The Limits of Social Recognition: Experimental Evidence from Blood Donors*

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Abstract

Does social recognition motivate prosocial individuals? We run large-scale experiments at Italy's main blood donors association, evaluating social recognition through social media and peer groups against a simple ask to donate. Across several studies, we find that the simple ask is at least as effective as offering social recognition. In a survey experiment with blood donors we show that socially recognized donations signal not only altruism but also image-seeking. This can lead to social recognition being less effective, or even counterproductive, when offered to those who are already perceived as good citizens.

Keywords: Prosocial behavior, blood donations, social recognition, observability, natural field experiment, social media, WhatsApp.

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Did you hear my covert narcissism I disguise as altruism
Like some kind of congressman? (Tale as old as time)

Taylor Swift, Anti-Hero

Well-functioning societies rely on the contributions of good citizens. These are the mission-oriented workers, community leaders, and volunteers who consistently support their communities, often without direct material compensation that matches the full social value of their efforts. To understand how such individuals are motivated, an active research agenda has explored complementary forms of compensation that foster good citizenship. Such compensations range from future benefits in social interactions, the psychological utility from helping others, and social rewards (Bursztyn and Jensen, 2017; Ashraf and Bandiera, 2018).

Theory emphasizes conformity with socially relevant groups, social pressure, and costly signaling of a socially desirable identity as reasons why people respond to social recognition (Bernheim, 1994; Bénabou and Tirole, 2006, 2011). However, it remains unclear whether social recognition enhances the motivation of all potential contributors. On the one hand, a stronger identification with a group can heighten the importance of norm adherence. On the other hand, once a strong altruistic reputation is established, increasing observability as a reward may dilute the positive signal or even portray good actions as selfish image-seeking behavior (Bénabou and Tirole, 2006).

To empirically investigate these theoretical considerations, this paper examines the role of social rewards in shaping good citizenship. Our focus is on understanding how recognition, a prevalent social reward, motivates repeat blood donors. Collaborating with Avis, the largest Italian association of blood donors, we embedded experimental protocols into the information systems of its Tuscany chapter.[1] Donors were asked to donate blood in the month following our experimental communications, with our primary outcome of interest being whether they made any donations during this period. We employ two main approaches for providing social recognition. First, we introduce a social media campaign

[1]Several features make the setting exceptional. First, we can eliminate concerns that the results could be driven by awareness of being observed by researchers and concerns of participants acting out of desire to please the experimenter. Second, we can ensure high levels of participants' engagement with our intervention thanks to the availability of official trusted communication channels. Third, we have direct access to administrative records of blood donations from the regional health authorities that we can precisely link to experimental data.

that rewards participants who donate during the study period by prominently listing their names on Avis Toscana's widely followed Facebook page. Second, we adapt a classical intervention from Gerber et al. (2008) where we inform small random groups of 20 donors about their peers' recent donation behavior and subsequently reveal the identities of those who donated within the period.

We test social recognition against two natural benchmarks: not being solicited and being solicited with a simple ask. To maximize reach, all treatments were delivered through the WhatsApp Business API. We find that participants donate more in the social recognition treatments compared to when they are not solicited. However, the simple ask is at least as effective at encouraging giving as any of the social recognition interventions. It is also significantly more effective than offering social recognition in the public format on Facebook pages.

We also test the Facebook recognition treatment in a large pilot administered via email (instead of WhatsApp). We document that email interventions in this setting fail to reach a large proportion of donors and consequently have limited scope to change behavior. By replicating Facebook recognition in both an email and a WhatsApp implementation, we identify the null findings of our email intervention as an implementation failure.[2]

In sum, we find that a simple ask in this setting proves to be at least as effective as recognition incentives (which are costly for organizations to implement). Although this is an unusual finding (as highlighted in our own meta-analysis in Online Appendix A), models of social image concerns can explain the negative effects of social recognition as an overjustification. Specifically, if agents are heterogeneous in their desire to be seen as altruistic by others, visible acts of good citizenship signal both the agent's prosocial type and their desire to impress others. Increasing the visibility of good deeds can backfire when the prevailing sentiment views such actions as image-seeking behavior (Bénabou and Tirole, 2006, p. 1,665).[3]

Using a pre-registered survey experiment with 3,016 participants from the main study, we provide more direct evidence for this mechanism, illustrating how social recognition influ-

[2]Distinguishing between true null findings and implementation failures is a point made systematically in a more recent study by Angrist and Meager (2023).

[3]We thank Roland Bénabou for this helpful suggestion. An explicit illustration of how heterogeneous image concerns deliver this result, in a model of social signaling, is provided in Online Appendix B.2.

ences acts of good citizenship differently based on the target population. We first measure inferences about the types of donors who do donate in our study. We then collect three sets of beliefs regarding either a selected sample of repeat donors or the general population: i) key primitives of social signaling models, ii) predictions about the donation difference from an intervention that compares the *Simple ask* and *Facebook* messaging, and iii) qualitative evidence of what donors believe as the main mechanisms behind these interventions.

We first establish that inferences about those who donate in our study align with the idea that donations signal both altruism and image concern. Turning to primitives, we find that participants anticipate a more concentrated distribution of altruistic preferences toward high altruism among repeat donors than in the general population. This implies a relatively limited scope for repeat donors to signal altruism through public acts. Conversely, they expect the distribution of image concern to remain flat for both repeat donors and the general population, suggesting scope for signaling image concern through public acts.

Moreover, we find that respondents predict that similar social recognition interventions are more likely to be successful with the general population but could backfire with repeat donors. Taken together, these findings help explain why simply asking works better than social recognition in our setting: recognition can backfire when good actions do little to improve altruistic image and instead signal image concern. Qualitative responses also support this view and indicate that other mechanisms, such as privacy concerns (Goldfarb and Tucker, 2011) or aversion to control systems (Ellingsen and Johannesson, 2008), are perceived to play a lesser role in our setting.

This paper contributes to a broad literature on social recognition (for a review, see Bursztyn and Jensen, 2017).[4] Few of these papers focus on settings where people already have a strong identity and reputation as good citizens. Exceptions include Ager et al. (2021), who study status seeking on the intensive margin of performance among World War II pilots, and Soetevent (2005), who studies church offerings in a repeated experiment. Among repeat blood donors, we show that prospective social recognition does not motivate people to give.

[4]Relevant to our work is the extensive literature on how prosocial behavior responds to image concerns (Ariely et al., 2009), social norms (Frey and Meier, 2004; Fellner et al., 2013), and social pressures (DellaVigna et al., 2012). Support for these social influence mechanisms also comes from studies on other forms of good citizenship, such as child immunization (Karing, 2018), energy conservation (Allcott and Rogers, 2014), and voting (Gerber et al., 2008).

This contrasts with other studies that report suggestive positive effects of social recognition on blood giving. For example, Lacetera and Macis (2010) study non-linear social incentives to provide quasi-experimental evidence on how the prospect of reaching a milestone of donations that qualifies for a publicly awarded medal affects the time lag between donations. Meyer and Tripodi (2021) manipulate the visibility of blood donation pledges (but not the act of giving itself) and find increased pledging. Our survey experiment provides several pieces of evidence for a mechanism that explains potential backfiring of social recognition.

Our work also complements a large literature on peer and social influence (e.g., Frey and Meier, 2004; Shang and Croson, 2009; Krupka and Weber, 2009; Allcott, 2011; Ferraro and Price, 2013; Kessler, 2017; Perez-Truglia and Cruces, 2017; Cantoni et al., 2019; Drago et al., 2020; Oh, 2023; Becker, 2021), which has substantially advanced our understanding of how these forces can be molded in natural settings. We offer new insights into a strand of this literature on how context shapes the direction of social recognition effects. Existing evidence shows that the composition of observers in social recognition interventions matters (Bursztyn et al., 2019; Braghieri, 2021), while our paper sheds light on the importance of the composition of the observed. We further show how measuring the inferences that people make regarding others' underlying motives (Gerber et al., 2016; Perez-Truglia and Cruces, 2017; Karing, 2018; Bursztyn et al., 2023) can be used to anticipate how a policy will play out at scale.

Why focus on blood donations? Blood products are essential in medicine and cannot yet be generated artificially (Shaffer, 2020). In most countries, balancing the demand and supply of blood is complicated by the lack of a price mechanism, as blood donors are not monetarily compensated, making the act purely altruistic (World Health Organization, 2009). Given this dynamic, blood donations have captured the attention of social scientists both as a measure of a community's social capital (Guiso et al., 2004) and as a key policy area, with efforts being made to develop non-monetary instruments to address blood shortages (Heger et al., 2020). This study presents the first experimental evidence on the effects of social recognition on blood donations and offers guidance on how natural features of local collection systems can (and cannot) effectively harness social recognition.

The rest of the paper is organized as follows. Section 1 describes the setting and the research design of our interventions. Section 2 provides experimental results. Section 3

presents the survey experiment. Section 4 concludes.

1 Research design

1.1 Institutional setting

In Italy, blood collection relies on NGO blood donor associations. In 2018, 92 percent of donors in Italy were affiliated with such associations (Catalano et al., 2019). These associations play an important role in donor recruitment and collaborate with local hospitals to schedule donation appointments.[5]

Our study was conducted in partnership with the Tuscany chapter of Avis, the largest Italian association of blood donors. Partnering with Avis Toscana allows us to reach the vast majority of blood donors in the region, which are affiliated with a local Avis branch within the region, and it gives us access to several official communication channels to contact donors. Avis Toscana is also one of the few regional chapters in the country to have access to a rich data infrastructure that links administrative-donation-level data from the universe of blood collection centers (including hospitals) available to donors. In turn, this setting is particularly suitable for investigations that combine experimental interventions with accurate administrative data on actual donation behavior.

1.2 Piloting public recognition on social media

In 2019 we conducted a pilot intervention to investigate whether the prospect of social recognition on social media encourages repeat blood donors to give blood when asked.[6] We discuss the pilot to make readers aware of the results of our pre-registered study and to highlight how this pilot has informed the design of our main study.

Figure 1 provides an overview of the design. In a set of *Simple ask* treatments, donors were asked to make a donation in the study period of November 2019 without any incentive. In another set of *Facebook* treatments, donors received a similar messages with the following

[5]In some Italian regions, though not in the context of this study, blood donor associations directly handle blood collection and oversee the commercialization of intermediate blood products.

[6]Pre-registration: #AEARCTR-0004890

social recognition incentive: they were informed that their November 2019 donations would be broadly acknowledged on the organization's highly visited Facebook page.[7] The full design with a full account of experimental materials and pre-registered analyses are relegated to Online Appendix C.

Procedures. Avis Toscana donors were included in the study if they had provided an email address and if they were eligible to donate. This leaves us with 15,326 donors, a sample covering 15.62 percent of active Avis Toscana donors (who donated in the five years before the experiment). Treatment messages were emailed to study participants between October 29 and 31.

Sample. Online Appendix Table C.1 shows that the final sample of 15,326 donors is well balanced across treatments on age and gender. However, there are small imbalances in past donation behavior. We account for these by controlling for individual characteristics in econometric specifications. Post-treatment balance tests show that the opening rate of treatment emails, about 23 percent, is similar across treatments (Table C.1). This is important in a design with treatment randomization at the level of Avis branches, where contact lists are maintained, because it rules out differential quality of contact lists across branches as a confound.

Limitations. The pilot study faced two key limitations. First, the engagement rate was notably low, with only 23 percent of the emails opened. This significantly diminishes our statistical power to detect the anticipated effect sizes that were determined during sample size calculation at pre-registration. Second, randomization was conducted at the Avis branch level, of which only 67 could be included. The size of these branches varies widely, from a few hundred to several thousand donors. Moreover, some of the larger branches have donor pools with distinct socio-demographic compositions. These factors compromise the quality of our randomization, potentially biasing the balance of donor attributes between the treatment and control groups.

[7] The page has over 7,000 Facebook followers and over 48,000 accounts reached per month between Facebook and Instagram.

1.3 Main intervention

Our main intervention addresses the design limitations of the pilot and tests alternative approaches of providing social recognition, guided by a conceptual framework presented in Online Appendix B.1.[8] The design is summarized in Figure 1 (see Online Appendix Table D.3 for an English translation of treatment messages). With the exception of donors in *No ask*, all donors in the study receive a message encouraging them to donate in the month of March 2021, referencing donation procedures. *Simple ask* is an active control that includes a generic statement—"As in every month, we are in need of blood"—that allows us to tie the ask to March 2021 without signaling shortages. In *Facebook*, donors are informed that their donations of March 2021 will be acknowledged broadly through the organization's highly visited Facebook page.

To explore the effectiveness of other approaches to harness social recognition in this setting, we include treatment arms inspired by a classical social recognition intervention that features peer comparisons and visibility in small social groups (Gerber et al., 2008). We adapt it by decomposing the informational content of the intervention to separately identify the two motivational mechanisms. The *Peer + Visibility* treatment mirrors the social recognition intervention in Gerber et al. (2008). It provides a social comparison with fellow group members based on donations made in the past 11 months and promises an image reward at the end of the month—by making March 2021 donations publicly visible within the group. *Peer* includes a similar message but omits the paragraph on the visibility incentive. To assess the role of the communication channel in explaining the results of the pilot, we manipulate whether *Simple ask* and *Facebook* are delivered via email (as in the pilot) or via the official WhatsApp channel.

Procedures. Using Avis Toscana's official WhatsApp account, and with the support of customer engagement service Twilio,[9], we deploy a new tool for conducting experiments. Twilio allows us to access the WhatsApp Business API to simultaneously contact very large

[8] Pre-registration: #AEARCTR-0007266

[9] Twilio.com

numbers of registered donors with personalized messages. [10]

The study includes donors registered at one of the 65 largest local Avis branches in the region. To be included, donors must have provided a phone number to Avis (those who did not are likely to be inactive donors), made their last donation in the past five years, and given that last donation at a blood collection center with at least 500 donors who satisfy these criteria. This amounts to 43,247 donors, a sample representing 52.08 percent of active Avis Toscana donors.

Days before the intervention, Avis Toscana sent out via WhatsApp a short, unrelated survey that serves two purposes. First, it provided delivery receipts to identify donors who do use WhatsApp and allows us to exclude the rest. Second, it introduced our study's consent procedure. Donors were offered a simple way to opt out, at any time, from research studies that Avis Toscana may conduct through this channel, by replying with the keyword "NORICERCA" into the WhatsApp chat. The unrelated survey was explicitly presented as a research study, whereas the experimental communications sent after a few days were not.

We see this as a strength of our study. Natural field experiments (Harrison and List, 2004) are often considered to have greater external validity, but they are also criticized on ethical grounds for not eliciting consent from study participants. Our study strikes a middle ground between eliciting consent and avoiding behavior that would be overly influenced by the subjects' perception of being part of a research study.[11]

[10]The WhatsApp Business API tool was introduced by WhatsApp in August 2018 and is primarily used by large firms and organizations for personalized service communications with their customers and beneficiaries. The social media platform reviews all templates of messages that organizations want to send to their contact lists and does not allow advertisement or mass campaigns. Conducting experiments through the WhatsApp Business API presents at least four substantive advantages over SMS, mail, and email experiments: availability of reliable information on subject engagement with the experiment, ease of conducting longitudinal studies, ease in establishing trust with the recipient through official verification of the organization's account (green check mark), and at a relatively low cost (4.70 USD every 100 messages). This API allows organizations to contact their beneficiaries only when they provide consent for being contacted. An ideal feature of our setting is that all Avis donors provide consent to be contacted by Avis for blood donation initiatives. The closest approach to ours is introduced in Bowles et al. (2020), who use the "broadcast list" feature of private WhatsApp accounts to contact 27,000 newsletter subscribers with non-personalized messages. This method has the disadvantages that messages cannot be tailored at the individual level, longitudinal studies are impractical, and the reputational benefits of verified business accounts are not available.

[11]Study participants received follow-up surveys and communications after the end of the study's one-month donation period, which could have, of course, given away that this was a research project. However, the timing of these communications preserves this as a natural field experiment for the collection of our main

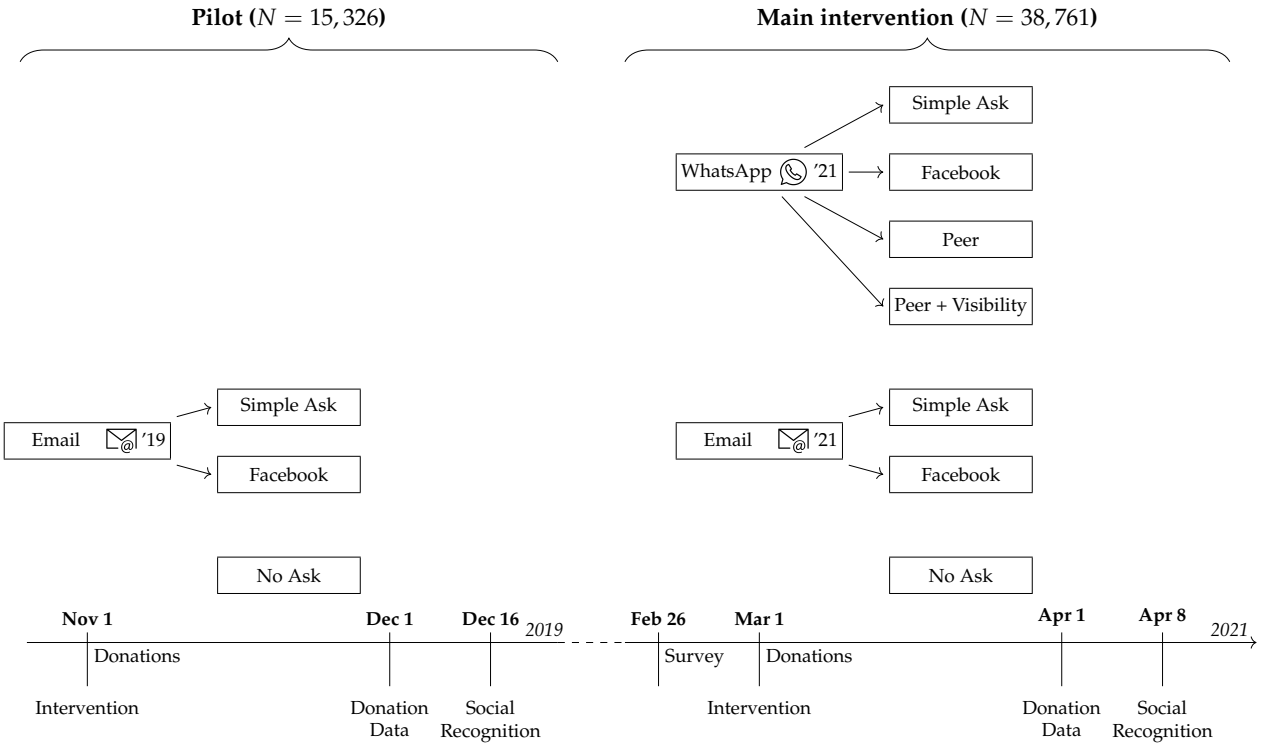

Figure 1: Design overview

Notes: The *No ask* group serves as a passive control for both the email and WhatsApp experiments. In the pilot, randomization was conducted at the Avis branch level, encompassing 67 clusters. This contrasts with the main intervention, which includes donors from 65 Avis branches but employs a finer randomization at the 20-donor group level, resulting in 681 clusters for the email channel and 677 for the WhatsApp channel. The timeline spells out, both for the pilot and the main intervention, the donation period as well as the implementation of social recognition for treatments *Facebook* and *Peer + Visibility* (see Online Appendix C and D for a complete illustration of how social recognition was implemented).

After excluding ineligible donors and those did not receive this initial message (4,041), along with those who opted out before treatment (376) and after (69), our final study sample includes 38,761 donors. Of these, 25,323 were assigned to being contacted via WhatsApp and 9,002 via email, while 4,436 did not receive any further message (*No ask*).

Donors in the study are randomly partitioned into groups of 20, and treatment is assigned at this 20-donor group level.[12] For stratification, we create 8 partitions of groups based on three variables. These partitions vary in a $2 \times 2 \times 2$ fashion in whether they include above/below median female share, above/below median average age, and above/below median past donations in the group. We randomize treatment between groups of 20 donors

pre-registered outcome—March 2021 donations.

[12]We also experimentally vary the social proximity of the group of peers to whom donations are made visible and with whom subjects compare their donation behavior. For more details, see Online Appendix D.

from within each partition.[13]

Sample. Online Appendix D.4 compares observable characteristics of the population of active Avis Toscana donors (column 1) to the final study sample (column 2) to show representativeness of the latter for the former. The table also shows that strong predictors of donation behavior, such as past donation behavior and gender (women are allowed to donate less frequently), are well balanced across treatments. In the treatments administered via WhatsApp, the share of participants who have received the message is very close to 100 percent, and about 90 percent of subjects included in the study read the message within 30 days. The email opening rate is much lower, around 17 percent. Interest in graphical content that provides a visual illustration of the social rewards is relatively low and varies across treatments. Finally, we see virtually no opt-out from the research study after treatment (69 out of 38,830 participants).

2 Results

2.1 Public recognition on social media

Table 1 reports the results of three experiments: the pilot experiment and the two conceptual replications testing how social media recognition affects blood donations. For the first experiment, we estimate that a simple ask and social recognition both affect donations significantly. However, these results are not robust to controlling for local branch fixed effects (the level at which social media recognition is randomized) as evident when comparing columns 1 and 2. Notable limitations of this pilot experiment were the quality of randomization and the low opening rate of experimental communications (22.62 percent), which were sent via email.

As previously discussed, the main intervention, encompassing the two subsequent replications, addresses the two key limitations of the pilot experiment. For both replications, we

[13]The pilot clustered randomization at the Avis branch level to minimize treatment contamination due to potential donor interactions. However, the low intra-class correlation (ICC = 0.016) observed in the pilot suggests minimal contamination within branches, and it allows for treatment assignment at a more granular level.

Table 1: Facebook experiments

	(1) ✉ '19	(2) ✉ '19	(3) ✉ '21	(4) ✉ '21	(5) 💬 '21	(6) 💬 '21
	Baseline category: No ask					
Simple ask	0.014*	0.025***	0.016**	0.014**	0.028***	0.027***
	(0.008)	(0.007)	(0.007)	(0.006)	(0.007)	(0.007)
Facebook	0.017**	0.008	0.009	0.010	0.012*	0.012*
	(0.007)	(0.008)	(0.007)	(0.006)	(0.007)	(0.007)
Donors' observables	Yes	Yes	Yes	Yes	Yes	Yes
Local branch FE	No	Yes	No	Yes	No	Yes
Observations	14993	14993	13438	13438	12853	12853
Clusters	67	67	681	681	677	677
R2	0.060	0.069	0.050	0.056	0.055	0.064
Opening rate	22.62%	22.62%	17.21%	17.21%	90.63%	90.63%
Facebook - Simple ask	0.003	-0.017	-0.007	-0.005	-0.016	-0.015
$\hookrightarrow$ p-value	0.768	0.122	0.321	0.481	0.023	0.026

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Notes: The treatment effects are estimated using a linear probability model, where the dependent variable indicates whether the subject donated either blood or plasma in the study period (March 2021). *Simple ask* and *Facebook* are binary treatment indicators. *Donors' observables* include age groups (18–38, 39–51, 52+), gender, and past donations (computed over the 11 months before the experiment). Standard errors in parentheses are clustered at the level of randomization: for the 2019 email experiment (columns 1 and 2), we cluster at the local branch level; and for the 2021 experiments (columns 3–6), we cluster at the 20-donor group level. *Opening rate* is defined as the share of participants who opened the email or "read" the received message on WhatsApp. All columns estimate the model for all blood donors in treatments *No ask*, *Simple ask*, and *Facebook*. *Local branch* refers to the 67 branches of the Tuscan chapter of Avis included in the study.

improve the quality of the randomization by varying treatment assignment *within* branches. Between replications, we vary the communication channel while holding everything else constant.

We find that changing the communication channel from email to WhatsApp strongly impacts engagement: the opening rate of treatment messages rises from 17 to 91 percent. In both the second and the third experiment, we estimate a positive and significant intention-to-treat effect of the *Simple ask* treatment on donations. The effect is larger, though not significantly so, in this third (WhatsApp '21) experiment (t-test, $p = 0.135$), and in both experiments we find that making donations more visible tends to backfire. In the third experiment, where much greater engagement improves the scope for our intervention to influence donation behavior, we identify a significant crowding-out effect of social recognition ($\hat{\beta}_{Facebook} - \hat{\beta}_{Simple\ ask} = -0.015$, $p = 0.026$).

We place special emphasis on this third experiment because it represents the culmination of a series of efforts to optimize the experimental design for internal validity and statistical power. We view the negative result from this experiment as surprising in light of the exist-

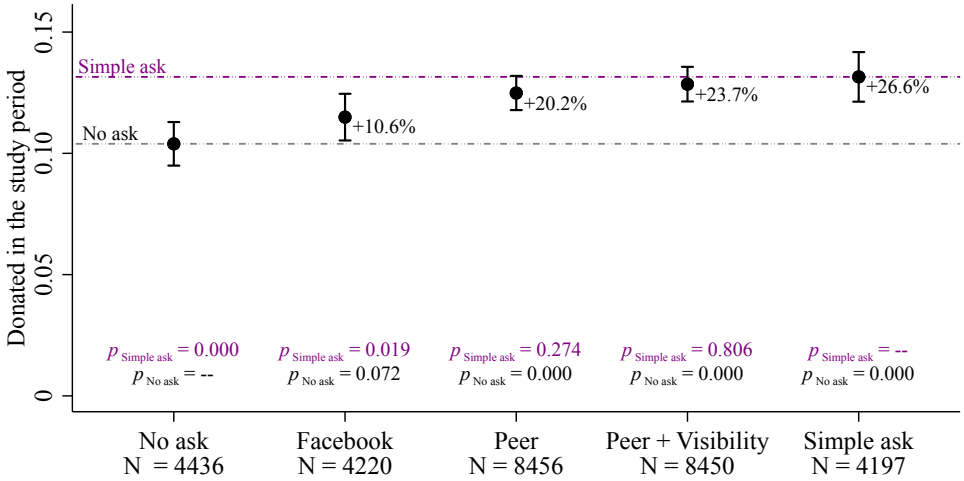

Figure 2: Response to different asks

Notes: The figure compares the share of participants who donated either blood or plasma in the one-month study period (March 2021), across all the different treatment conditions implemented via WhatsApp. Capped ranges are 95 percent confidence intervals. For each treatment T, p_C denotes the p-value of the difference $\hat{\beta}_T - \hat{\beta}_C$, where C is either *No ask* or *Simple ask*. P-values are based on a regression model similar to column 6 of Table 1 for all treatment conditions implemented via WhatsApp (Online Appendix D.6 is the corresponding regression table).

ing literature, which we summarize and discuss in a meta-analysis presented in Online Appendix A. A straightforward explanation for this finding could be that donors disliked the way social recognition was implemented through Facebook channels, leading them to withhold donations as a form of protest. We rule out this explanation with a sentiment analysis showing that sentiment toward treatment communications is very and similarly favorable in the *Simple ask* and *Facebook* treatments, as further examined in Online Appendix D.2.

2.2 Social recognition and when a simple ask is enough

In this section we compare the donation response to different asks included in the study, holding constant the communication channel—WhatsApp. In a control treatment where donors do not receive an experimental message from the organization, the share of participants who donate in the study period is 0.103.[14] Offering donors the prospect of being publicly recognized on social media (*Facebook*) increases donations by 10.6 percent. Donations also increase significantly when we offer donors peer comparisons (in *Peer* and *Peer + Visibility*), by informing them of how their recent donations compare to those of a random

[14]This is similar to the number of donations in the one-month study period: less than 0.1 percent of participants make more than one donation in this period (see Online Appendix D.4).

set of peers. We find that making prospective donations visible within a 20-person group has minimal impact.[15] However, none of these social rewards are more effective than the *Simple ask* treatment, which increases donations by 26.6 percent.[16]

Figure 2 summarizes mean comparisons across treatments. Taken together, these four treatments are estimated to generate 21.3 extra donations every thousand donors per month, relative to the counter-factual of business as usual (as in *No ask*). Given the costs of sending personalized WhatsApp messages through the API, this campaign is cost-effective at a price point of 2.21 USD per extra donation.[17]

2.3 Secondary analyses and robustness

In this section, we briefly discuss the additional results of our intervention, which are relegated to Online Appendix D.3 and D.4 due to space constraints.

Peer comparisons and norm adherence. Using data from the *Peer* and *Peer + Visibility* treatments, we analyze how organic exposure to exogenously different social norms, represented by average past donations from group members, influences donation behavior. We use two models: one presuming a linear effect of social norms and another categorizing them into quintiles. The results overall indicate no evidence of adherence to the social norms that donors observe in their group.

Social proximity. Using experimental variation in group composition, we examine how social proximity influences social norm adherence and visibility concerns, again using data from the *Peer* and *Peer + Visibility* treatments (in which donors were either matched with

[15] A similar contrast to the one we study between *Peer* and *Peer + Visibility*, with visibility being manipulated in small groups, is investigated in a finitely repeated public goods experiment by Kessler et al. (2021) (*Peer information only* vs *Social recognition*) and in a field experiment on campaign contributions by Perez-Truglia and Cruces (2017) (*List once* vs *List update*). The null finding that we find is consistent with Perez-Truglia and Cruces (2017) but not with the positive effect of visibility found in Kessler et al. (2021).

[16] A concern may arise that the *Simple ask* is more effective due to its conciseness. If message length dictates effectiveness, the longest treatment message (*Peer + Visibility*) should also result in fewer donations than the second shortest message (*Facebook*). However, a t-test using estimates from column 3 of Online Appendix Table D.6 rejects this one-sided null hypothesis ($p = 0.004$).

[17] Compared, e.g., to the 50 USD per extra donation from cold calling repeat donors in Bruhin et al. (2015).

those from the same donation center (*Close*) or were scattered across Tuscany (*Distant*)). A validation exercise indicates that donors perceived greater social proximity in the *Close* group, as shown by their likelihood to believe they knew a group member and their more frequent and extensive responses to treatment messages. However, the main analysis indicates that social proximity does not significantly affect visibility concerns regarding group members or reinforce norm adherence. While the generalizability of these findings is constrained by the social proximity manipulation that we could implement, this evidence poses challenges the commonly held view of social proximity as a moderator of social influence (e.g., Topa, 2001; Leider et al., 2009; Bond et al., 2012; Goette and Tripodi, 2021; Bicchieri et al., 2022).

Past donation history. We examine if frequent donors react differently to social recognition interventions. While past research (e.g., Landry et al., 2010; Lacetera et al., 2014; Goette and Stutzer, 2020) suggests that donor history impacts responses to appeals, we find that more frequent donors have a slightly stronger, but statistically insignificant, reaction to most appeals. Norm adherence is consistently weak for all donors.

Local and inter-temporal spillovers. We address concerns that our treatment effects, observed against a passive donor control group (*No ask*), might inadvertently discourage donations due to negative intervention spillovers, especially in settings with potential capacity constraints. This could arise if treatments cause difficulties for donors in scheduling appointments, leading to crowding-out effects. To assess this, we use a difference-in-differences approach, comparing the behavior of donors from different Avis branches in Tuscany, 65 of which were included in our study. By effectively comparing trends in monthly donations between included and excluded branches, our findings suggest there is no congestion effect in the *No ask* treatment and that WhatsApp solicitations effectively boost donations.

We also estimate long-term treatment effects beyond the specified donation period. However, due to varying post-study communications across treatments, particularly for social recognition, these results should be interpreted cautiously.

2.4 Interpretation

Collectively, these results indicate that in this setting, repeat donors do not need social recognition as encouragement for their altruism. This population is largely unaffected by the channels of social recognition that we test; a simple ask to give appears to work best to encourage their donations. While we find that social recognition in small groups does not fare much worse than a simple ask, recognition in a highly visible public venue—such as the public Facebook page—can backfire. An explanation, based on social signaling (Bénabou and Tirole, 2006), that accounts for this finding is that individuals tend to shy away from activities that could make them appear image concerned. In the next section, we use a theory-informed survey experiment that directly examines this explanation and entertains alternative ones.

3 Survey experiment for mechanisms

We conduct a follow-up survey experiment with donors who participated in our main study.[18] We see this sample selection as a natural one as Avis donors are the policy's target population and because social recognition via Facebook is implemented on pages that are primarily subscribed by fellow blood donors. This survey leverages the blood donors' intimate knowledge of the study setting to shed light on the backfiring effects of social media recognition, and it connects a seemingly surprising result with the body of existing evidence discussed in Online Appendix A.

Our approach has four steps. First, we measure beliefs of the primitives of the environment that affect social signaling equilibria. Second, we elicit predictions of the treatment effects estimated for the main intervention. Third, we elicit the inferences that blood donors make about unobservable characteristics of peers who donate with and without social recognition. Last, we gather qualitative evidence of what repeat donors believe are the channels through which social media recognition encourages giving.

[18] Pre-registration: #AEARCTR-0007266.

	Surveys			
Survey Items	Version 1	Version 2	Version 3	Version 4
1. Perceived distribution of **altruism** and **image concern**; probabilistic beliefs over a 4-type distribution	✓	✓	✓	✓
2. Predicted treatment effect of social media recognition; most likely sign of the treatment effect of *Facebook* relative to *Simple ask*	✓	✓		
3. Behavioral motives for social media recognition to encourage or discourage donations	✓	✓		
4. Perceived altruism and image concern types of repeat donor who gives blood following the [randomly selected either *Simple Ask* or *Facebook*] treatment			✓	✓
Invited	5,000	5,000	5,000	5,000
Completed	755	751	763	747

Figure 3: Survey experiment design overview

Notes: The blue (red) checkmark indicates that the population about which beliefs are elicited is repeat donors (general population). The survey was launched on August 19, 2021 and ran for seven days. From the main intervention, a sample of 20,000 donors was invited, of which 3,016 completed the survey.

3.1 Design

Survey items. The survey has four versions, which we assign randomly, each with a distinct set of questions to minimize confusion and survey length. For survey items 1 to 3, we introduce variation between subjects by eliciting beliefs about two populations (either repeat blood donors or the general population). For survey item 4, we vary between subjects the experimental treatment about which beliefs are elicited and provide a full description of the exact treatment messaging. The four versions of the survey are summarized in Figure 3.

Implementation. A random sample of 20,000 blood donors from the initial experiment were invited to take part in the survey on August 19. The survey ran for a week, during which we collected 3,016 complete responses. This sample mirrors the initial experimental sample in terms of age and gender, but it has an over-representation of the organization's more engaged donors (Online Appendix Table E.3). It also has similar coverage of all treat-

ments, with the exception of the *Peer + Visibility* treatment (Online Appendix Table D.4).[19] The survey experiment and main hypotheses were pre-registered, and a full description of the materials and procedures are available in Online Appendix E.

3.2 Results

In a population where altruistic preferences are heterogeneous, charitable activities can provide positive recognition utility as they signal altruism. However, agents may differ in the degree to which they care about being seen as altruistic by others, and some may shy away from public displays of altruism to avoid being perceived as image concerned. The net effect of social recognition interventions on the total supply of charity is generally ambiguous. It is more likely to be positive when the signaling tends to concentrate on the (desirable) altruistic trait. In Online Appendix B.2 we provide simulations to illustrate results from Bénabou and Tirole (2006) for how increasing the visibility of donations can backfire in the presence of heterogeneity in image concern. In the rest of this section, we provide evidence in support of this model and assess the importance of alternative explanations.

Perceived distribution of model primitives. Participants expect a flatter distribution of altruistic types in the general population than among repeat donors. Conversely, they anticipate a flatter distribution of image concern types among repeat donors than in a general population sample (Figure 4, panels A and B). This suggests relatively little scope for signaling altruism for repeat donors given that 77.3 percent of them are viewed as either somewhat or very altruistic. This aligns with a signaling interpretation whereby signaling of a desirable trait (altruism) is overshadowed by signaling of an undesirable trait (image concern).

Predictions of experimental results. Panel C of Figure 4 shows that a majority of participants (40.5 percent) predict that the social recognition intervention, when administered to repeat blood donors, will not influence donation levels. They view a negative effect as more likely (33.0 percent) than a positive one (26.5 percent). In contrast, when a similar

[19] Participants in this treatment could be less willing to answer this survey as they already received the highest number of follow-up messages after the one-month donation period.

intervention is administered to the general population, a positive effect is predicted as the most likely scenario. In Online Appendix E.2, we establish that this result is not driven by self-serving beliefs of the *Facebook* treatment donors who may want to justify their lack of donation, by showing that it holds true regardless of the initial treatment assignment of the survey participants.

Inference. Modal beliefs on the type of repeat donor who donates in response to the treatment message suggest that when social recognition is available, the decision to donate signals both lower altruism and higher image concern. As shown in panel D of Figure 4, participants expect the modal altruism type of their peers who give in the study period to be 3.470 in *Simple ask* and 3.051 in *Facebook* ($p < 0.001$), both being at least somewhat altruistic. The modal image concern type is expected to drop from 3.017 in *Facebook* to 2.669 in *Simple ask* ($p < 0.001$), corresponding to a level between not very and somewhat image concerned.

Perceived motives and alternative explanations. We asked participants to individually assess the potential reasons for observing either a positive or negative effect of the social media recognition intervention. Their evaluations varied on whether the intervention targeted repeat donors or the general sample. Unless otherwise noted, we aggregate these responses in this discussion (but report disaggregated numbers in Online Appendix E.2).

For reasons possibly leading to a *positive* effect, we allow for an open answer and include three explicit options often discussed in the literature. These options posit that donations on social media can motivate (a) people who seek to inspire others to donate, (b) those wanting to be seen as prosocial, and (c) those who may otherwise forget. Notably, 39.2 percent of respondents select (b) as the main reason, followed by (a), which is selected by 30.2 percent. Participants expect that impressing others by showing altruism is relatively more important in the general population compared to repeat donors. In contrast, repeat donors care more about inspiring others to donate.

For the potential reasons behind a *negative* effect, we again allow for an open answer and include three explicit options often discussed in the literature. These options posit that publicizing donations on social media may discourage (a) privacy-concerned individuals, (b) those who worry that their donation may signal image concern, and (c) those who may feel controlled or manipulated. Around half of the respondents (50.5 percent) select (b) as

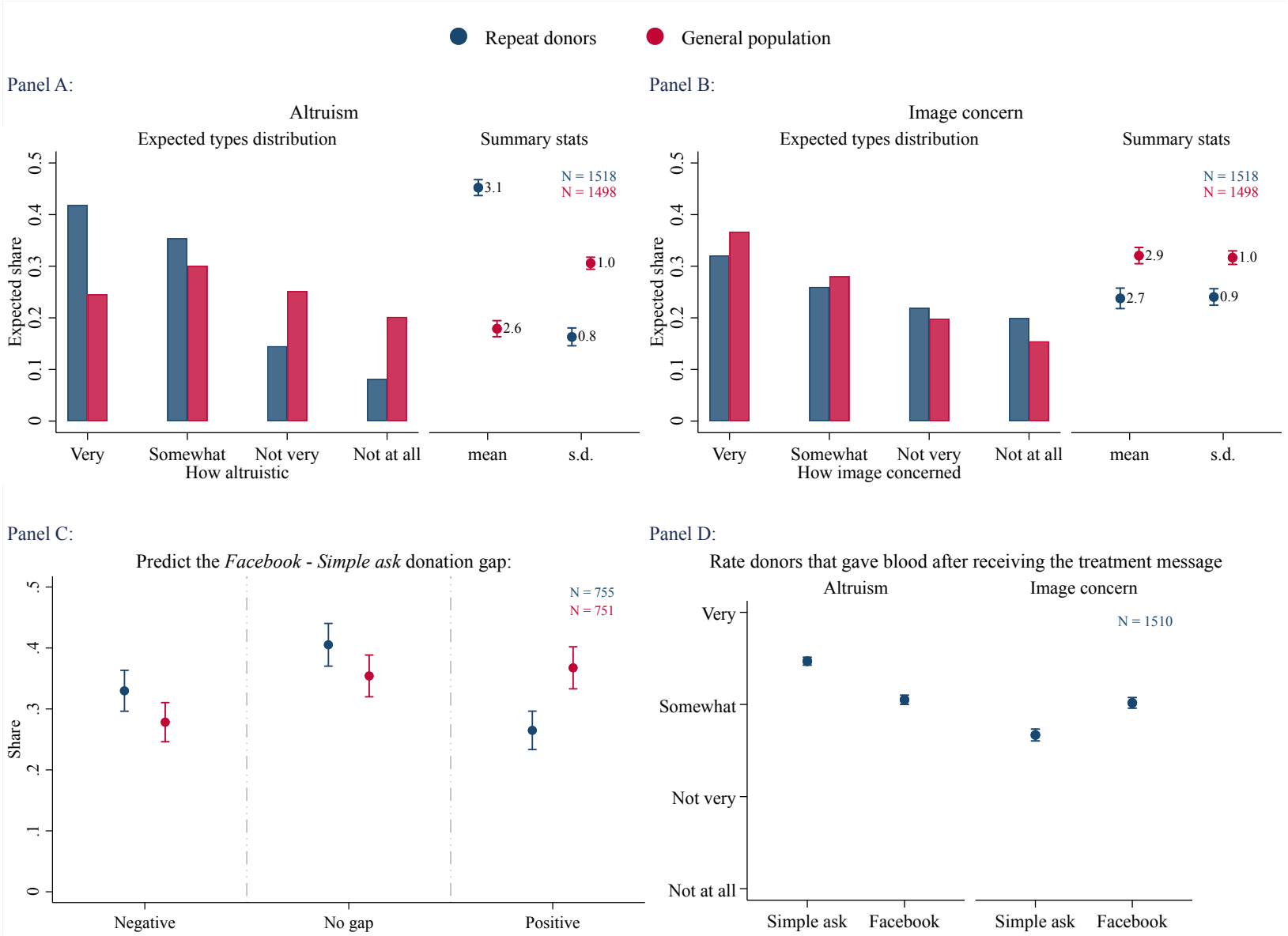

Figure 4: Overview of results from the survey experiment

Notes: Panel A (B) reports the average perceived distribution of altruism (image concern) among repeat blood donors and in the general population, accompanied by the mean and standard deviation of this distribution. Panel C reports the share of respondents predicting that the effect of the *Facebook* treatment relative to the *Simple ask* treatment, among repeat blood donors and in the general population, will be either negative, null, or positive. Panel D reports the modal types that respondents attribute to repeat donors who give blood during the study period; in a between-subject design with 1,510 respondents, 764 (746) are asked to judge donors in treatment *Simple ask* (*Facebook*). For all panels, error bars show 95 percent confidence intervals.

the main reason.

3.3 Interpretation

Taken together, the results of the survey experiment align with the conjecture, based on social signaling theory, that the distribution of unobservable traits in the population subjected to social recognition can determine whether such a policy is beneficial or detrimental to the supply of good citizenship. Our evidence suggests that repeat donors can anticipate the effects that we estimate from our experimental intervention. Furthermore, they can reconcile our findings with the findings from populations that are not selected based on the positive traits emphasized by a signaling opportunity. They also expect the primitives of a social signaling model to be consistent with greater scope among blood donors for signaling image concern. Qualitative perceptions of the main crowding-out channels confirm the social signaling interpretation and rule out prominent alternative explanations that would otherwise be empirically indistinguishable with our data, such as privacy concerns (e.g., Goldfarb and Tucker, 2011) and aversion to control systems (Ellingsen and Johannesson, 2008).

4 Conclusions

Does social recognition motivate repeat contributors? We investigate this question through a series of experiments within the routine activities of a blood donor association. We find that social recognition does not motivate repeat blood donors any more than a simple ask. In fact, public recognition on social media leads to fewer donations compared to a simple ask.

The more general conclusion we draw from our study is not that social recognition cannot motivate repeat contributors, but rather that the composition of the target population can dramatically affect a given intervention's effectiveness as predicted by theory. We present evidence of an often-overlooked implication of social recognition models: that publicity can backfire if individuals worry about appearing image concerned (Bénabou and Tirole, 2006). This mechanism can trump the classical signaling of good traits, especially in settings where a one-off public action is less informative of their altruism—as is the case of repeat donors with an established reputation of good citizens. Our survey experiment offers several pieces

of evidence consistent with the interpretation that repeat donors are less concerned about signaling altruism than they are about not being perceived as image concerned.[20] Theoretically, this is encouraging as it highlights the external validity of economic models in predicting when similar interventions are likely to fail. However, from a policy perspective, it is somewhat disheartening since incentivizing good citizenship with recognition proves more challenging than we first thought.

Organizations and practitioners often face the challenge of translating proof-of-concept policy tools into actual policy. Studies like ours fill an important gap between theory and practice, a space where we believe academics can do more to identify the limits of such policy tools—guided by our models. Understanding how various groups respond to different incentives is of primary importance for targeting specific policies. This paper tackles this issue with a static theoretical framework (Bénabou and Tirole, 2006) in a classical empirical application (Guiso et al., 2004). Further research should shed light on the dynamic consequences of these findings.

[20]This is consistent with research on bragging for good deeds, where people with no established altruistic identity, i.e., investment bankers, benefit from bragging, while social workers do not (Berman et al., 2015). The challenges of encouraging good citizens to seek out publicity for their good actions are further examined in Silver and Small (2023).

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