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Abstract

A great deal of experimental evidence in economics showing systematic deviations from the predictions of a model of optimization based on purely selfish preferences has been used to make arguments in favour of pro-social preferences. However, the same experimental evidence can be interpreted as selfish individuals following social norms that are costly to break. This paper sets up an experiment in an attempt to experimentally evaluate the two propositions. Though the results are by no means conclusive, the substantive evidence can be used to construct a case for norm following behaviour over pro-social preferences.

Key Words: Experimental economics, Game Theory, Social Norms

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Experimental Investigation of Pro-Social Preferences

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1. Introduction

Often, people do not free ride or free ride less often than is predicted by standard economic theory. An ordinary Ultimatum Game involves the division of a monetary stake between two individuals of whom one plays the role of a proposer (P) and the other, that of a responder (R). P proposes a division of the monetary stake to R. Suppose the stake is hundred rupees. Then, P can offer R any amount up to hundred rupees. If R accepts the offer, payments are made to the parties in accordance with the offer. On the other hand, if R rejects the proposal, both players get nothing. The outcome of this game as predicted by the model of entirely selfish individuals would be such that P would make an offer close to zero (since P knows that R would not reject any offer above zero; as any such offer makes him better off relative to rejection) and R would actually accept such offers. However, in most experimental situations, an average offer of 30-40 percent of the stake is made, with offers worth 50 percent of the stake not being uncommon. The Dictator Game (DG) is quite similar to the UG. But in the DG, the responder does not have the choice of turning down the offer. It can be argued that nonzero offers observed in the UG are made due to strategic considerations: The responder might turn down an offer that is too low, and the proposer might then be worse off. Such a strategic consideration is absent in the DG since R does not have the choice of turning down the offer. Hence, one

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would expect near zero allocation to be made to R. Yet the mean allocation turns out to be nearly 20 percent of the stake. However, at the same time, there is considerable variance in the amounts offered, with many offers of zero being made on the one hand, and a few offers worth 50 percent of the stake being made on the other. In a Public Goods (PG) game, each of the N players can contribute an amount C_i of their choosing from an initial endowment that is identical for each player. The total amount contributed by all players, $\sum_i^N C_i$ is multiplied by some factor $M > 1$ and is distributed equally among all players regardless of their individual contributions. In this game, if players are concerned only about their selfish interests, then the dominant strategy is to contribute nothing. But in one shot public goods games, subjects often contribute about 50 percent of their endowment. There is, however, a great deal of variability observed in contributions made, with a number of subjects contributing nothing. When the public goods game is repeated, mean contributions decline over subsequent rounds. If a punishment mechanism that allows subjects to punish others is introduced, many will do so even at a substantial cost to themselves. Punishment occurs even in the last round of the public goods game, presumably when players ought not to have any incentive to discipline others at a cost to themselves. The decline in contributions across rounds gets significantly arrested by the introduction of such an option. Allowing people to communicate also increases contributions. Nonzero contributions are made even when interactions are anonymous.

It is commonly claimed as being suggested by experimental evidence that people not only have selfish preferences concerning their own payoffs, but also that they have preferences concerning the well-being of others, that is,. social preferences. Not only is it claimed that some people have such preferences, but also that such preferences are sufficiently widely shared that they can have large and systematic effects on behaviour. It is typically assumed that these preferences are sufficiently stable so that we can use them to predict behaviour across a wide range of interesting contexts. Three groups of prominent models can be broadly identified (Meier 2006):

i. *Outcome based pro-social behaviour theories*

These theories assume that an individual's utility depends directly on the utility of other people. This approach is based on the premise that others' consumption or utility positively affects the agent's utility. People behave pro-socially or contribute to public goods because they enjoy the well-being of others. Altruistic preferences are widely used to explain a range of behaviours like donations (Smith, Kehoe and Cremer 1995), volunteering (Unger 1991), behaviour in the workplace (Rotemberg 1994), and contributions in Dictator Games (Eckel and Grossman 1996; Andreoni and Miller 2002). This approach can be traced as far back as Adam Smith (1759) who argued, "How selfish soever man may be supposed, there are evidently some principles in his nature, which interest him in the fortune of others, and render their happiness necessary to him, though he derives nothing from it except the pleasure of seeing it." This class of theories includes models based on pure altruism, impure altruism (*warm glow models*) and those models in which one's utility depends upon the difference between one's well-being and that of others (*models of inequality aversion*). Andreoni (1990) extends the pure altruism model, according to which individuals value the improvement in others well-being simply for its own sake, to a model of impure altruism which suggests that individuals experience a 'warm glow' from giving. Not only do individuals care about the utility of the recipient, but also receive some private good benefit from their pro-social behaviour. Models of inequality aversion (Fehr and Gächter 2000) assume that people value their relative standing in the income distribution. These models further assume that an individual is particularly sensitive to inequality if his/her payoff is smaller than those of other subjects. Such models help to explain why people behave altruistically towards those who are worse off than themselves, but punish those who are better off.

ii. *Theories of reciprocity*

Such theories are based on the notion that individuals behave in a friendly manner when they are treated benevolently and respond in an unfriendly way when treated badly. Models of altruism are consequentialist in that they assume that only observed outcomes matter to people. In addition to the final distribution of outcomes, models of reciprocity also consider how these outcomes come into being. People are also concerned with the

intentions that lead others to choose their actions. We talk of reciprocity when people respond in a friendly manner to pro-social behaviour and punish deviations from pro-social behaviour by behaving in an unfriendly way themselves (Rabin 1993; Falk and Fischbacher 2006; Dufwenberg and Kirchsteiger 2004). These models have the merit of recognising that people not only respond to monetary payoffs but also to the motives and intentions with which players act. Blount (1995) reports that subjects in an ultimatum game accept lower offers when such offers are generated by a random mechanism than when they are chosen deliberately by other individuals. Individuals are seen as conditional co-operators. They cooperate only if they expect others to do so. From this perspective, expectations are crucial.

iii. *Theories of pro-social behaviour based on self identity*

The third approach to pro-social behaviour stresses the importance of self identity for pro-social behaviour (Akerlof and Kranton 2000). People are not only concerned about their reputation among others, but would also like to have a good self image. They undertake certain pro-social activities in order to self-signal their good traits. From the point of view of these models, people do not necessarily care about the outcome of their pro-social behaviour, but are concerned about how such behaviour affects their self-identity. Whether pro-social behaviour leads to an improved self-image depends upon at least two factors: First, what is considered as good behaviour, that is, the normative structure of ideas in a given society and second, in what circumstances a pro-social action is a valuable signal of one's good traits.

The findings of pro-social' behaviour are also often taken as evidence of limited applicability of the standard *homo economicus model* of human behaviour as entirely self-interested (Henrich et al 2004).

Other economists have challenged this interpretation arguing that these experimental findings may be accounted for entirely in terms of selfish preferences and conventional game theory assumptions. Even among those who accept that such experimental results cannot be fully accounted for in terms of purely selfish preferences,

it is argued that these results must be accounted for in some other way—for example, by appealing to social norms. Apparently, pro-social behaviour seems to be context dependent; changes in experimental design lead to different behavioural results. This instability across contexts might lead us to suspect that whatever accounts for non-selfish behaviour is often labelled as pro-social behaviour.

Social norms are an important part of context. This is generally well accepted in the literature (Elster 1989). However, in what precise way do norms affect behaviour? We need a clear understanding of the way in which norms affect behaviour if we want the approach to have predictive content across different contexts. Broadly speaking, there are two ways in which norms can be conceptualised. One approach associated with game theorists like Binmore (2007) and Samuelson (2005) is to think of a norm (or behaviour conforming to a norm) as a simple Nash equilibrium in some repeated game. The norm does not enter directly into the subject's utility function. Rather, subjects have certain preferences and people's conformity to a norm is explained by these preferences and the structure of the game. The existence of the norm is something that needs an explanation, rather than being something that does the explaining. Norm-based explanations provide a challenge to theories of pro-social behaviour. From the point of view of norm-based models, it is sufficient for agents to prefer to follow appropriate norms so as to produce the observed pro-social behaviour. We do not need any specific structure of preferences like altruism, reciprocity or self-identity. Given that people could be following norms, experimental evidence is open to alternative interpretations. When the experimenter has his participants play a game, which he intends to be a one shot game, can we be really sure that the players model it as a one shot game? Binmore and Samuelson ask us to consider the following possibility: A lot of social interaction is best modelled as a repeated game. When subjects play a one shot game in the laboratory, they typically import patterns of behaviour, heuristics and norms which they derive from their experience of playing a repeated game that looks familiar. Suppose players play a one shot prisoner's dilemma game in the laboratory. The evidence that they cooperate could be used to argue for pro-social behaviour. However, if the participants are, in real life, playing an infinitely repeated prisoner's dilemma game in which they indeed cooperate

without being pro-social, the evidence of cooperation in a one shot game can be used to demonstrate the importation of the behavioural pattern characterizing the infinitely repeated game into the one shot game.

Cristina Bicchieri, in a series of papers as well as her recent book (2006), has examined the conditions for the existence of a social norm. Firstly, norms are not generic imperatives like “always cooperate” or “always reciprocate” or “always be fair”. Social norms are rather local and context dependent. Fairness, for example, can mean different things depending upon what is being allocated: We might want to allocate seats in a PhD programme on the basis of merit, but if we were allocating kidneys, the same criterion cannot be used. Social norms map specific contexts into behavioural rules, and groups of such rules taken together give meaning to concepts such as fairness and trustworthiness. (Bicchieri 1999, 2008). Second, people have conditional preferences for following a norm depending upon their expectations of what others do and what they themselves are expected to do in similar situations. These expectations are different from those that people are supposed to have as suggested by the models of reciprocity. In the case of these models, people behave pro-socially or otherwise, depending upon how they expect others to behave, but ‘to reciprocate’ itself is not conditional. From Bicchieri’s perspective, people may or may not choose to reciprocate, given their expectations. Third, in order to be effective, norms have to be activated by salient cues. We have to be focused on norms in order to obey them. Norm activation is the outcome of a social inference that, most of the time, occurs automatically and may escape our conscious control. When a situation gets categorised in a particular way, a script gets invoked. Scripts or schemes are basic cognitive structures that contain our knowledge of people, events and situations. These cognitive structures also involve our beliefs, expectations and behavioural rules. The script is both a source of projectible regularities as well as of legitimate expectations. The legitimacy of expectations arises from our tendency to treat scripted interactions as ‘natural kinds’ (Bicchieri 2006). This empirical legitimacy might become a quasi-moral one, and the projectible regularity might be thought of as a ‘right’ or a ‘duty’. The fact that norms are embedded into scripts gives our reasoning its local

flavour. We do not reason about fairness in general, but are able to detect specific instances of departures from fairness in specific contexts.

More formally, let R be a *behavioural rule* for situations of type S , where S can be represented as a mixed-motive game. According to Bicchieri (2006), we say that R is a social norm in a population P if there exists a sufficiently large subset $P_{cf} \subseteq P$ such that for individual $i \in P_{cf}$,

1. *Contingency*: i knows that a rule R exists and applies to situations of type S ;
2. *Conditional preference*: i prefers to conform to R in situations of type S on the condition that:
 - a) *Empirical expectations*: i believes that a sufficiently large subset of P conforms to R in situations of type S ;

And either

- b) *Normative expectations*: i believes that a sufficiently large subset of P expects i to conform to R in situations of type S ;

or

- b') *'Normative expectations with sanctions*: i believes that a sufficiently large subset of P expects i to conform to R in situations of type S , prefers i to conform, and may sanction behaviour.

A social norm R is *followed* by a population P if there exists a sufficiently large subset $P_f \subseteq P_{cf}$, such that, for each individual $i \in P_f$, conditions 2(a) and either 2(b) or 2(b') are met for i and as a result, i prefers to conform to R in situations of type S .

For Bicchieri, norms enter into the subject's utility function. Players experience payoff reductions from violating norms. Once a subject starts to conform to a norm, the subject's preferences will undergo a change: The subject will now have a preference for conforming to the norm.

Denote the strategy set of player i by S_i , and let $S_{-i} = \prod_{j \neq i} S_j$ be the set of strategy profiles for players other than i . Then, in Bicchieri's account, a norm for player i is formally represented as a function $N_i : L_{-i} \rightarrow S_i$ where $L_{-i} \subseteq S_{-i}$. A strategy profile

$s = (s_1, \dots, s_n)$ instantiates a norm for j if $S_{-j} \in L_{-j}$. It violates a norm if, for some j , it instantiates a norm for j but $s_j \neq N_j(s_{-j})$. Let π_i be the payoff of player i . The norm-based utility function of player i depends on the strategy profile s and is given by:

$$U_i(s) = \pi_i(s) - k_i \max_{s_{-j} \in L_{-j}} \max_{m \neq j} \{ \pi_m(s_{-j}, N_j(s_{-j})) - \pi_m(s), 0 \},$$

where $k_i \geq 0$ is a constant representing a player's sensitivity to the relevant norm. The discounting term (multiplied by k_i) is the maximum payoff term arising from all norm violations.

To take an example in order to illustrate this, consider the standard Prisoner's dilemma, where each player has two possible strategies: C (cooperate) and D (defect). The norm-based utility function of each player is defined at C and undefined at D. The norm-based utility function for player 1 is as follows:

$$U_1(C, C) = \pi_1(C, C) - k_1(\pi_1(C, C) - \pi_1(C, C)) = \pi_1(C, C)$$

$$U_1(D, D) = \pi_1(D, D) - k_1(\pi_1(D, D) - \pi_1(D, D)) = \pi_1(D, D)$$

$$U_1(C, D) = \pi_1(C, D) - k_1(\pi_1(C, C) - \pi_1(C, D))$$

$$U_1(D, C) = \pi_1(D, C) - k_1(\pi_2(C, C) - \pi_2(D, C))$$

Player 2 has a similar utility function. The game turns out to be a coordination game with two equilibria if

$$k_1 > \frac{\pi_1(D, C) - \pi_1(C, C)}{\pi_2(C, C) - \pi_2(D, C)}$$

$$k_2 > \frac{\pi_2(C, D) - \pi_2(C, C)}{\pi_1(C, C) - \pi_2(C, D)}$$

Otherwise, it remains a PD game. So, when a player is faced with the PD game and has no information about the identity/history of other players, she will rationally choose to follow the cooperative norm if two conditions are satisfied.

1. She must be a potential norm-follower (must have a sufficiently high k)
2. She must also believe that the k values of other players are such that they make him/her sensitive to the norm. She will have to assess the probability that the other players are norm following types, and if she assesses them sufficiently high, she will cooperate.

Apparently, pro-social behaviour can arise because of a cooperative equilibrium in such a game, given the existence of a social norm. In the norm following approach, pro-social behaviour is strategic, rather than unilateral as in the case of models based on pure or impure altruism, reciprocity or self-image. Rational individuals choose to follow norms not only because of their preferences, but also because of their assessment of others as likely norm-followers. On the other hand, models of pro-social behaviour posit human behaviour as consisting of imperatives like “be fair”, “be altruistic”, and “always reciprocate”.

It would be interesting to decide which of the two positions is a better description of human decisions. In this paper, we have attempted to resolve this issue using experimental evidence.

We exploit the critical difference between the two positions: Models of pro-social behaviour posit imperatives that are non-strategic, while norm following is strategic. Pro-social behaviour can result or fail to come about depending upon people’s expectations of how they are expected to behave and of how others would behave. Suppose we start with the hypothesis that people are essentially selfish rather than unilaterally pro-social. We consider a variant of the simple dictator game, but situate it within the context of benevolent behaviour. Participants, chosen on the basis of their performance in a test, earn an endowment of three hundred rupees. In the baseline treatment, they are asked to donate anonymously to a real Non for Profit Organization (NPO) that promotes functional English among slum youth. A representative from this NPO made a presentation to all the participants who had been selected post the test. This is a simple dictator game and given pro-social preferences, one should be able to find non-zero contributions. On the other hand, maintaining anonymity ensures that norms are not being called upon (of course, there is nothing to prevent the participants from recalling norms; more of this later). Since what contribution an individual makes cannot be known by anybody else, there cannot be any reason for reacting to how others would expect the individual to behave. The next three variants of the game maintain anonymity but vary the experimental design to test for different kinds of focusing effects. The final treatment

(treatment 5) removes anonymity, but is otherwise identical to the baseline treatment. Removing anonymity makes the situation strategic if generosity is a valued norm.

Given anonymity and the assumption of purely selfish behaviour, we could have a game like the one given below (G1):

Payoff Matrix for G1

SELF	OTHER	
	C	NC
C	0,0	0,4
NC	4,0	4,4

Where NC stands for ‘do not contribute’, while C stands for ‘contribute something’. When generosity is not seen as a norm, or when anonymity is maintained, (NC, NC) is the dominant strategy equilibrium. If we remove anonymity, however, the situation will change. Given Player 1’s norm-based utility function, we have,

$$U_1(C, NC) = 0 - k_1 * \max \left\{ \begin{array}{l} \pi_1(C, C) - \pi_1(C, NC) \\ \pi_2(C, C) - \pi_2(C, NC) \\ 0 \end{array} \right\}$$

$$= 0 - k_1$$

$$U_1(NC, C) = 4 - k_1 * \max \left\{ \begin{array}{l} \pi_1(C, C) - \pi_1(NC, C) \\ \pi_2(C, C) - \pi_2(NC, C) \\ 0 \end{array} \right\}$$

$$= 4 - k_1$$

Similar calculations for player 2 result in the following payoff matrix:

Payoff Matrix for G2

SELF	OTHER	
	C	NC
C	0,0	$k_1, 4 - k_2$
NC	$4 - k_1, -k_2$	4,4

Assuming $k_1 = k_2 = 5$, we have the following coordination game:

Payoff Matrix for G3

SELF	OTHER	
	C	NC
C	0,0	-5,-1
NC	1,5	4,4

Since there is no anonymity, each person now faces a Bayesian game. Suppose a player is a norm follower and assesses a sufficiently high probability of other players being norm followers. Then, a rational, utility maximizing agent will choose to contribute. Thus, after removing anonymity, we might observe pro-social behaviour among norm following individuals. Whether one has been generous or not is publicly observable. If each player values being seen as generous, and expects others as likely to be sufficiently sensitive to the norm of being seen as generous, then, given our hypothesis, we should see a significant increase in donations made. On the other hand, if people are indeed pro-social, then removal of anonymity should not lead to a significant jump in the amount contributed (unless people are both at the same time). If people are neither pro-social nor are they norm followers, we should see negligible donations in both the cases. In the next section, we outline the details of our experimental set up and of the results obtained. The final section interprets the findings of the experiment and concludes the paper.

2. The Experiment and Its Findings

The experiment constituted five treatments, conducted sequentially. The fundamental game played in all treatments remains the same, namely, the division of a sum of money so as to contribute a part of it to charity while retaining the remainder for oneself.

Selection of subjects for the experiment was made on the basis of scores obtained on a general knowledge test. Participants were commonly addressed by the representative of the NPO Leap Forward that would receive the actual donations. The representative made a brief presentation of the fundamental objectives and operation of the

organization. In order to avoid interaction and thereby any form of strategic manipulation of the decision taken in the experiment, the NPO was requested not to provide any contact details that would enable subjects to enhance future employment prospects or advance such other self-regarding motives.

The following is an enumeration of the five treatment methods conducted:

Treatment 1: Baseline Treatment

Subjects participating in the treatment were given an envelope containing three hundred rupees, an amount, which they were told, they had earned for their relatively good performance on the test. The inculcation of the sense of having earned the money is aimed at nullifying the ‘found money effect’ which could have impacted the choice of the amount contributed to charity.

Each subject was then led to an isolated room where he/she would make his choice as regards the sum obtained. The amount that the subject wished to contribute would be placed into the same envelope that was to be dropped into a box placed in the room. An envelope with no source of identification and an isolated room allowed the maintenance of complete anonymity as regards choice made by an individual subject.

Focusing Treatments

For norms to be activated, individuals need to be focused on norms. Recent work in Psychology suggests that drawing attention to a norm, or ‘focusing’ is a crucial component of producing norm compliant behaviour. A norm’s influence is crucially related to the degree to which individuals’ attention is focused on the norm. Individuals do not always have norms in mind, and when they don’t have them in mind, norms exert no effect on behaviour. Harvey and Enzle (1981) and later, Cialdini et al. (1990) have developed a theory in which norms are influential only when an individual’s attention is drawn to the norm.

Treatment 2: Descriptive Focusing Treatment

Descriptive focusing refers to the effect that thinking about the behaviour of others has on us. It has been suggested that thinking about the actions of others will lead

subjects to consider how appropriate such actions are, thus focusing them on the pro-social norm.

The structure of this treatment was exactly the same as the previous treatment (treatment 1). However, before making the choice in isolation, subjects were asked to make a guess of the proportion of people they thought would have donated at least Rs.150 in the previous session of the experiment. In case of a guess within the range of 5% of the actual proportion, the subject would receive fifty rupees in addition to the amount retained by him after making the contribution. Thereafter, subjects proceeded to make their choice of contribution to charity in the isolated room. Finally, subjects were asked whether they thought people participating in this experiment ought to donate 50 percent or more of the amount received. The answers were placed in envelopes with no mark of identification so as to assure the subject that strict anonymity would be maintained as regards their identity.

Treatment 3: Injunctive Focusing Treatment

Injunctive focusing explores whether behaviour differs from the descriptive focus condition if subjects are instead focused directly on the pro-social norm. This is done by asking subjects what they thought other people said one should do in a given decision context.

Just as in Treatment 2, the essential structure of the experiment continued to remain the same as in case of Treatment 1. However, before making their choices, they were asked to estimate the proportion of people who thought that one ought to donate 50 percent or more of the amount received to the NPO. Subjects whose estimates would lie within the range of 5% of the actual proportion would receive an additional fifty rupees. Thereafter, the subjects made their choice of division of the sum of money received by them under the condition of anonymity.

Treatment 4: Informational Treatment

Informational influence of norms refers to the influence whereby the appropriate or norm compliant behaviour is learnt by observing the actions of others. This influence

predicts a positive relationship between one's action and what one observes others doing. Specifically, Subjects behave more pro socially when they observe more pro-social behaviour on the part of others.

In this treatment, the subjects were provided with information about contribution made by four participants in the previous sessions of the experiment. Given this information, the subjects were asked to make their choice of division in the isolated room.

Treatment 5: Choice under no anonymity

The subjects were informed that the contributions made by them under this treatment would be displayed in public. In consequence, the envelope of money received by the subjects had their name on it. Subsequently, subjects were led to the isolated room where they would drop the envelope containing their contribution into the box in the room.

The results of the experiment obtained from the five treatment methods can be summarised as follows:

Table 1 : Summary of the results obtained for the five treatment methods of the experiment

Treatment	Number of Observations	Mean donation (Rs)	Modal donation (Rs)	Minimum donation (Rs)	Maximum donation (Rs)
Baseline	18	58.89	50	0	300
Descriptive focus	18	106.11	50	0	300
Injunctive focus	18	31.11	50	0	300
Informational	16	63.12	50	0	300
Choice under no anonymity	16	128.12	50	50	300

The appendix to this paper contains bar graphs that show the frequencies in which the amounts donated occurred, across the five treatments. As we can see in Table 1, the mean donation in the baseline treatment is fifty-nine rupees. The mean donation in the descriptive focus treatment is substantially higher, while that in the injunctive focus treatment is smaller compared to baseline treatment. The modal donation is fifty rupees

across all treatments. Interestingly, in all treatments except treatment 5, there were donations worth ten rupees. The notes in the envelope given to participants had only six notes of fifty rupees each. This means that some participants actually put a ten rupee note from their own pockets after having taken all the money from the envelope. This observation raises the following question: Why should an individual, who can take away all three hundred rupees without anybody noticing, and evidently wishes to do so, go through the trouble of leaving behind a ten rupee note drawn out of his/her own resources? We will come back to this question later. Table 2 represents the results obtained from non-parametric tests conducted to check whether or not each of the treatments (treatments 2 to 5) differ significantly from the baseline treatment.

The descriptive focus treatment and the treatment under which choice is made under the condition of no anonymity differ significantly from the baseline treatment. The descriptive focus treatment is the one in which we are trying to find out how thinking about others' actions affects behaviour. Even when this treatment is significant, its interpretation is thrown into question by the non-significance of the stronger version of this treatment, namely the informational treatment in which, we have actually shown the participants, choices made by four randomly chosen people.

Table 2 : Krusal-Wallis test results

Treatment under comparison with the baseline	Kruskal-Wallis chi-squared statistic	Degrees of freedom	P value
Descriptive focus	4.198	1	0.0405
Injunctive focus	1.4512	1	0.2283
Informational	0.0032	1	0.955
Choice under no anonymity	7.6959	1	0.0055

The informational treatment is obviously stronger than the descriptive focus treatment in which participants are only made to 'guess' the decisions made by others. Table 3 below shows the average amounts observed by each participant and the choices subsequently made.

The regression of the amount donated by the subjects on the mean donation observed by them results in a statistically insignificant regression coefficient: The actual donations made neither increase nor decrease with the observed mean donations. In fact, this treatment is not significantly different from the baseline treatment. Therefore, the interpretation of the statistically higher mean donations in treatment 2 as resulting from a focussing effect of the norm is problematic.

Table 3 : Average donation observed by a subject and the actual donation made by him

Mean Donation Observed	Donation made
15	300
27.5	200
27.5	50
30	50
40	50
42.5	0
50	100
62.5	0
75	50
75	10
80	50
87.5	50
112.5	0
137.5	50
150	0

3. Interpretation of the Findings

As we have already seen, treatment 5 (choice made under no anonymity) is statistically different from the baseline treatment and the mean donations made in this condition are the highest. The only difference between these treatments is the doing away of anonymity by an announcement made in treatment 5 according to which a list of the names of all participants with the donations made by them would be up for display in a public place. This brings in the role of expectations: One's expectations about how others would behave accompanied by those about how others expect one to behave. Now, we are in the world of norms. Consequently, under treatment 5, the mean donation goes up substantially. Participants are concerned that they be seen as generous, once they can be observed at all. As we have seen above, removing anonymity transforms the mixed motive game of type G1 into a game of type G2, which is a coordination game. As long as individuals have the correct beliefs about others, the resultant increase in mean donations can be thought of as the equilibrium (C, C) in G2.

How does one explain the appearance of ten rupee notes in treatments 1 to 4? Is it a result of pro-social behaviour? There is an alternative interpretation that must be tackled. As we have seen, our participants want to be seen as norm followers. Outside the laboratory, we follow the norm of generosity. Even when anonymity is maintained, and we are not in a norm related situation, the familiarity of the situation would activate the same script, and norm-following would be thought to be morally right. However, the rational agent also understands that this is not a norm-related situation as anonymity is maintained. This gives rise to a clear conflict between the activated script and a rational understanding of the situation. This conflict gets resolved largely in favour of rational self-interest, as one would expect. But the script cannot be ignored completely; it creates a sense of guilt. This sense of guilt is different from the one associated with the self-image models of social preferences. In the case of these models, agents would like to have a good self image unconditionally. On the other hand, agents are conditional norm followers in real life, and rational calculation leads to dissonance with their everyday understanding. This results in the minimal donations being made as an almost rational resolution of this dissonance, but which still gives some weight to the real world scripts

with which the individual makes sense of the situation. Perhaps if this experiment is repeated a few more times, a new script about how to act in precisely these experimental situations under anonymity might emerge, and we might observe zero donations in subsequent iterations of the game.

All in all, we can interpret our admittedly mixed results as favouring the norm-based explanation over the one based on pro-social behaviour.

Appendix

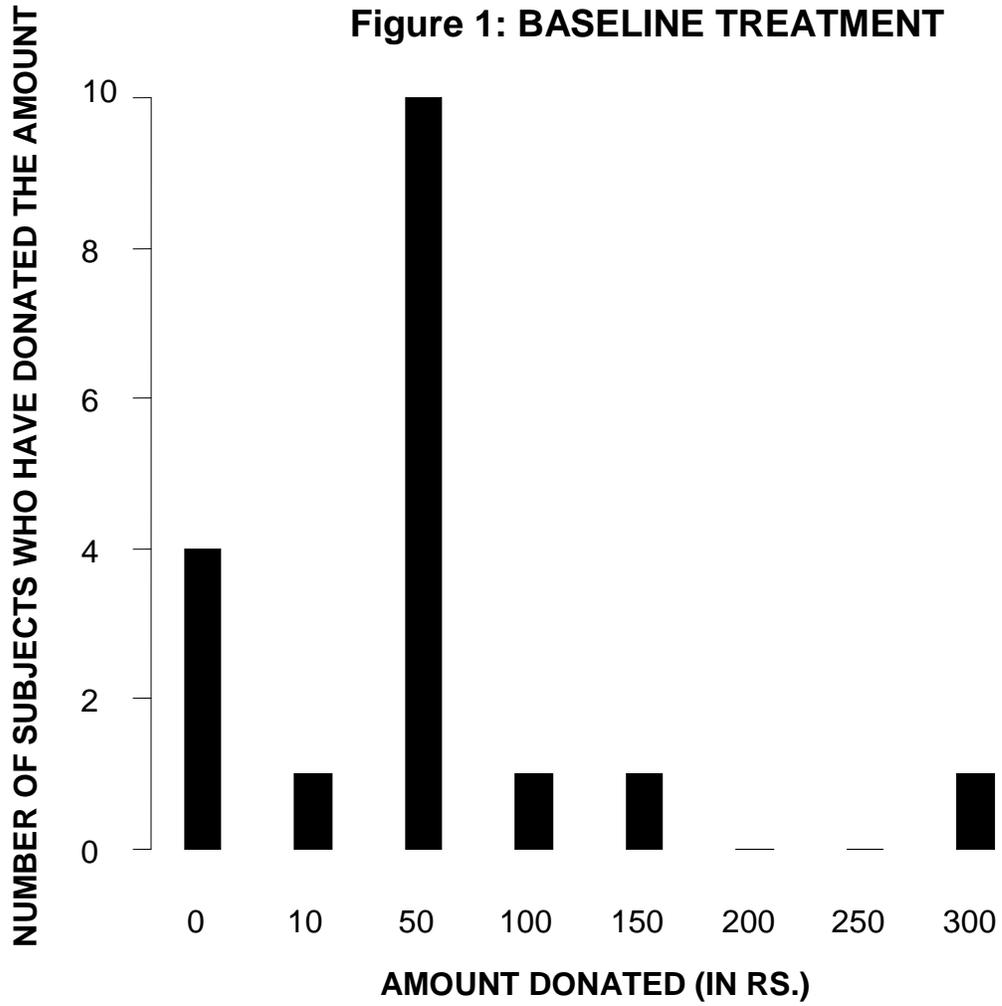


Figure 2 : DESCRIPTIVE FOCUS TREATMENT

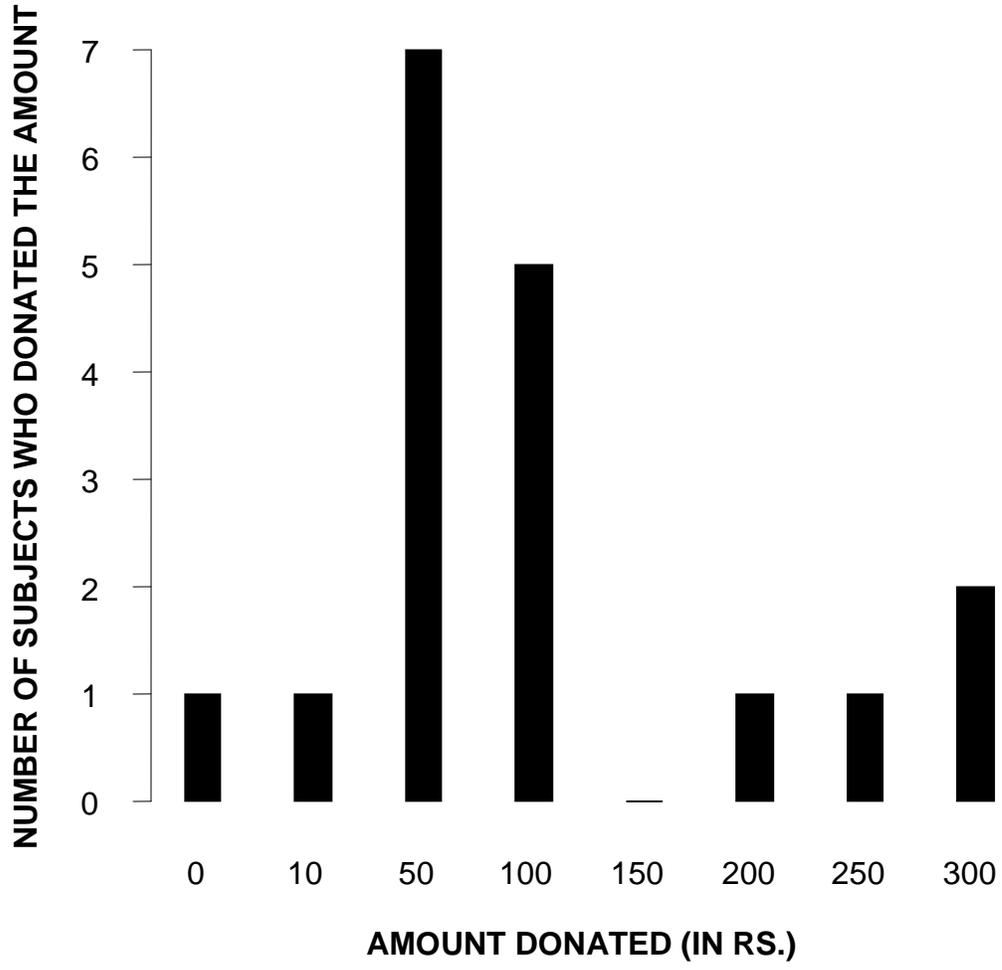


Figure 3 : INJUNCTIVE FOCUS TREATMENT

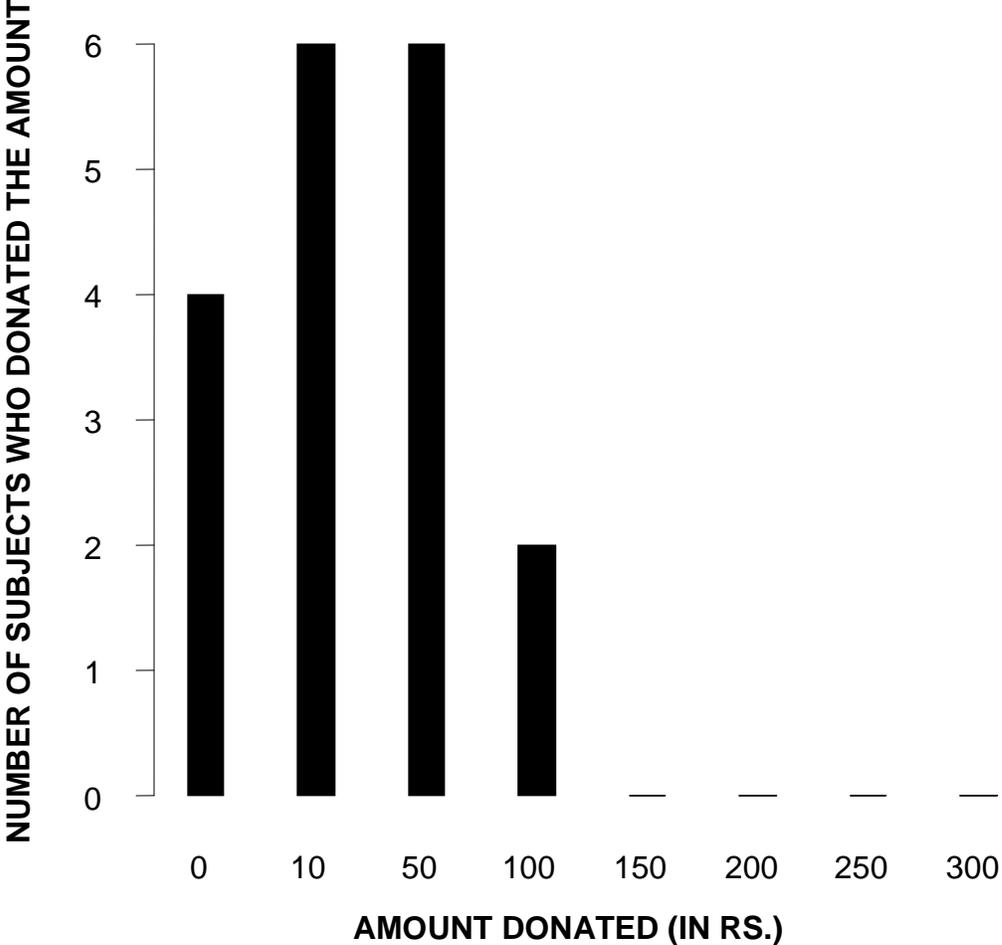


Figure 4 : INFORMATIONAL TREATMENT

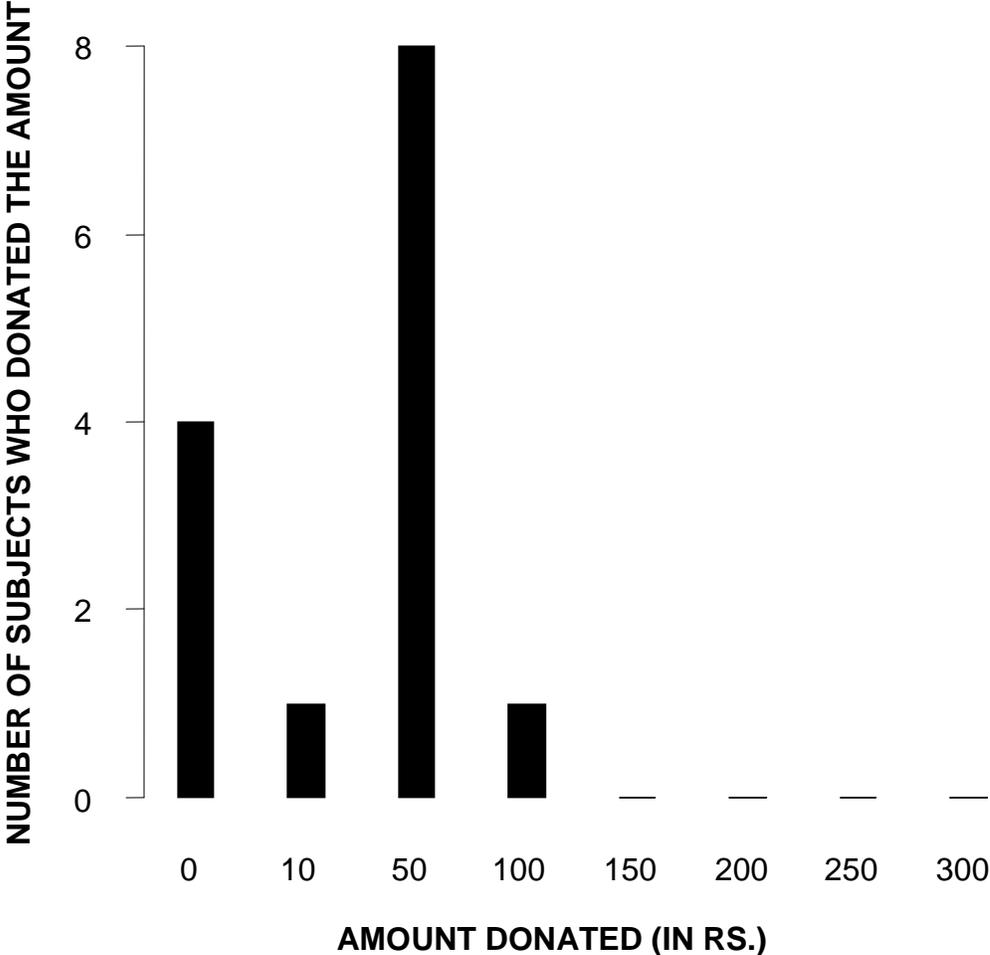
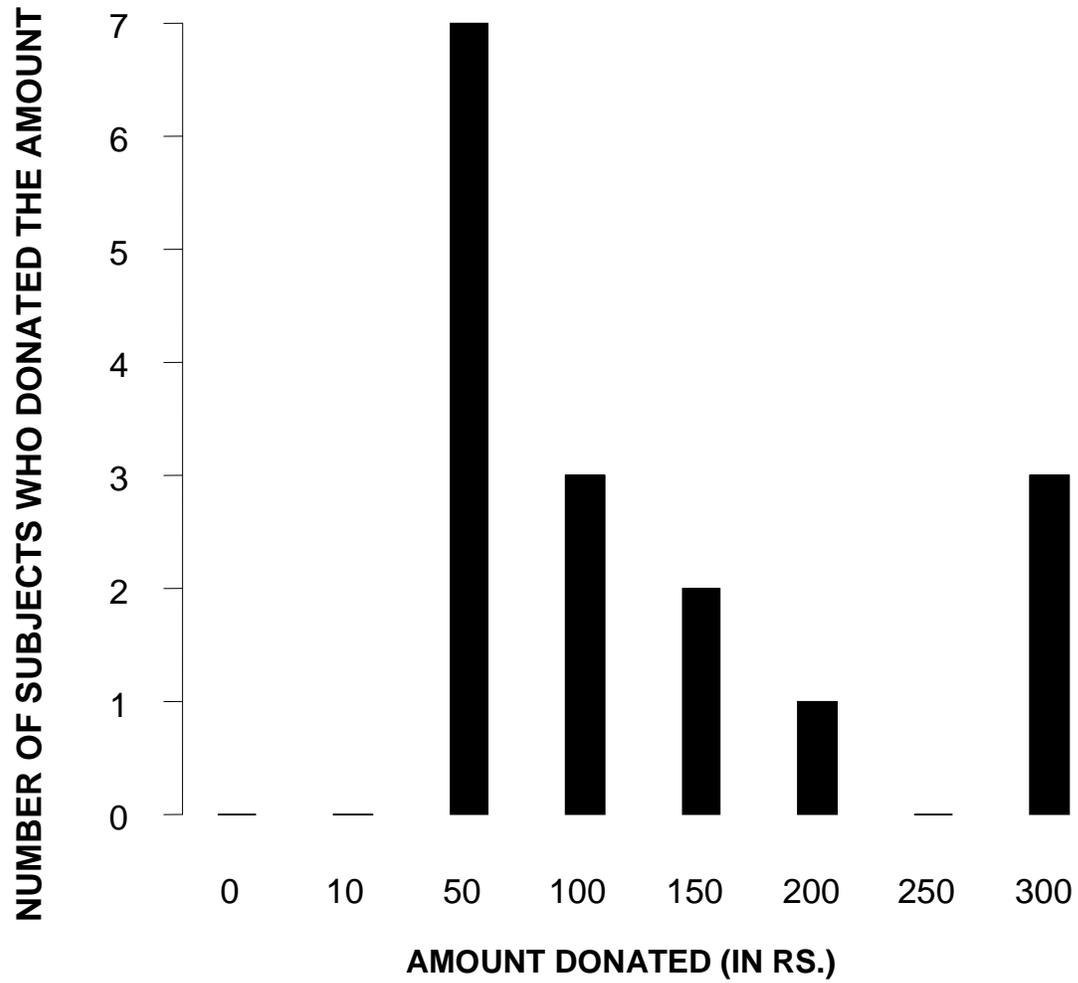


Figure 5 : TREATMENT IN WHICH CHOICE IS MADE UNDER NO ANONYMITY



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