Social Influence in Prosocial Behavior:
Evidence from a Large-Scale Experiment

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Teaching materials for the JEEA

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Social influence

Social influence

Relevant to most choice domains that economists care about

- e.g. consumption, financial, prosocial behavior, voting, etc.

People tend to conform to the behavior of others

- Why?

Related literature

Evidence of social influence from vast array of domains

- charitable giving (Frey and Meier 2004, Kessler 2017), donating blood (Bruhin et al. 2015), public good contribution (Chen et al. 2010), exercising (Aral and Nicolaides 2017), marketing (Bapna and Umyarov 2015), public protests (Cantoni et al. 2017), voting (Bond et al. 2012), water and energy conservation (Ferraro and Price 2013, Allcott and Rogers 2014), tax avoidance (Drago et al. 2020) ...

Potential mechanisms of social influence

- reciprocity (Rabin 1993), conformity (Bernheim 1994), social learning (Bikhchandani et al. 1992), social incentives (Bandiera et al. 2009)
- disentangling conformity and social learning in financial decisions (Bursztyn et al. 2014) and lottery choice (Lahno and Serra-Garcia 2015)

This project

Questions

- Why do people conform?
- Can the economic environment induce conformity when peers' behavior is not observable?

Theoretical framework

- Conform to identify with *attractive role* (Kelman 1961)
  - Social proximity
  - Aspirational role played by peer

Experiment in prosocial behavior setting

- Eliminate any scope for social learning
- Manipulate incentives of peers to test conformity predictions on donations
- Help of belief data to distinguish mechanisms

Two classes of conformity models

Instrumental conformity:

Normative conformity:

Two classes of conformity models

Instrumental conformity: Imperfectly informed agents infer relevant *states* from others' behavior (Banerjee 1992, Bikhchandani et al. 1992)

- Tightly related to social learning

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Normative conformity: Desire to adhere to the behavior of a relevant social reference (Kelman 1961, Jones 1984, Bernheim 1994, Akerlof 1997)

- The focus of this paper

The role of conformity in prosocial behavior

Simple model with conformity

$$U(d_i|m_i, m_j) = (v_i + m_i)d_i - c(d_i) - \kappa_{i,j}(\lambda_{i,j}, m_i, m_j) \tag{1}$$

- d_a is a's donation, for $a = \{i, j\}$
- $v_a \sim F(v_a)$ is a's prosocial type
- In $\kappa_{i,j}(\cdot)$ we incorporate insights from Kelman 1961
  - conformity pressures endogenous to the peer's prosocial intentions
  - conformity pressures increasing in social proximity to the peers

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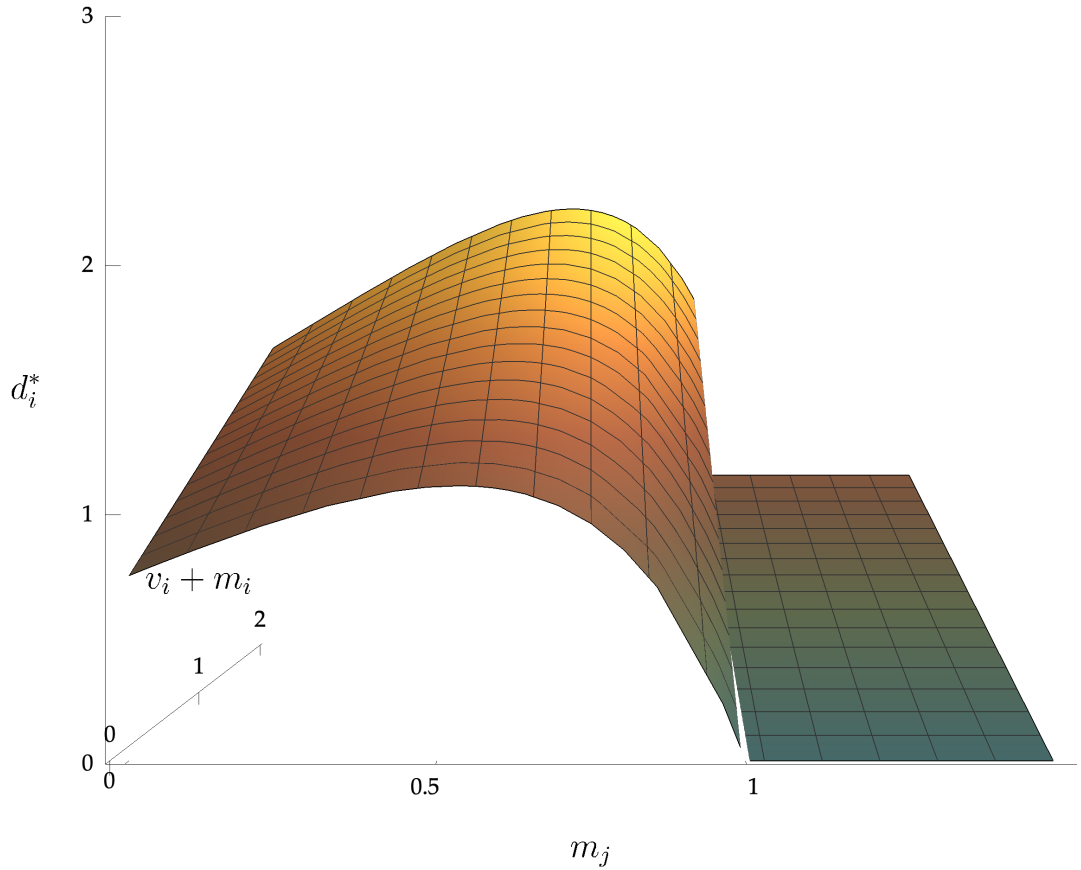
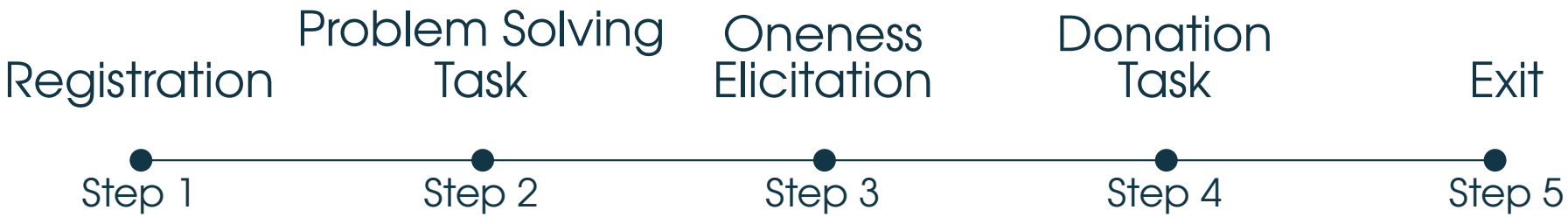
This model generates non-monotonic responses to peer's incentives

- that cannot be captured by altruism, warm-glow, inequity aversion

For quadratic cost and uniform $F(v_a)$



Timeline of the experiment



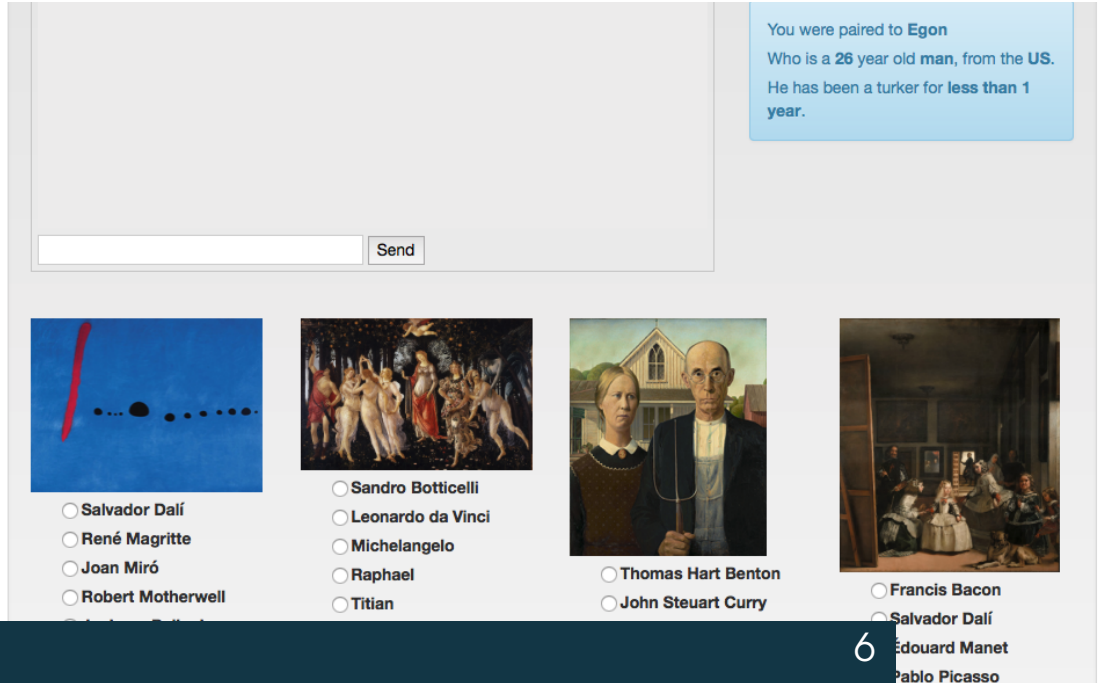
Timeline of the experiment

Registration — **Problem Solving Task** — Oneness Elicitation — Donation Task — Exit

Step 1 — **Step 2** — Step 3 — Step 4 — Step 5

Subjects meet in random pairs and jointly solve a puzzle

- Pay each correct answer that both partners give
- Contact to develop social proximity (Chen and Li 2009)



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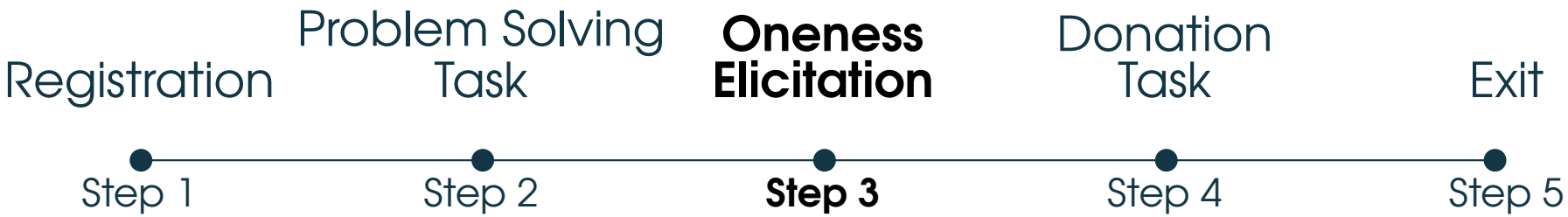

Oneness: Proposed by Cialdini et al. 1997

- Simple average of WE scale and IOS scale
- Validated by Gächter et. al 2015 for measuring subjective closeness to another person

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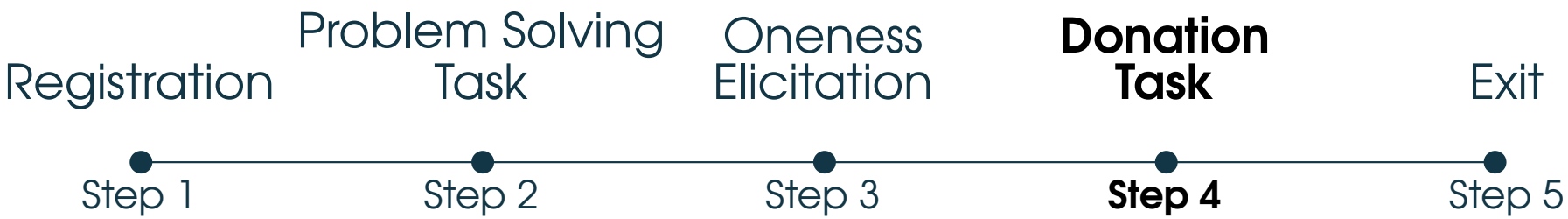

Task: 50 tokens donation for DWB by entering 100 "w"-"e" keystroke sequences

- Each player can independently generate up to 10 donations

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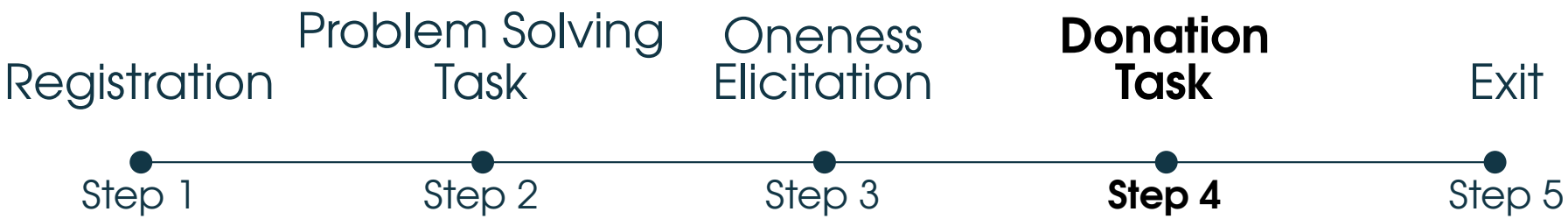

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- 3×3 incentive treatments, between-subject
  - incentives to **self**: *none*, *moderate*, *high*
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  - incentives in every pair are common knowledge

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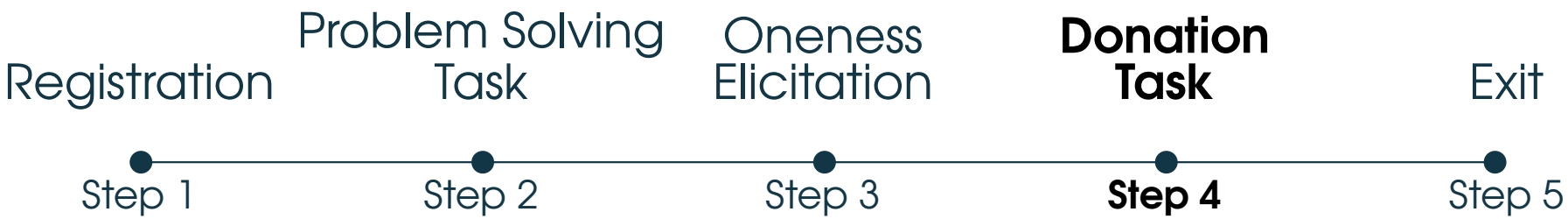

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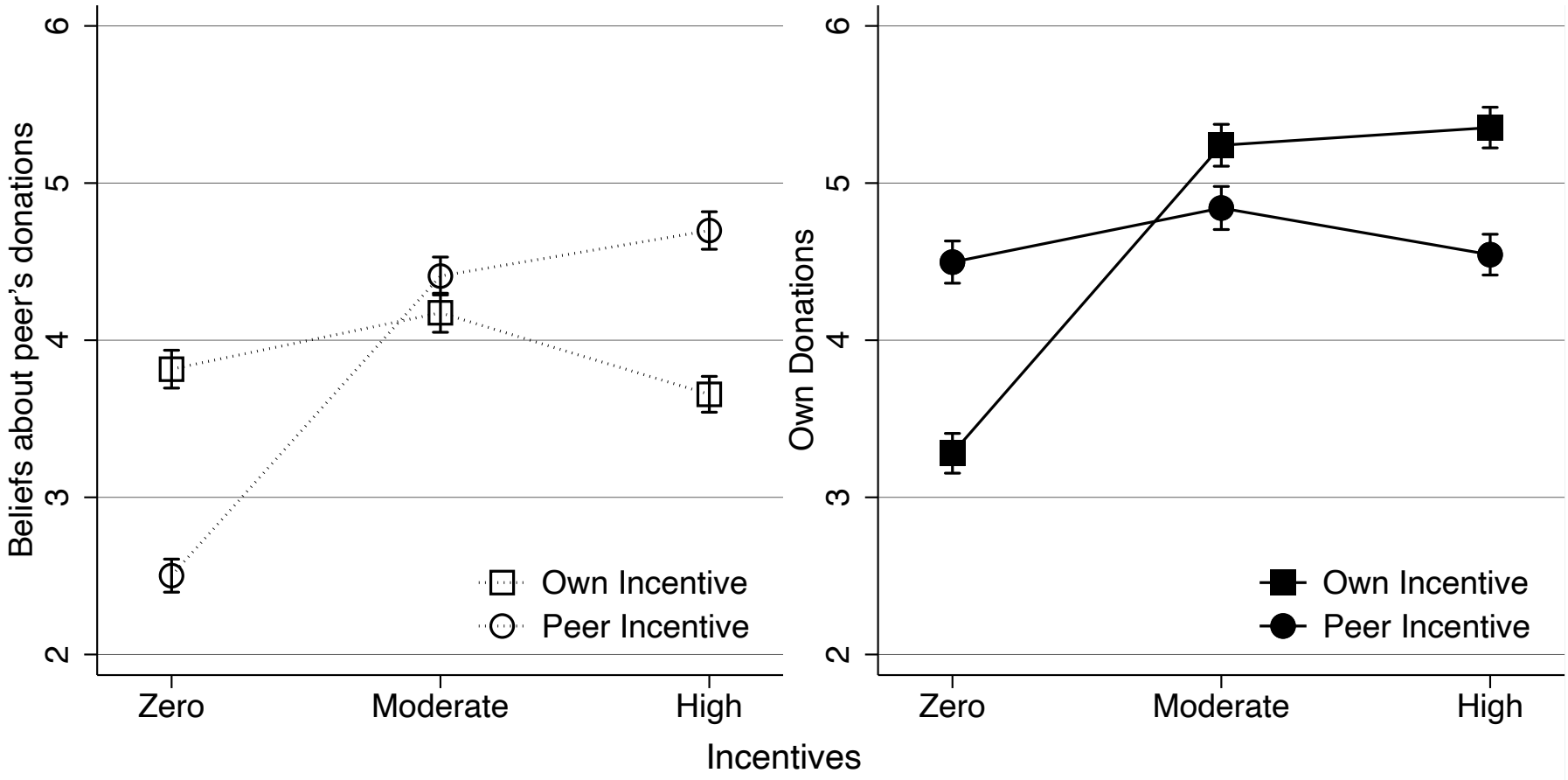
Outcomes: Beliefs about peer's donations and subject's donation

Results overview



Incentive effects

	Oneness *Above* Median		Oneness *Below* Median	
	Donation	Belief	Donation	Belief
Incentives to self (*baseline: None*)				
Moderate	1.921***	0.420*	2.037***	0.257
	(0.254)	(0.222)	(0.254)	(0.260)
High	1.712***	-0.337	2.502***	-0.105
	(0.242)	(0.221)	(0.259)	(0.227)
Incentives to other (*baseline: None*)				
Moderate	0.837***	2.155***	-0.214	1.773***
	(0.259)	(0.222)	(0.268)	(0.221)
High	0.170	2.227***	-0.251	2.218***
	(0.236)	(0.211)	(0.269)	(0.229)
Observations	1571	1571	1343	1343
R^2	0.096	0.115	0.107	0.101

Do weak ties conform?

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- Substitution as in standard (im)pure altruistic giving
  - They monotonically increase giving with incentives
  - They expect their partner to do the same
  - They don't react much to partner's incentives: if anything they slightly decrease giving as they expect their partner to give more

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- Stronger response to moderate *incentives to other* (ITO)

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Beliefs

- support view that moderate incentives induce conformity
- rule out non-monotonic response to ITO due to substitution

Main takeaways

Social influence in prosocial behavior

- Evidence for conformity model of identification
- Clean separation from social learning
- Design also rules out social/self signaling, reciprocity, social incentives
- Empirically rule out incentive inequality and (im)pure altruism

Implications

- Social influence spreads even without social information about others' behavior
- Enrich message on how incentives shape norm-adherence (Gneezy and Rustichini 2000; Fuster and Meier 2009)
  $\hookrightarrow$ incentives don't just break norm-adherence. Size matters!