratic fairness view** ($m_j = p_j$)

→ Everybody should get according to their choices

Fairness Preferences

Cappelen et al. (2007):

Fairness Preferences categorization in Bergen, NO

- Setup:
 - ① Participants receive \$50 and decide to invest 0, 25 or 50 in two investments with random:
 - A. Low return (x2)
 - B. High return (x4)
 - ② Participants paired and each decide as dictators in DG
- Possible combinations and fairness view prescription :
 - Same return and same investment (*liber.* = *merit.* = *egal.*)
 - Same return and higher investment (*liber.* = *merit.* > *egal.*)
 - Higher return and same investment (*liber.* > *merit.* = *egal.*)
 - Different return and different investment (*liber.* ≠ *merit.* ≠ *egal.*)

Fairness Preferences

Cappelen et al. (2007):

Fairness Preferences categorization in Bergen, NO

- Empirical Evidence:
 - For initial test on student sample in Norway
- | | |
|---|------|
| ① Egalitarian ($m_j = X/2$): | ~44% |
| ② Libertarian ($m_j = x_j^{PRE}$): | ~18% |
| ③ Meritocrat ($m_j = p_j$): | ~38% |

Fairness Preferences

Almås et al. (2020):

Fairness Preferences in United States and Norway

- Setup:
 - ① Anonymous workers perform an effort task
 1. Paired together
 2. One is chosen to receive \$6, the other receives \$0: (6,0)
LUCK: Randomly chosen
MERIT: Chosen by task productivity
 - ② Participants (spectators) decide how to redistribute workers' payoffs
→ (6,0), (5,1), (4,2), (3,3), (2,4), (1,5), (0,6)

Fairness Preferences

Almås et al. (2020):

Fairness Preferences in United States and Norway

- Empirical Evidence:
 - Implemented inequality is larger in MERIT than in LUCK
 - Both in Norway and the United States
 - For representative sample in Norway (NO) and United States (US)

	NO	US
① Egalitarian ($m_j = X/2$):	~35% in NO	vs. ~15% in US
② Libertarian ($m_j = x_j^{PRE}$):	~15% in NO	vs. ~30% in US
③ Meritocrat ($m_j = p_j$):	~40% in NO	vs. ~40% in US

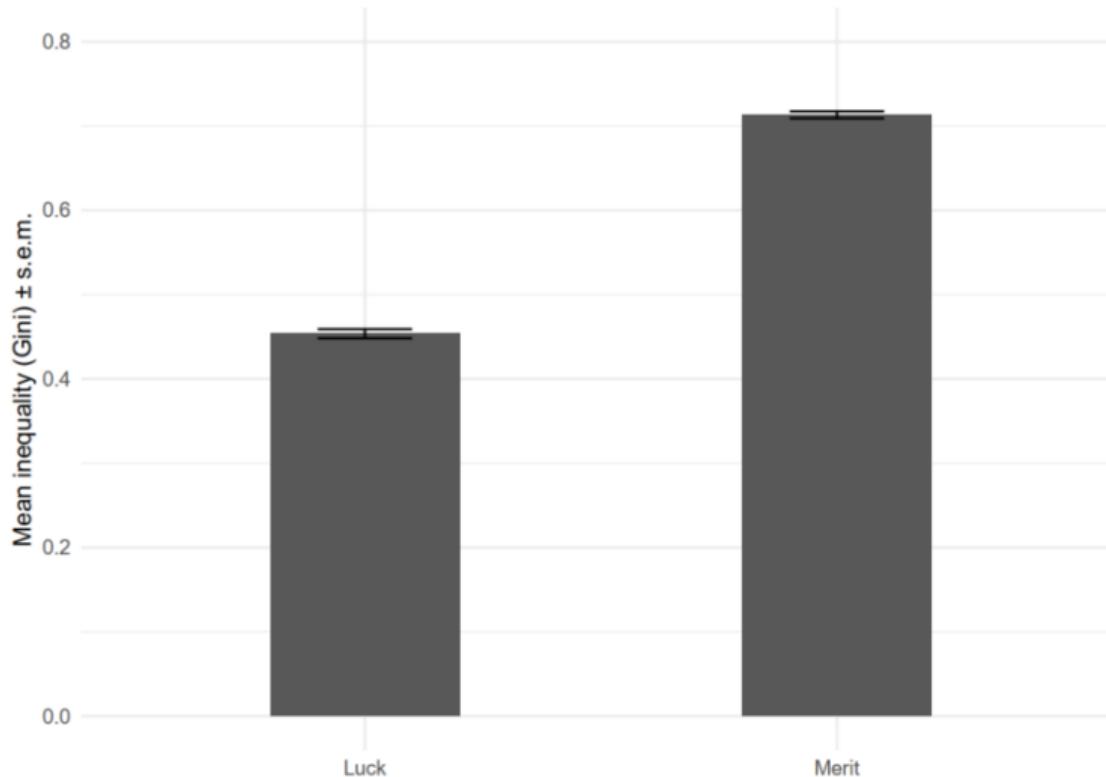
Fairness Preferences

Almås et al. (Forthcoming):

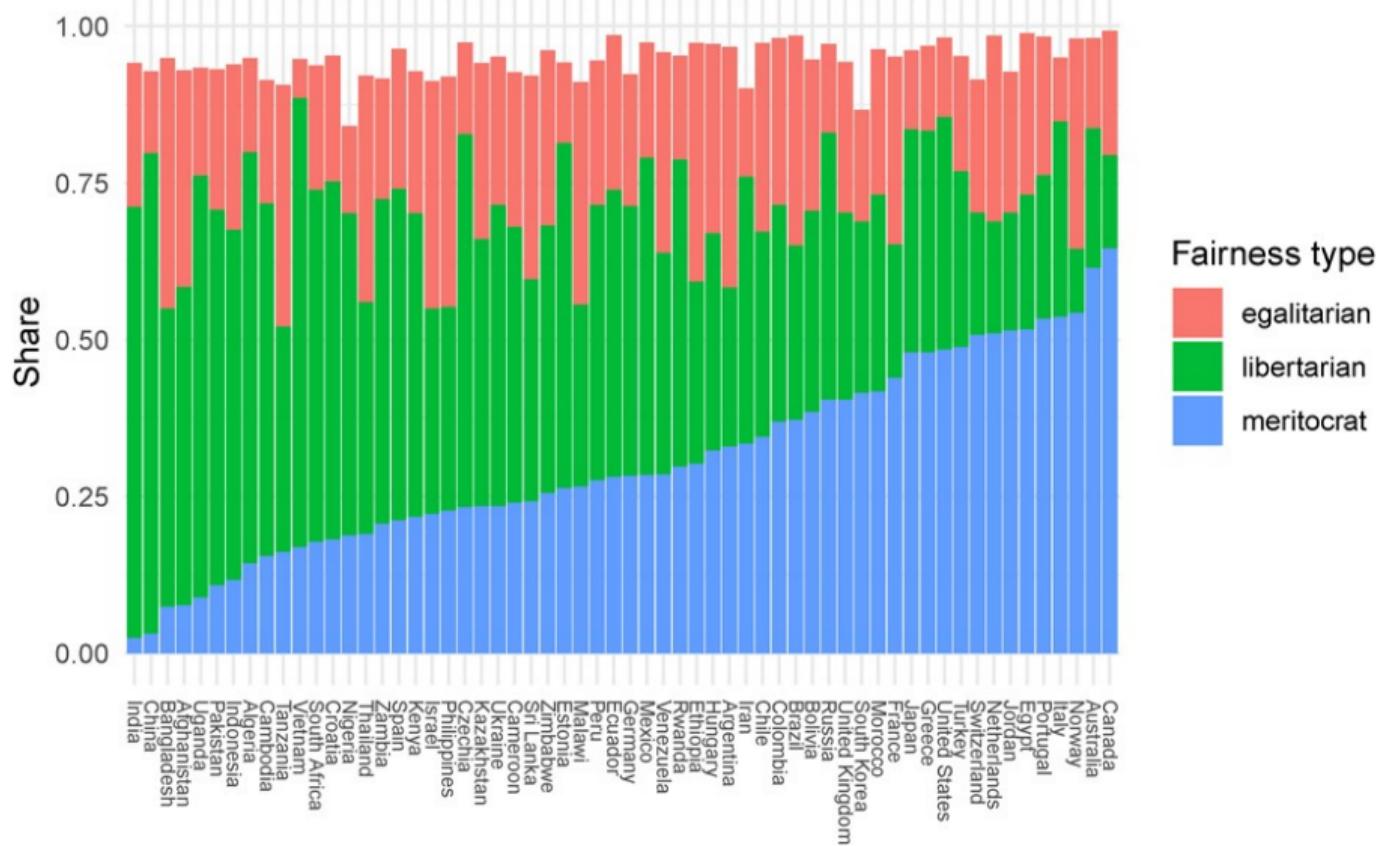
Fairness Preferences in the World

- Setup:
 - Gallup survey on ~66,000 individuals
 - Representative samples of 60 countries, comprising 80% of world population
 - Same design as in Almås et al. (2020)

Implemented Inequality



Fairness Preferences in the World



Fairness Preferences

Harrs & Sterba (2023):

Fairness Preferences and attitudes towards redistribution

- Setup:
 - ① Anonymous workers perform an effort task
 1. Paired together
 2. One is chosen to receive \$6, the other receives \$0: (6,0)

LUCK: Randomly chosen
MERIT: Chosen by task productivity
 - ② ~ 2,000 spectators decide how to redistribute workers' payoffs
 - For both the LUCK and MERIT treatment
 - ③ Spectators answer about redistributive preferences

Fairness Preferences

Harrs & Sterba (2023):

Fairness Preferences and attitudes towards redistribution

- Empirical Evidence:
 - For representative sample in the United States

- ① **Egalitarian** ($m_j = X/2$): ~12%
- ② **Libertarian** ($m_j = x_j^{PRE}$): ~5%
- ③ **Meritocrat** ($m_j = p_j$): ~60%

- Fairness preferences predict support for redistribution
 - Egalitarians (libertarians) support more (less) redistribution
 - Beliefs about society fairness are much relevant, but only for meritocrats

Fairness Preferences

Almås et al. (2010):

Development of Fairness Preferences in Norway

- Setup:
 - ~500 children from 20 schools in Bergen, NO
 - Grades 5th, 7th, 9th, 11th, 13th
- ① Participants work on an effort task
 - Ticking off certain number in sequence of 3-digits numbers
 - A. Low payoff per number ticked off
 - B. High payoff per number ticked off
- ② Participants are many times paired and decide as dictators how to redistribute payoffs

Fairness Preferences

Almås et al. (2010):

Development of Fairness Preferences in Norway

- Empirical Evidence:
 - Younger children are mostly egalitarian (or libertarian)
 - People grow into being meritocrats

	5th	12th
① Egalitarian ($m_j = X/2$):	~65% in 5th	vs. ~22% in 12th
② Libertarian ($m_j = x_j^{PRE}$):	~30% in 5th	vs. ~35% in 12th
③ Meritocrat ($m_j = p_j$):	~5% in 5th	vs. ~43% in 12th

Fairness Preferences

Almås et al. (2017):

Self-serving Fairness Preferences?

- Setup:
 - ~500 children (from grade 9th) from 11 schools matched with administrative data
 - Distinction between low-SES and high-SES
- 1 Participants work on an effort task
- 2 Participants are paired and decide as dictators how to redistribute payoffs
- 3 Participants decide as spectator how to redistribute payoffs of others
- Empirical Evidence:
 - No difference in behavior as dictators
 - ~30% given on both low- and high-SES
 - Difference in behavior as spectators
 - ~50% of low-SES choose equal split vs. ~20% of high-SES

Fairness Preferences

Cappelen et al. (2013):

Needs and Entitlements

- Setup:
 - ~400 university students from Norway/Germany and Uganda/Tanzania
- ① Participants work on an effort task
 - ② Participants are paired and decide as dictators how to redistribute payoffs

Fairness Preferences

Cappelen et al. (2013):

Needs and Entitlements

- Empirical Evidence:
 - Participants from NO/DE more productive than those from UG/TZ
 - No prioritization to own country,
 - ... but needs considerations matter
 - Participants from NO/DE gave away more when paired with participant from UG/TZ
 - ... than when paired with low-productivity participant from NO/DE
 - Participants from UG/TZ are much more egalitarian

	LI	vs.	HI
1 Egalitarian ($m_j = X/2$):	~45% in LI	vs.	~23% in HI
2 Libertarian ($m_j = x_j^{PRE}$):	~29% in LI	vs.	~35% in HI
3 Meritocrat ($m_j = p_j$):	~27% in LI	vs.	~43% in HI

Fairness Preferences

Andre (2024):

Shallow Meritocracy

- Setup:
 - ① Workers earn money by completing effort tasks under **different circumstances**
 - A. **Lucky:** earn high payoff for each complete task
 - B. **Unlucky:** earn low payoff for each complete task
 - ② 9,000 American spectators distribute earnings among workers
 - T0: when workers are unaware of circumstances
choices are unaffected by circumstances
 - T1: when workers are aware of circumstances
choices are affected by circumstances

Fairness Preferences

Andre (2024):

Shallow Meritocracy

- Evidence:
 - Circumstances affect workers' effort
 - Lucky workers complete ~100% more tasks than Unlucky workers
 - Spectators don't take into consideration the impact of circumstances on workers' effort
 - Similar distribution in T0 and T1
 - Spectators hold workers responsible for their choices
 - ... even if they are shaped by circumstances beyond their control

Fairness Preferences

Brun & Ramos (2023):

The Complexity of Assessing Fairness in Latin America



Fairness Preferences

Brun & Ramos (2023):

The Complexity of Assessing Fairness in Latin America

- Setup:
 - ① Workers earn money by completing effort tasks under different circumstances
 - A. **Lucky:** earn high payoff for each complete task
 - B. **Unlucky:** earn low payoff for each complete task
 - ② ~200 high school students distribute earnings among workers
 - ③ Students complete cognitive assessment
 - **LOW:** scored in bottom half
 - **HIGH:** scored in upper half

Fairness Preferences

Brun & Ramos (2023):

The Complexity of Assessing Fairness in Latin America

- Evidence:
 - Circumstances affect workers' effort
 - Lucky workers complete ~100% more tasks than Unlucky workers
 - Students don't take into consideration the impact of circumstances on workers' effort
 - ... but those in HIGH predict a relevant impact
 - Those in HIGH also account more for different circumstances on their decisions
 - Less than 20% among LOW vs. more than 30% in HIGH
 - **Revealing impact** of different circumstances closes the gap
 - Only affect decisions of those in LOW

Fairness Preferences

Cappelen et al. (2022):

Meritocracy under Uncertainty

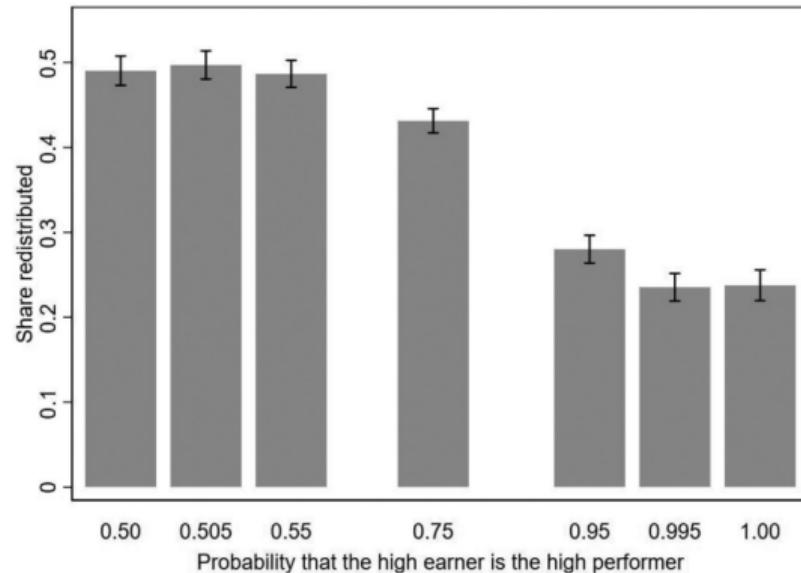
- Setup:
 - ~200 university students in Washington D.C.
- ① Participants work on an effort task
 - Add sets of five two-digit numbers without using a calculator
 - ② Participants are many times paired and decide as dictators how to redistribute payoffs
 - Initial payoffs of (\$20, \$0) are determined with stated probability by task outcome
 - One in seven possibilities: 0%, 1%, 10%, 50%, 90%, 99%, 100%.
 - Probabilities that the high earner is the high performer:
 - 50%, 50.5%, 55%, 75%, 95%, 99.5%, 100%.

Fairness Preferences

Cappelen et al. (2022):

Meritocracy under Uncertainty

- Empirical Evidence:



Main Takeaways

- People take into account **other's payoffs**
- **Reciprocating** past behavior yields utility
 - Greater when response matches perceived kindness
 - Perceived kindness depends on consequences and intentions
- Outcomes **distribution** matters
 - Narrowly focusing on own payoffs is a rarity, most individuals also yield utility from others
 - Impacts can vary depending on whether other's payoffs are larger/lower than own payoff
- People strive for **fairness** in outcomes
 - Equality is not always perceived as fair
 - Disutility arises from differences between what other's should and actually get