On the origin of injunctive norms: Theory and Experiment

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Introduction

Recent studies: Large explanatory power of **injunctive norms**.

- Injunctive Norms → What one should or should not do.

Previous literature:

- Introduce an incentive compatible task to elicit injunctive norms in the lab. (Krupka and Weber (2013))
- Task used in several studies.

Limitation: No theory for the source of the norm. (exception Kimbrough and Vostroknutov (2023))

This paper: I propose a theory of injunctive norms.

- Injunctive norms can be micro-founded with Kantian moral concerns.
- Key mechanism: **Universalization reasoning** → What if everyone else also did that?

Krupka and Weber framework

Consider a decision problem where an individual has to choose an action $a \in A$.

$$u(a) = \underbrace{V(\pi(a))}_{\text{Material Incentives}} + \underbrace{\gamma N(a)}_{\text{Normative Incentives}}$$

- $V(\cdot)$ is a concave function.
- $\pi(a)$ is the individual's monetary payoff when he selects action a.
- $\gamma \geq 0$ is individual's degree of norm compliance.
- $N(a) \in [-1, 1]$ represents how "socially appropriate" is to choose action a.

$N(a)$ elicited empirically with a coordination game.

Proposed injunctive norm

Individuals' utility function: (Alger and Weibull (2013))

$$u(x,y) = \underbrace{(1-\kappa)\pi(x,y)}_{\text{Material payoff}} + \underbrace{\kappa\pi(x,x)}_{\text{Moral concerns}}$$

$$\tilde{u}(x,y) = \underbrace{\pi(x,y)}_{\tilde{V}(\pi(x,y))} + \underbrace{\tfrac{\kappa}{1-\kappa}}_{\gamma}\underbrace{\pi(x,x)}_{N(x)}$$

$$\rightarrow N(x) \equiv \pi(x,x)$$

Extended Utility   Extended Norm

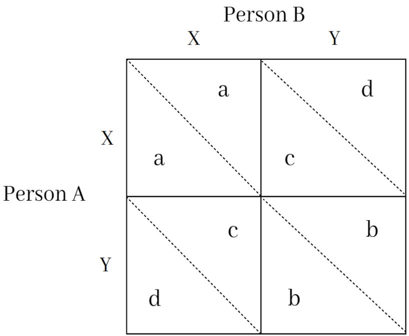
Prediction: Individuals evaluate strategies leading to a higher $\pi(x,x)$ as more socially appropriate.

- Consider an interaction behind the veil of ignorance (Rawls (1971)).
- The most socially appropriate strategy is the one that maximizes individuals' material payoff if it were to become a universal law (Kant (1785)).

Experimental Design

- Elicit injunctive norms in seven **situations** with the Krupka and Weber (2013) method.
  - Example situation: Dictator game with earnings. Situations
- Each situation is divided into two **variants** that differ in one dimension.
  - Example variants: Dictator (Variant 1) or Recipient (Variant 2) works to generate the endowment.
- Design allows for **within** and **between** variant tests.
- **Purpose of the experiment**:
  - Test the theory in interactions of various natures.
  - The variants are selected to test key predictions of the theory.
  - Provide new evidence.

2x2 symmetric games



- $N(X) = a$
- $N(Y) = b$

Stag hunt game

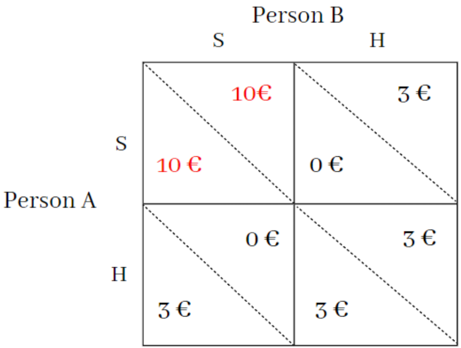


Figure: Stag Hunt 1

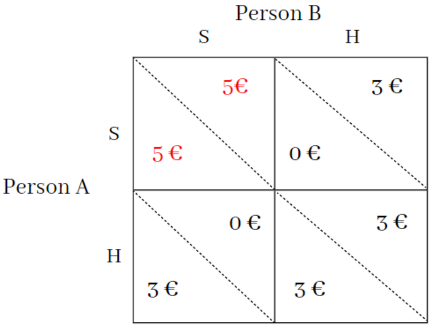
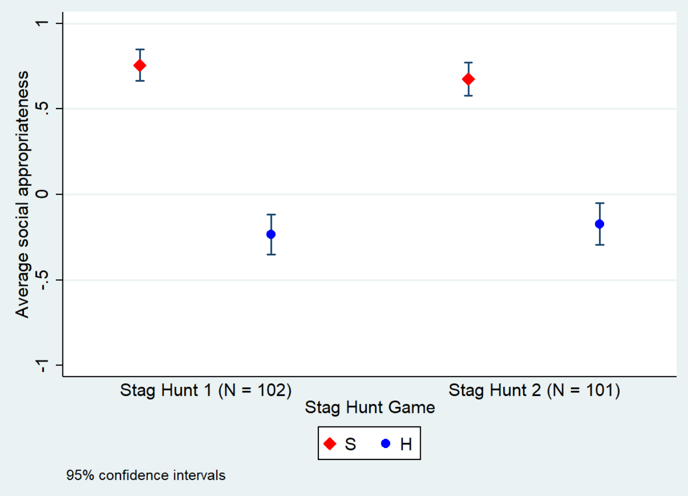


Figure: Stag Hunt 2

Stag hunt game



Prisoner's dilemma

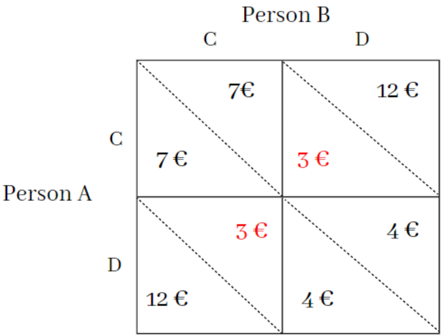


Figure: Prisoner's Dilemma 1

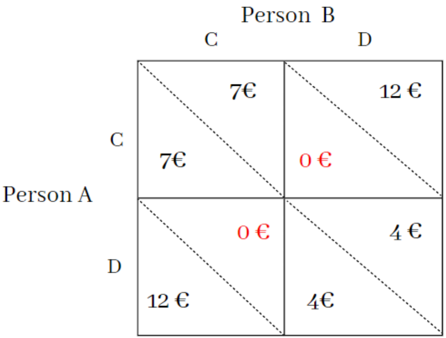
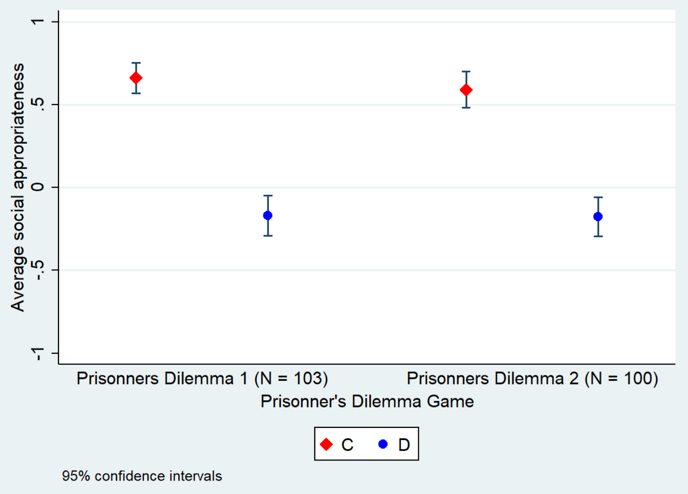


Figure: Prisoner's Dilemma 2

Prisoner’s dilemma



Conclusions

- Recent studies have shown the large explanatory power of injunctive norms.
- I propose a theory of injunctive norms.
  1. Account for the injunctive norms elicited in previous studies.
  2. A potential explanation for how individuals form injunctive norms.
  3. Test the predictions of the theory in different settings with a lab experiment.

Thanks for your attention!

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Extended Utility

Individuals' utility function:

$$u(x,y) = \underbrace{(1-\kappa)\pi(x,y)}_{\text{Material Incentives}} - \underbrace{\alpha \max[\pi(y,x)-\pi(x,y),0] - \beta \max[\pi(x,y)-\pi(y,x),0]}_{\text{Social Preferences}} + \underbrace{\kappa\pi(x,x)}_{\text{Kantian concerns}}$$

- $\pi(x,y)$ is the material payoff under strategy profile (x,y).
- $\pi(x,x)$ is the material payoff if the other individual were to (hypothetically) choose the same strategy x.
- $\kappa \in [0,1]$ is the degree of morality.
- β is the degree of (dis)utility from advantageous inequality.
- α is the degree of (dis)utility from disadvantageous inequality.

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Extended injunctive norm

Include **kindness** motivation where individuals evaluate positively strategies that "help others"

$$g(t_i, \tilde{t}_{-i}) \equiv \sum_{j \neq i} \pi_j(\tilde{t}_{-i}, t_i)$$

I define the **extended norm** as a convex combination of the **universalization** and **kindness** norms.

$$\widetilde{N}(t_i, \tilde{t}_{-i}) = (1 - \tau_i) N(t_i) + \tau_i g(t_i, \tilde{t}_{-i})$$

$\tau_i \in [0, 1]$ the weight the individual attaches to the kindness motive.

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Normalization function

Consider $\bar{t} \in argmax_{t \in X} N(t)$ and $\underline{t} \in argmin_{t \in X} N(t)$.

Then, I define the normalization function $z(t) \equiv 2\frac{N(t)-N(\underline{t})}{N(\bar{t})-N(\underline{t})} - 1$.

This imposes:

1. The social appropriateness of each strategy is between -1 and 1.
2. The ranking proscribed by $N(t)$ is maintained by $z(t)$.
3. $N(\underline{t}) = -1$ and $N(\bar{t}) = 1$.

Situations and Variants

1. Linear public goods games (vary return contributing public good)
2. Volunteer's dilemma (vary group size)
3. Coordination game with two Pareto ranked nash equilibria.
   - Vary payoffs when coordinating in the Pareto-dominant NE.
4. Stag hunt game.
   - Vary payoffs when coordinating in the payoff-dominant NE.
5. Prisoner's dilemma.
   - Vary payoff of cooperating when opponent defects.
6. Dictator game with earnings (dictator or recipient works)
7. Dictator game with joint production.
   - Differences in contributions for endogenous or exogenous reasons.

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