

# Does Indirect Reciprocity Motivate People to Behave Prosocially Toward Organizations? Evidence from the Field

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## Summary:

- Indirect reciprocity motivates prosocial action toward identifiable individuals. But can indirect reciprocity motivate prosocial behavior toward organizations at scale? And what might that reveal about the mechanism underpinning indirect reciprocity?
- In a preregistered field experiment (N = 9,442) and lab replication (N = 798), we find that people who benefited from the services of a not-for-profit are **more likely to donate to the organization when urged to “pay it forward” rather than to “help someone else” by donating.**
- Follow-up mechanism investigation (N = 1594) suggests that in line with prior literature on indirect reciprocity, **descriptive norms** mediate the effects of pay-it-forward messaging on motivating prosocial action. But, we also find evidence for a second mechanism – **impact clarity.**

## Background & Motivation:

- From children’s play to economic games and peer-to-peer interaction, indirect reciprocity **motivates prosocial behaviors** (Beeler-Duden & Vaish, 2020; Gray, Ward & Norton, 2014; Yoeli, Hoffman, Rand & Nowak, 2013).
- Indirect reciprocity can enhance **gratitude** (Bartlett & DeSteno, 2006), **boost reputational concerns** (Alexander, 1987), and highlight **descriptive norms** (Jung, Nelson, Gneezy & Gneezy, 2014).
- However, given anonymity and reduced perceptions of personal impact when donating to a large organization could dilute the strength of pay-it-forward messaging when employed at scale.

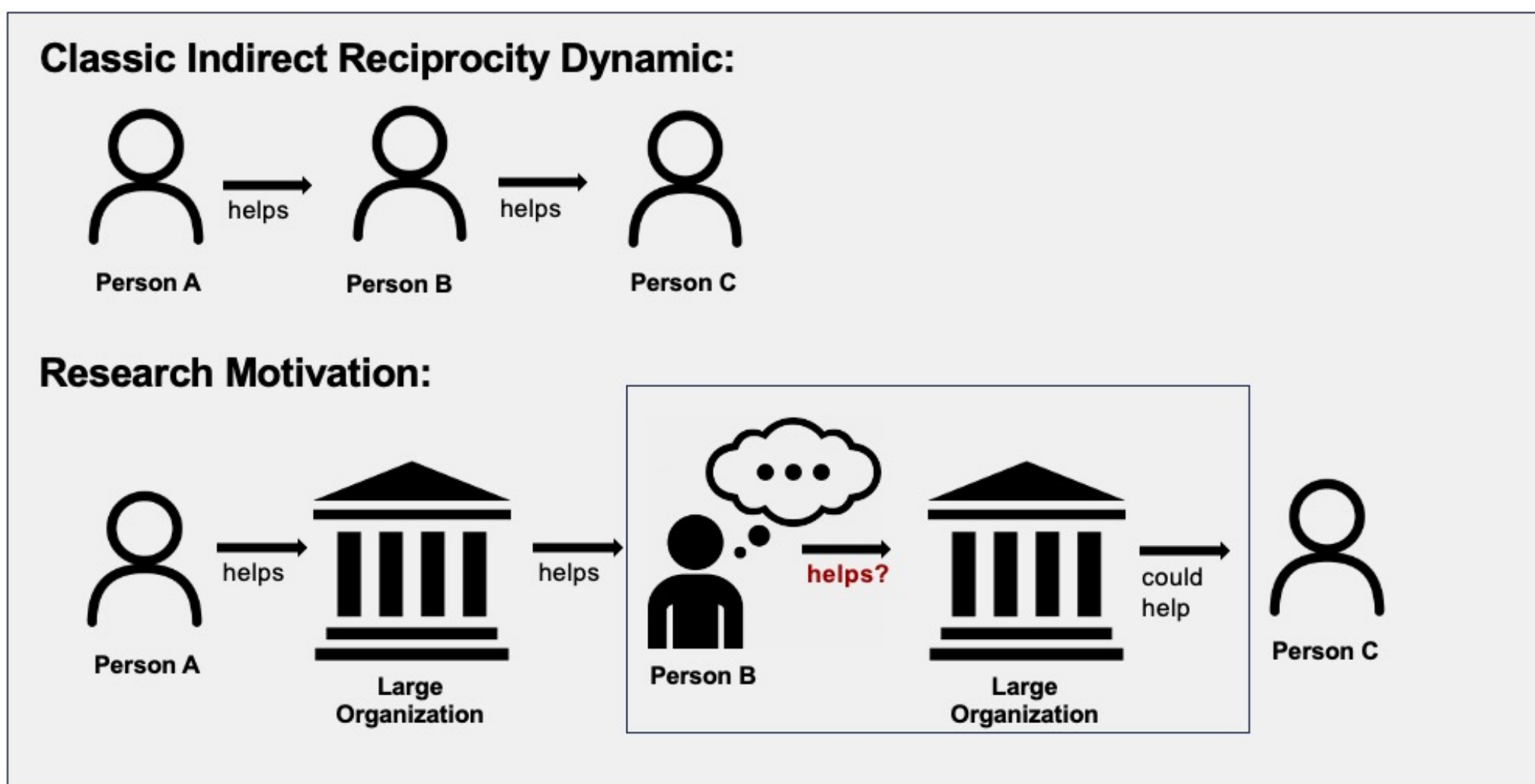


Fig 1. Indirect reciprocity is operationalized as an individual-to individual-to individual helping scheme. We examine the dynamic of individual-to organization-to individual (via organization) helping behavior.



## Methods: Field Study #1 & Lab Replication (Study #2)

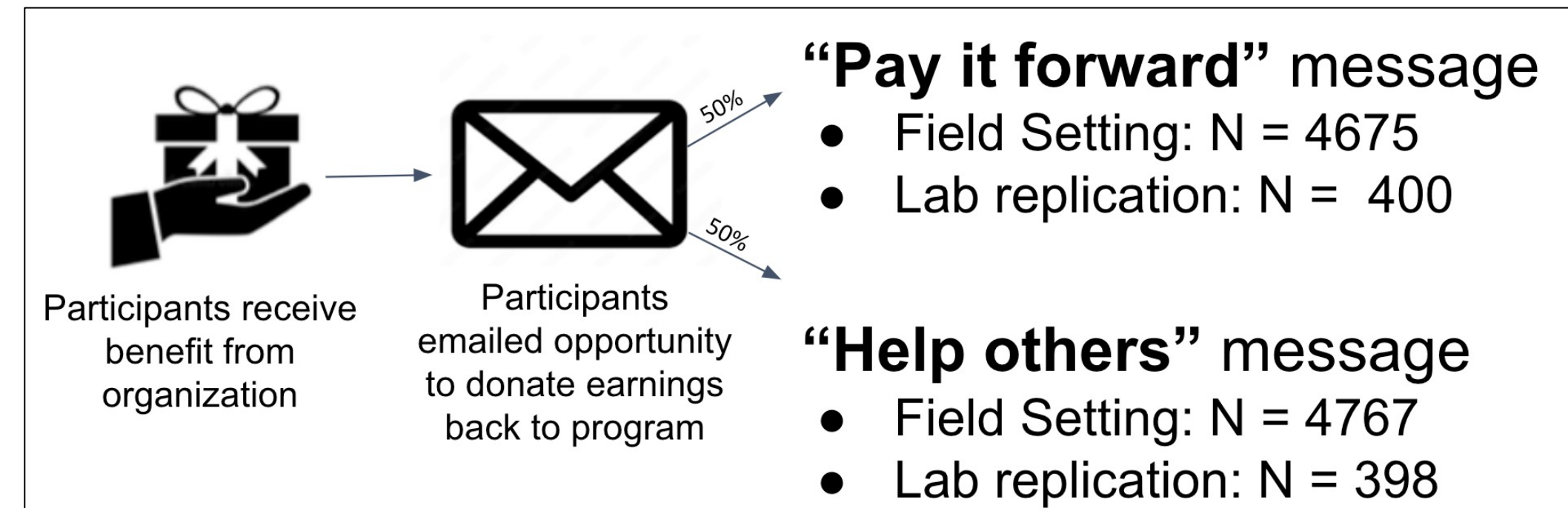


Fig 2. Participants enrolled in a free program that allowed them to earn small monetary incentives for going to the gym (N = 9,442). Participants were randomly assigned to receive an email at the end of the program that either encouraged them to “pay it forward” or simply “help others,” holding social norms constant across conditions. The decision to donate earnings back to the program was then recorded. The methods were replicated on Prolific (N = 798), but rather than partaking in the program and making actual donations, participants envisioned partaking in the program and rated their donation likelihood. See Panel 3, Figure 4 for stimuli.

## Results & Discussion: Field Study #1 and Lab Replication (Study #2)

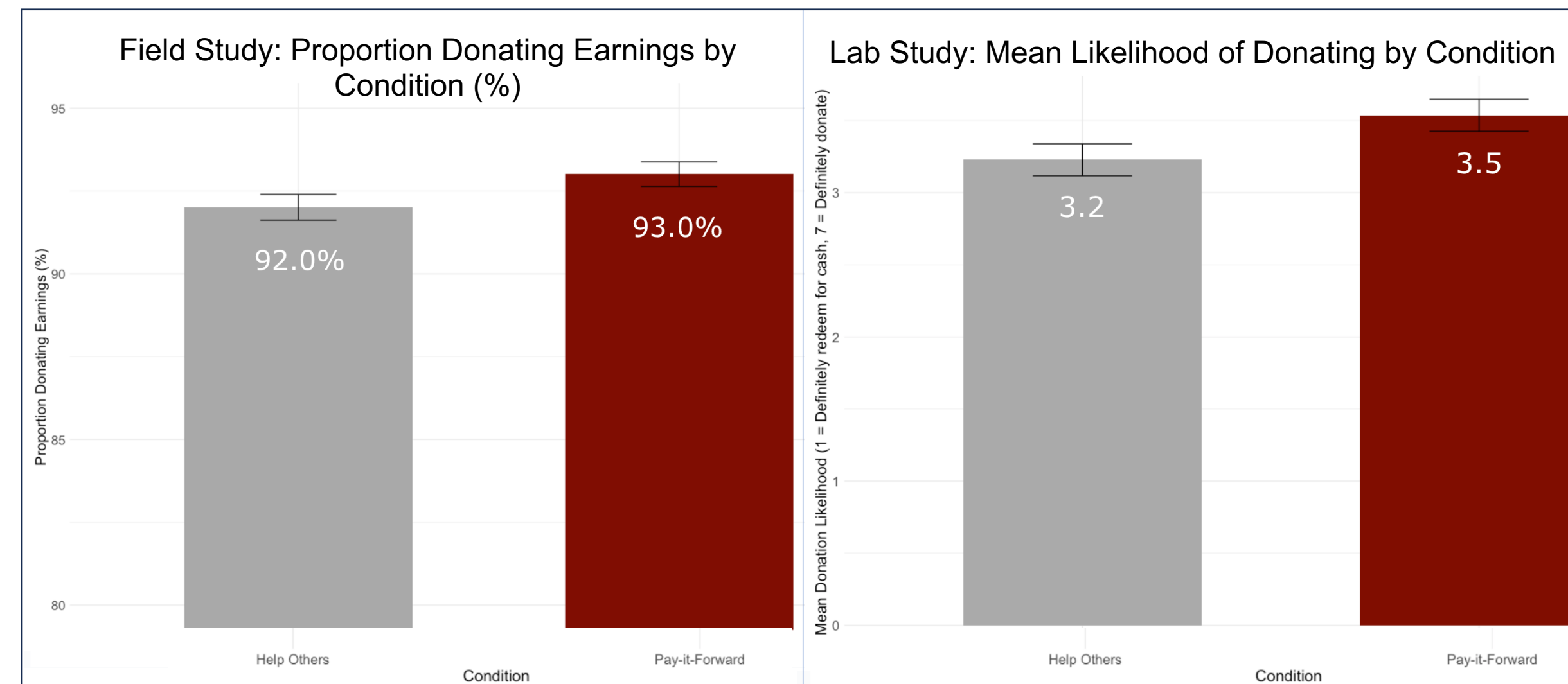


Fig 3. Proportion donating in the field context (left panel) and likelihood of donation in the in-lab replication (right panel) are greater in the pay-it-forward condition than the help others condition. Both lifts in donation rates are statistically significant.

- In the field, participants were a regression-estimated **1.37 percentage points more likely to donate their earnings in the pay it forward condition** than in the control condition (a 1.49% increase in donations) ( $p = .01$ ), a small but significant effect on donation propensity. Such findings suggest indirect reciprocity appeals can also guide human-organization giving behavior.
- This result was replicated in the lab. Participants encouraged to “pay-it-forward” rated themselves as .31 scale points more likely to donate back to the non-profit than participants encouraged to simply “help others” (**a 9.6% lift in donation likelihood**) ( $p = .05$ ).
- A preregistered follow-up field study “pressure tested” pay-it-forward messaging in a novel setting – university course evaluations (N = 2,246). We observed a very small but not significant .64% lift on course evaluation completion rates compared to requests to “help others” ( $p > .10$ ). Ex post, we find impact clarity and descriptive norm beliefs may be less malleable in the course evaluation setting (descriptive norms,  $t(283) = 3.78$ ,  $p < .005$ ; impact clarity  $t(283) = 5.09$ ,  $p < .005$ ).

## Study 3: Mechanism Methods & Results

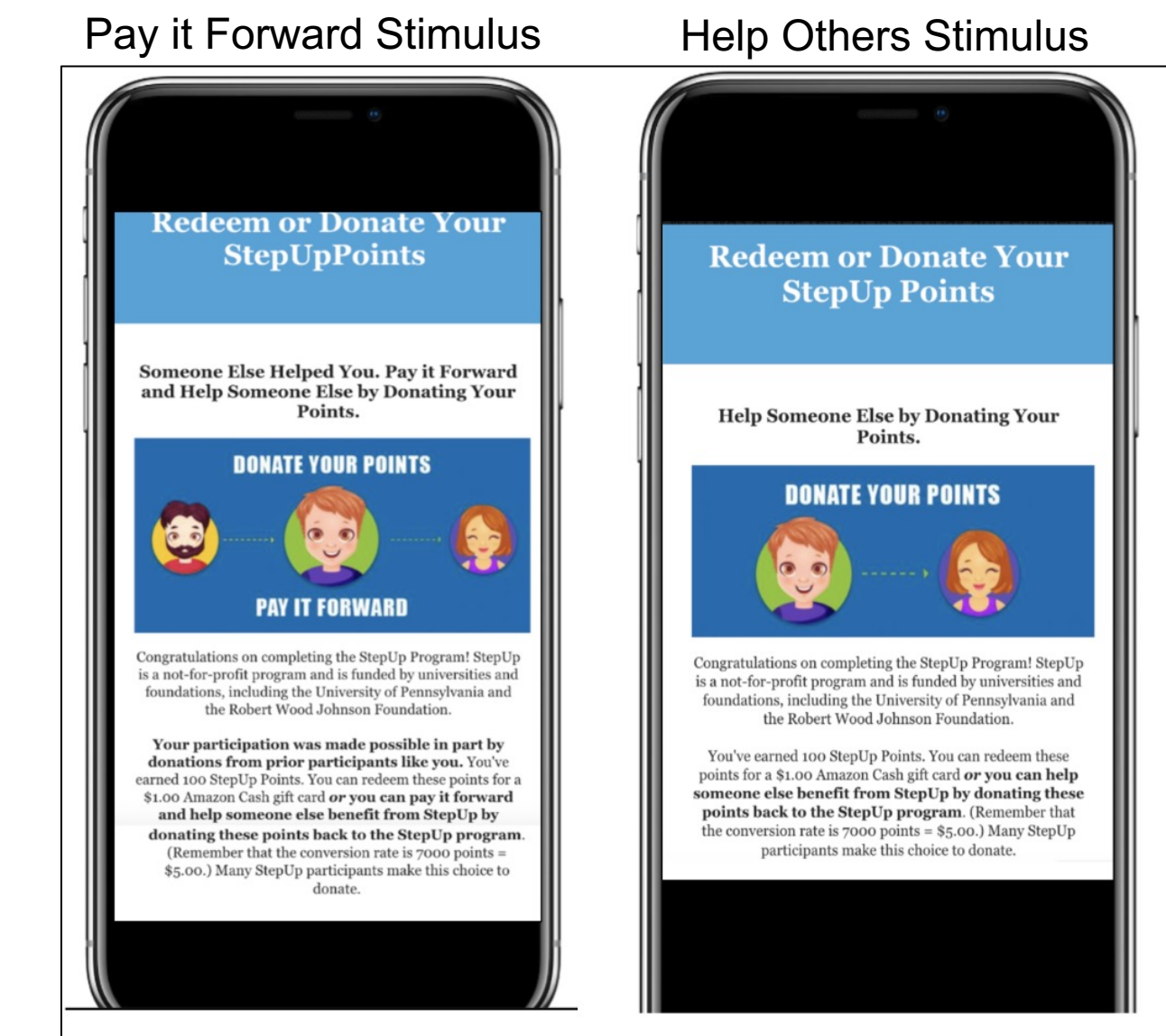


Fig 4. Participants in Study 3 saw the same email stimulus as Studies 1 and 2 and were prompted to consider both donation propensity and the message’s potency on four prospective drivers of the indirect reciprocity effects previously observed.

On Prolific (N = 1591), we examined four potential drivers of indirect reciprocity. Participants saw the same stimuli as Field Study #1 and the in-lab replication (see left) and rated their sentiments on the following four items on a 7-point scale (1 = “Completely disagree”, 7 = “Completely agree”).

- Gratitude: “I am grateful to StepUp”
- Impact Clarity: “I feel like my donation will make a clear impact”
- Descriptive Norms: “I think most people donated”
- Similarity to recipients: “I think people who would benefit from StepUp are similar to me.”

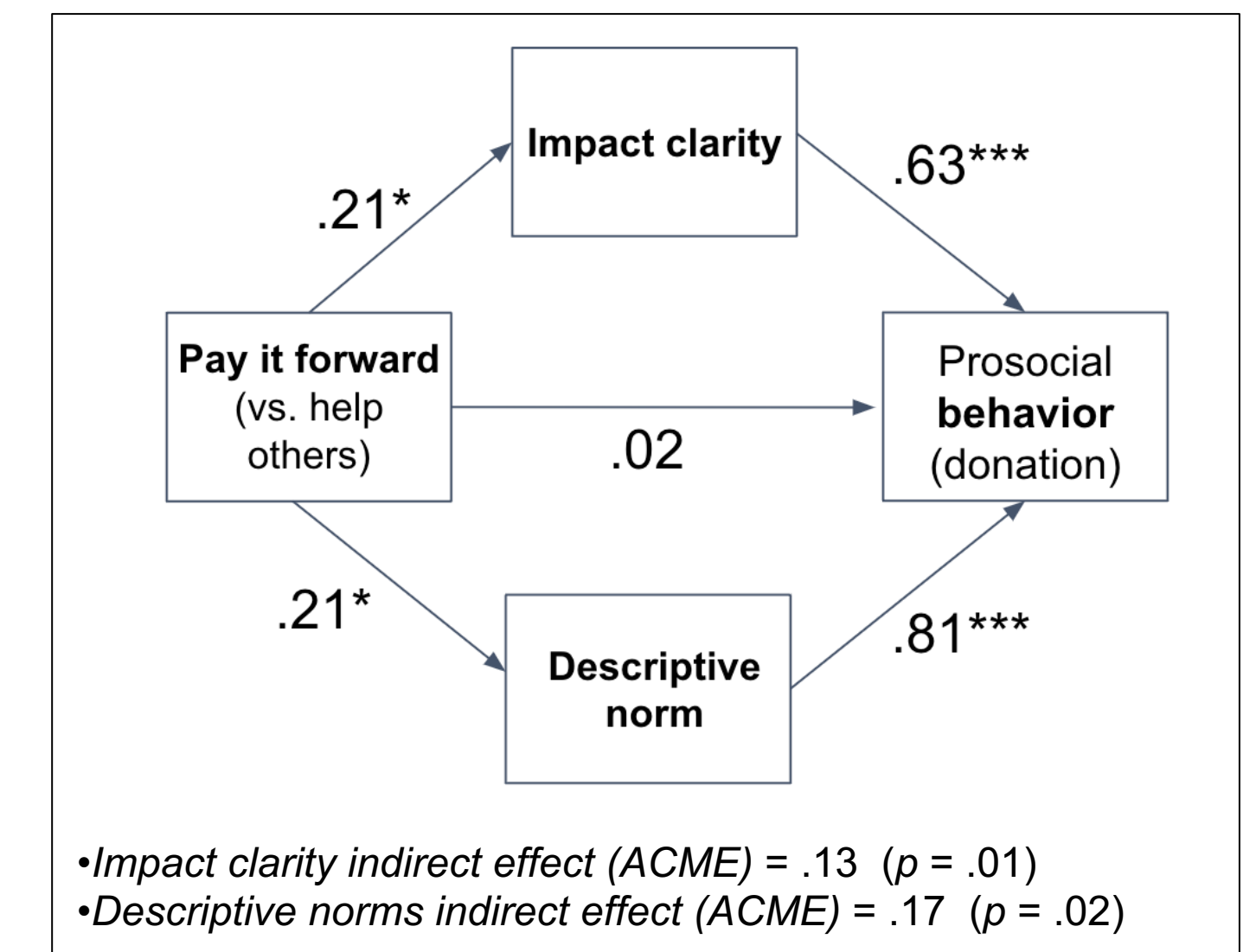


Fig 5. Both descriptive norms and impact clarity showed significant indirect effects on the likelihood of donation, but neither gratitude toward the program nor similarity to recipients significantly indirectly impacted donation propensity. Note that we were underpowered to detect the very small main effect of pay-it-forward messaging on donation propensity in this study (where  $d = .07$ ). Descriptive norms as a key mediator aligns with prior findings by Jung, Nelson, Gneezy and Gneezy (2014), and prior work has pointed to the importance of clear impact in large-scale donation efforts (e.g. Jenni & Loewenstein, 1997) though suggests the impact may go beyond changes to perceived proportion of contributions.

## References

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