Generosity

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Abstract

We develop a simple model of generous behavior. It is based on the premise that some people are generous, but everyone wants to appear generous. Although non-monetary donations are always inefficient, our model predicts non-monetary donations when the inefficiency is relatively small, when the donor is relatively poor, when the recipient is relatively rich, and when the average level of altruism is relatively low. The model helps to explain a variety of phenomena ranging from the prevalence of volunteering to the nature of Christmas gifts.

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1 Introduction

A man has two reasons for the things that he does. The first one is pride and the second one is love.
Hüsker Dü[1]

Why is it acceptable to ask colleagues, friends and neighbors to help out with a removal, getting amateur service from people who never contemplated entering the removal business, but unacceptable to ask the very same people to sponsor a professional removal? And why do people volunteer for charitable causes even when it would generate larger benefits for the recipients if the donor spent the hours at work and donated the wage? Conventional economic thinking suggests that these practices are plainly inefficient and should not exist.

The same is true for Christmas gifts. Indeed, Waldfogel (1993, 2002) finds that a conventionally computed deadweight loss of Christmas is sizeable. Donors sometimes buy suboptimal presents, the average efficiency loss being estimated at about ten percent of the purchase price. In addition, donors spend valuable time and effort in order to find an optimal present.[2]

Like Mauss (1925) and Titmuss (1971) we believe that volunteering, help, and gifts are due to values and norms that encourage donations of time and effort, but not necessarily of money. The challenge is to understand why these norms emerge.

We suggest that the main reason for non–monetary generosity is that people give not only in order to benefit the recipient but also in order to appear generous in the eyes of the recipient or other observers. There is ample evidence that people care about approval, and although a non–monetary gift is less valuable to the recipient, it may nonetheless be a cost–effective way for the donor to signal altruism and attain the associated prestige. The argument runs as follows. If it is valuable for the altruist to be recognized as such, donations serve as signals and will be distorted upwards relative to the full information benchmark. A reduction in this distortion would be valuable to the donor. We assume, realistically, that altruistic donors have a comparative advantage

[1]Besides accurately reflecting the paper's message, the caption is intended as a non–monetary tribute to Colin Camerer, whose appreciation of Hüsker Dü is evident from Camerer (1988, page S194).

[2]Solnick and Hemenway (1996) and List and Shogren (1998) have found that recipients often attach a material value to gifts that exceed the gifts' cost, hence questioning our premise that non–monetary gifts are inefficient. (Everyone accepts that gifts also have sentimental value, but the authors carefully try to eliminate this when computing the material value.) As Waldfogel (1998) notes, this anomaly might be largely due to the sizeable difference between people's willingness to accept (WTA) and their willingness to pay (WTP).

in making non–monetary donations. For example, although most people may find it onerous to buy Christmas presents or to help out with removals, the effort cost is smaller for altruistic donors than for egoistic donors. Hence, the non–monetary donation necessary to distiguish oneself as an altruist is smaller than the corresponding monetary donation.

Several predictions emerge from the trade–off between concern for the recipient and the price of prestige. First, it is quite obvious that non–monetary donations are more likely when they are relatively efficient. Volunteers will tend to engage in activities that they are good at, and we tend to give more specialized Christmas presents when we think we know the recipient's preferences. Second, as the donor gets richer the size of the donations increases, and efficiency losses are correspondingly greater. Therefore, large donations are less likely to be non–monetary. Third, as the recipient becomes richer, the utility loss associated with inefficient donations is smaller. Thus, non–monetary donations become relatively more important. Finally, an increase in donor altruism increases the weight put on efficiency losses, but this will not necessarily lead to less non–monetary donations, because the utility loss associated with the non–monetary donation simultaneously decreases. In particular, wealthy recipients may never receive money, no matter how altruistic the donor becomes.

The idea that people seek approval is accepted by social psychologists and economists alike.[3] Even self–esteem is heavily affected by others' opinions. As Veblen (1934, p.30) put it: "the usual basis for self–respect is the respect accorded by one's neighbors". For evidence that desire for social approval is important for charitable giving, see for example Schwartz (1967), Satow (1975), and especially Harbaugh (1998a,b) and Andreoni and Petrie (2003).

The notion that money makes it too easy to fake regard, and that personalized gifts are therefore more credible, has been discussed by Zelitzer (1994), Carrier (1995), and Offer (1997) among others. Robben and Verhallen (1994) report that recipients significantly prefer gifts that are costly in terms of time and effort rather than money. This finding squares well with the regard sig-

[3]For typical views on approval in anthropology and sociology, see Homans (1961), Coleman (1990, 129–131), and Wright (1994). Becker (1974) mentions several classical references, as does Offer (1997). For a more comprehensive literature review covering all social sciences, see Brennan and Pettit (2004). Here, we would just like to reiterate Adam Smith's thoughtful passage: "What is the end of avarice and ambition, of the pursuit of wealth, of power, and preheminece? Is it to supply the necessities of nature? The wages of the meanest labourer can supply them ... what are the advantages which we propose to gain by that great purpose of life which we call bettering the human condition? To be observed, to be attended to, to be taken notice of with sympathy, complacency and approbation, are all the advantages which we can propose to derive from it." (Smith, 1753, ch. ii. 1).

nalling hypothesis, at least if we think that recipients appreciate learning that the donor is altruistic. Lee, Piliavin, and Call (1999) explicitly compare people's motivation for giving time, money, and blood. Volunteering of time is more strongly affected by others' expectations than are donations of blood and of money.

In the standard model of pure and impure altruism due to Andreoni (1989), the opinions of others play no explicit role. The donor's "warm glow" (impure altruism) could be linked to what others think, but formally the warm glow is simply assumed to be more or less proportional to the gift. While this reduced form model is very useful in many applications, it does not explain why people give in inefficient ways. Explicit signaling models of gift giving have been proposed by Camerer (1988), Carmichael and MacLeod (1997), Denrell (1998), and Prendergast and Stole (2001). In all of these, gifts are used to credibly communicate information about the donor's type. Camerer (1988) and Prendergast and Stole (2001) are most closely related to our work, as both provide reasons for the existence of non–monetary gifts. Camerer's story is nonetheless quite different from ours. In his model, inefficient gifts are given only because gift giving is bilateral. Gifts with a low user value prevent people from entering relationships in order to collect gifts. In our model, gift giving is unilateral, and non–monetary gifts are chosen *despite* their inefficiency, because they are harder to mimick by insincere donors.

Like the present paper, Prendergast and Stole (2001) find that non–monetary gifts ought to be more common when the efficiency loss is small and when the donor's altruism is not too large. However, a crucial feature of their model is that altruistic donors have superior knowledge of the recipient's preferences. Therefore, their model is applicable only when the recipient's desires are not too well known. Our model applies even when the recipient's preferences are common knowledge; we can explain why an acquaintance can ask for help with a removal, but not ask for money. In fact, our model even allows the recipient's benefit to be monetary, thereby explaining volunteering for charities and generosity in the workplace. Admitting monetary benefits also distinguishes our work from other theories of non–monetary gifts, including those focusing on donor paternalism (Pollack, 1988), recipient screening (Blackorby and Donaldson, 1988), and donor commitment (Bruce and Waldman, 1991).

2 Model

A donor is endowed with ω_D units of cash and T units of time. Time is either spent working, earning a wage of 1 per unit of time, or it is spent helping a recipient. Money buys a single consumption good at a price of 1 per unit. The donor can also transfer money to the recipient. For simplicity, the recipient is assumed not to work and not to help anyone. Thus, the recipient merely consumes an endowment ω_R in addition to any transfers from the donor.

The donor cares both about own consumption c_D and the recipient's consumption c_R. The donor can be either *altruistic* or *egoistic*; the difference is that the altruistic donor values the recipient's consumption more. Let h denote the prior probability that the donor is altruistic. Let $\hat{h}$ denote the recipient's subjective probability that the donor is altruistic. Besides caring about consumption, the donor would like the recipient, or some other observer, to believe that the donor is altruistic. The donor cannot avoid being observed.

Gifts can be either monetary or non–monetary, and of any size. Mixtures of monetary and non–monetary gifts are ruled out for simplicity; allowing mixed gifts does not substantially alter the analysis.[4] We measure the donor's cost of giving in consumption units, and we also assume that the recipient always receives gifts in the form of increased consumption. The cost to the donor of a monetary gift is denoted G^M, and the cost of a non–monetary gift is denoted G^T. The recipient's consumption increases by G^M and γG^T respectively. Thus, if $\gamma < 1$, the donor is less efficient at helping than at working. Relative to working, the donor also obtains some satisfaction or dissatisfaction from the helping activity itself. Clearly, one reason for giving time instead of money could be that the donor strongly likes the helping activity. To avoid this trivial explanation for generosity in the time domain, we shall assume that the donor prefers working to helping (for given consumption levels).

Formally, let the donor's utility function be

$$u_i = d(c_D) + \alpha_i r(c_R) - t(\alpha_i) f(G^T) + p(\hat{\alpha}), \tag{1}$$

where α_i parametrizes the donor's level of altruism (with $\alpha_H > \alpha_L$), d and r are increasing and concave functions, $\lim_{c_D \to 0} d'(c_D) = \infty$ and $\lim_{c_R \to \infty} r'(c_R) = 0$, f is increasing, and t is positive and decreasing. The variable $\hat{\alpha} = \hat{h}\alpha_H + (1 - \hat{h})\alpha_L$ denotes the donor's expected altruism (in the recipient's or some observer's view), which we will call the donor's prestige, and $p(\hat{\alpha})$ denotes the donor's utility of prestige. We assume that u_i is continuous and differentiable in all its arguments, and make the normalization that $p(\alpha_L) = 0$.[5]

We assume a separable donor utility function merely in order to ease computations and interpretations. We refer to $d(c_D)$ as the donor's *consump-*

[4] When allowed, mixed gifts are only rarely optimal, and all major results continue to hold.

[5] Note that this normalization would turn into a restrictive assumption if the donor could avoid being evaluated along the altruism dimension altogether.

tion utility, to $\alpha_i r(c_R)$ as the donor's *compassion utility*, to $t(\alpha_i)f(G^T)$ as the donor's *cost of intimacy*, and to $p(\hat{\alpha})$ as the donor's *utility of prestige*. Note that donors differ only in their compassion utility and in their cost of intimacy.

For simplicity, we restrict attention to the case where altruism is so modest that

$$d'(\omega_D + T) - \alpha_H r'(w_R) > 0. \tag{2}$$

Under this restriction, no donor would give anything were it not for the prestige benefit.

Observe that the situation is similar to a signaling game. The donor's strategy is a gift $G = (G^M, G^T) \in \{\{0\} \times \mathbb{R}_+ \cup \mathbb{R}_+ \times \{0\}\}$. Upon observing the gift G the recipient forms a belief $\hat{\alpha}$ concerning the donor's expected altruism. Although we abstract from any subsequent actions, the fact that the donor cares about the recipient's belief will generate all the strategic interactions that are typical of signaling games.

For much of the analysis the choice of solution concept is relatively unimportant, because only separating equilibria are of interest. Among separating equilibria, popular refinements tend to pick the outcome that is yield the highest donor utility: the best separating equilibrium. Notably, the commonly used Intuitive Criterion of Cho and Kreps (1987) has enough power to pick this outcome in our model. (In Section 4, we will discuss some issues that demand a richer model and probably a different solution concept.)

Our key assumption is that the cost of giving time is smaller for altruists than for egoists: $t(\alpha_H)f(G^T) < t(\alpha_L)f(G^T)$ for all $G^T > 0$. The justification is that the altruistic donor cares for the recipient, and hence finds it less painful to spend time thinking about or interacting with him or her. Buying a present for one we truly love, and helping one we truly like can be almost pleasurable. Precisely therefore, these activities are fine signals. As Camerer (1988, p.S195) points out: "Any net cost of time, energy, or imagination is part of the signaling cost of a gift: the thought does count."

3 Analysis

Before analyzing the full game, it proves useful to analyse the "restricted" games in which the donor cannot choose the nature of the gift, only its size.

3.1 Monetary gifts

Suppose the donor is confined to give a purely monetary gift. With $G^M \in \mathbb{R}_+$ and $G^T \equiv 0$, we can write donor utility as

$$u_i^M = d(\omega_D + T - G^M) + \alpha_i r(\omega_R + G^M) + p(\hat{\alpha}(G^M)).$$

Without concern for prestige, the donor would set G^M to maximize $d(\omega_D + T - G^M) + \alpha r(w_R + G^M)$. The optimal value of the gift, call it $G_*^M(\alpha)$, would then be given by the first–order condition

$$\alpha r'(w_R + G_*^M(\alpha)) - d'(\omega_D + T - G_*^M(\alpha)) \leq 0, \tag{3}$$

with equality if $G_*^M > 0$. By assumption (2), it follows that $G_*^M = 0$. Thus, the donor gives nothing unless there is a prestige benefit to be had from giving.

Since the utility function satisfies the single–crossing condition

$$\frac{\partial^2 u}{\partial G^M \partial \alpha} > 0,$$

the model has one and only one Intuitive equilibrium outcome in the sense of Cho and Kreps (1987), and this is the "best separating equilibrium." The Intuitive outcome thus has the feature that the altruistic donor gives a gift just large enough for the egoistic donor to reveal himself by not giving. More formally, the altruist's gift satisfies exactly the "upward" incentive constraint

$$d(\omega_D + T) + \alpha_L r(\omega_R) \geq d(\omega_D + T - G^M) + \alpha_L r(\omega_R + G^M) + p(\alpha_H).$$

Rearranging terms, we see that the altruist's gift G_S^M is given by

$$d(\omega_D + T) - d(\omega_D + T - G_S^M) = \alpha_L[r(\omega_R + G_S^M) - r(\omega_R)] + p(\alpha_H). \tag{4}$$

The left hand side is the reduction of consumption utility brought about by the gift, and the right hand side is the associated increase in compassion utility (for the egoist) and utility of prestige. In equilibrium, an egoistic donor refrains from giving, because any gift below G_S^M makes the recipient, or other observers, infer that the donor is egoistic, and with no prestige gain the egoistic donor never gives. While the equilibrium gift G_S^M is larger than the altruist would ideally have wanted, the price is worth paying in order to earn prestige. Since the altruist's opportunity cost of giving is smaller than the egoist's, there always exists a gift G_S^M that is small enough not to completely dissipate the prestige benefit and large enough to keep the egoist from pretending altruism.

It is useful to define the concept of "donation reward" as being the net contribution to donor utility from giving a non–zero gift.

Observe that the entire donation reward can here be ascribed to the presence of prestige. Since the altruist would not have given anything absent the prestige motive, it is also clear that the donation reward must be smaller than $p(\alpha_H)$. To be precise, the equilibrium reward obtained by the altruist under a purely monetary donation is

$$\begin{aligned}\pi^M &= d(\omega_D + T - G^M) + \alpha_H r(\omega_R + G^M) + p(\alpha_H) - d(\omega_D + T) - \alpha_H r(\omega_R) \\ &= (\alpha_H - \alpha_L)[r(\omega_R + G_S^M) - r(\omega_R)],\end{aligned}$$

where the second equality follows from (4). That is, the altruistic donor attains a reward that is equal to the compassion utility brought about by the gift minus the compassion utility that an egoist would have felt giving the same gift.

Observation 1 *With purely monetary gifts, the altruist's equilibrium donation reward equals the compassion utility differential associated with the smallest separating gift.*

3.2 Time gifts

Let us next consider the case in which the donor gives time but not money. The donor's utility function can now be written as

$$u_i^T = d(\omega_D + T - G^T) + \alpha_i r(\omega_R + \gamma G^T) - t(\alpha_i) f(G^T) + p(\hat{\alpha}(G^T)).$$

Note that giving the recipient γG^T units of consumption now costs the donor $d(\omega_D + T) - d(\omega_D + T - G^T) + t(\alpha_i) f(G^T)$. The cost is higher than before both because the gift is inefficient ($\gamma < 1$) and because of the intimacy cost $t(\alpha) f(G^T)$.

It is straightforward to check that the donor would not give a time gift if there were no prestige benefit; it follows directly from the assumption embodied in (2) and the fact that time gifts come with additional costs and no additional benefits.

As above, the Intuitive equilibrium outcome entails a gift by the altruist that precisely satisfies the egoist's incentive constraint

$$d(\omega_D+T)+\alpha_L r(\omega_R) \geq d(\omega_D+T-G^M)+\alpha_L+r(\omega_R+\gamma G^T)-t(\alpha_L)f(G^T)+p(\alpha_H).$$

The crucial observation here is that the egoist wanting to mimick altruism faces an additional cost, namely the cost of intimacy $t(\alpha_L) f(G^T)$. Rearranging terms, we find that the altruistic donor gives a gift G_S^T satisfying

$$d(\omega_D+T)-d(\omega_D+T-G_S^T) = \alpha_L[r(\omega_R+\gamma G_S^T)-r(\omega_R)]-t(\alpha_L)f(G_S^T)+p(\alpha_H). \tag{5}$$

Again, the egoistic donor gives nothing in equilibrium.

The level comparison between G_S^T and G_S^M is straightforward.

Observation 2 *Ceteris paribus, the material opportunity cost of non-monetary gifts, G_S^M, is smaller than that of monetary gifts, G_S^T.*

Comparing (5) to (4) we see that the difference has two separate causes. Non-monetary gifts are smaller both because they yield less utility to the recipient ($\gamma < 1$) and because they are more costly to provide ($t(\alpha_L)f(G_S^T) > 0$). Since the choice of gift will depend on parameters, this observation by itself is not very helpful, however.

The altruist's donation reward from donating a non–monetary gift is

$$\begin{aligned}
\pi^T &= d(\omega_D + T - G^T) + \alpha_H r(\omega_R + \gamma G^T) - t(\alpha_H)f(G_S^T) + p(\alpha_H) \\
&\quad - d(\omega_D + T) - \alpha_H r(\omega_R) \\
&= (\alpha_H - \alpha_L)[r(\omega_R + \gamma G_S^T) - r(\omega_R)] + [t(\alpha_L) - t(\alpha_H)]f(G_S^T),
\end{aligned}$$

where the second equality follows from (5).

Observation 3 *With purely non–monetary gifts, the altruist's equilibrium donation reward equals the sum of the compassion utility differential and the intimacy cost differential associated with the smallest separating gift.*

3.3 Money or time?

Having computed the equilibria of the two restricted games, we are ready to analyze the full game. Being able to choose the nature of the gift as well as its size, what will the donor do? As before, the Intuitive Criterion selects the best separating equilibrium.

Observation 4 *The donor gives money if $\pi^M > \pi^T$ and time if $\pi^T > \pi^M$.*

The proof is straightforward, so we only sketch it. Suppose that the best separating money gift equilibrium yields a higher altruistic donor reward than the best separating time gift equilibrium. The question is whether the availability of time gifts destroys the equilibrium. The answer is negative for the following reason: The equilibrium could only disappear (fail the Intuitive Criterion) if there were a time gift G^T with the property that (i) G^T yields a higher reward to the altruist and (ii) G^T does not yield a higher reward to the egoist. But if such a time gift existed, then it would have induced a separating equilibrium in the restricted game with time gifts only, contradicting the assumption that $\pi^M > \pi^T$. Suppose instead that the best separating money gift equilibrium yields a smaller altruistic donor reward than the best separating time gift equilibrium. Then, the money gift equilibrium does not satisfy the Intuitive Criterion, because the altruistic donor can defect and give time $G_S^T + \epsilon$, where ϵ is a small positive amount. – This defection can never be rational for an egoist, so the recipient should infer that the gift is given by an altruist, whence the defection pays off.

All that remains is to investigate how the various parameters of the model affects $\Delta = \pi^T - \pi^M$, the altruist's advantage from giving non–monetary rather than monetary gifts. The advantage can be written

$$\Delta = (\alpha_H - \alpha_L)[r(\omega_R + \gamma G_S^T) - r(\omega_R + G_S^M)] + [t(\alpha_L) - t(\alpha_H)]f(G_S^T). \quad (6)$$

We are now ready to perform our comparative static analysis.

Proposition 1 *The likelihood of non–monetary gifts is non–decreasing in the efficiency parameter γ.*

Although the result borders on the trivial, and is closely reminiscent of Prendergast and Stole (2001), we emphasize it for three reasons. First, it stands in stark contrast to the result of Camerer (1988), where the whole point of non–monetary gifts is their inefficiency. Second, the result is general, in the sense that it does not rest on restrictive assumptions concerning functional forms. Third, the result seems to fit the empirical evidence on gift giving. Notably, Waldfogel (2002) reports that cash gifts are more often given by donors who tend to give unwanted gifts.

Next, consider the effect of an increase in the recipient's wealth, ω_R.

Proposition 2 *An increase in the recipient's wealth ω_R increases the relative importance of non–monetary donations.*

The intuition is that the donor's concern for increasing the recipient's consumption becomes less important, relative to acquiring status, as the recipient becomes richer. Hence, the donor also becomes less concerned about the efficiency of the donation, preferring instead to make a non–monetary donation. There is just no point in giving money to a very rich person.

An increase in the donor's wealth works in the opposite direction.

Proposition 3 *An increase in the donor's wealth ω_D reduces the relative importance of non–monetary donations.*

Intuitively, the efficiency loss associated with switching from money gifts to time gifts is magnified as the donor gets richer and donates more. Eventually, when the donor is sufficiently rich, it no longer makes sense to donate time at all, as the efficiency loss eclipses any decrease in the cost of signaling.

Changes in altruism entail more subtle effects. Ceteris paribus, an increase in α_L clearly decreases Δ, as the positive second term becomes smaller and the negative first term becomes larger. However, it is not obvious how to interpret this result, as it conflates an increase in average altruism with a reduction in the uncertainty concerning the donor's type. Likewise, it is of limited interest to study the partial effect of a change in α_H. A more interesting exercise is to consider a proportional increase in α_L and α_H, henceforth simply called an *increase in donor altruism*.

Proposition 4 *(i) An increase in donor altruism increases the relative importance of non–monetary donations if $t(\alpha)$ is concave on the interval $[\alpha_L, \alpha_H]$. (ii) An increase in donor altruism reduces the relative importance of non–monetary donations if $t(\alpha)$ is convex on $[\alpha_L, \alpha_H]$ and either (a) the recipient's wealth is sufficiently small, or (b) the donor's wealth is sufficiently large.*

The proof is in the Appendix. By our assumption that $t(\alpha)$ is decreasing and positive, so that there is always a net cost associated with giving time rather than money, we know that t must be "essentially convex" when α is large (otherwise, t would eventually turn negative). Thus, the second case is most relevant: *When altruism is sufficiently large, the donor will give money, unless the donor is too poor or the recipient is too rich.*[6] This result is consistent with the casual observation that old people give money to young relatives, whereas young people give time to their old relatives even at high levels of altruism.

[Remains to analyse the impact of an increase in prestige.]

4 Extensions and Discussion

For simplicity we have focussed throughout on the case in which altruism is so modest that the least altruistic donors give nothing in a separating equilibrium. However, all the important insights remain when altruism is so great that both types of donor give positive amounts. The only difference is that when the least altruistic donors give a positive amount, they always give money; since they do not get the prestige benefit, there is no point for them in making a non–monetary donation. This observation is consistent with Waldfogel's (2002)

[6]For similar reasons, Prendergast and Stole (2001) find that gifts should be monetary when altruism is sufficiently large.

observation that cash gifts sometimes carry a stigma; the cash gift reveals the donor's relatively low altruism.

Another technically straightforward extension of the model is to allow a continuum of possible levels of altruism. However, a mechanical extension suggests that there is something wrong with mechanically assuming separating equilibria: In reality, we doubt that the gift size varies continuously so as to signal the donor's altruism exactly. Instead, it seems to us that gifts often come in certain conventional sizes. To capture this phenomenon, the equilibrium would have to be (at least partially) pooling. We shall now turn to a set of arguments that suggest how pooling may come about.

4.1 Social regulation

The social norms concerning gift giving have sometimes been subjected to considerable public debate. This is natural; many people are both donors and recipients, and to the extent that gift giving is socially wasteful, society has an incentive to regulate it. For example, Zelitzer (1994, p79) describes how "At the turn of the twentieth century, as their gift exchanges multiplied, Americans, contemplated, debated, and publicly defined gift transfers." One way to interpret social regulation is as coordination of expectations on a particular equilibrium, for example one that maximizes a weighted sum of utilities for donors and recipients. And in this case, the fully separating equilibrium may do quite poorly. For example, all donor types might sometimes be better off in the pooling equilibrium where no gift is given: In our two–type model, this happens when h is close to 1; see Mailath, Okuno–Fujiwara and Postlewaite (1993) for a belief–based argument in favor of selecting this equilibrium. On their side, recipients in our model typically prefer equilibria in which an average gift is always given to equilibria in which the gift is sometimes large and sometimes small. Thus, equilibria with relatively uniform gifts can be desirable for recipients and (many) donors alike.[7]

When it comes to the nature of the gift, we have shown that donors often favor non–monetary gifts. By contrast, recipients always favor cash gifts, as cash gifts are both larger and more useful. If social regulation plays a role here, we would therefore expect the balance to be tilted less strongly in favor of non–monetary gifts than indicated by our donor–focused analysis.

[7]We here eschew attempts to characterize formally the equilibria that a would be implemented by some social contract, but we conjecture that the problem can be formulated and solved along the lines proposed by Myerson (1985).

4.2 The compensation taboo

In many places, there are taboos against paying cash for neighborly help; see for example Webley and Lee (1993). Likewise, we usually don't pay colleagues and friends for their assistance. The model straightforwardly explains the opposition to such payments. If the recipient makes a positive cash payment, the altruistic donor will have to increase the gift so as to maintain separation. Having done so, the donor's utility is roughly the same as it would have been without the payment. The recipient, however, is worse off, because due to the inefficiencies associated with the transaction the additional help is worth less than the cash payment.[8]

This line of reasoning may explain the embarassments that result when donors and recipients have different expectations. Consider for example an ex post offer to pay a helper: The recipient after being helped takes out the wallet and wants to pay. The donor, who has not anticipated this, was expecting instead to be paid prestige. By accepting the money and pretending nothing, the donor will be unable to attain that level of prestige. Alternatively, the donor must explain to the recipient that the act was a signal of altruism. The recipient could then withdraw the offer to pay, but this is a dangerous course of action as it might be taken as a sign of surprise at the generosity of the donor. Thus, the recipient might instead repeat the offer to pay, while belittling the amount and inflating the donor's contribution.

The main exception to the compensation taboo is when part of the donor's costs are monetary; monetary costs can be reimbursed without inducing inefficiency. Presumably, this is why famous people (including leading academics) are often asked to contribute their time to various causes while being compensated only for their lodging and travel costs.

4.3 The teleological paradox

It has frequently been claimed that generous behavior cannot be driven entirely by the prestige motive; see Brennan and Pettit (2004, pages 36–46) for a recent discussion. The argument is that observers only value true generosity, and hence will not appreciate actions that are taken exclusively in order to gain prestige. As Elster (1983, page 66) puts it: "Nothing is so unimpressive as behavior designed to impress." Our model offers a straightforward resolution:

[8]Sometimes, cash payments allegedly even decrease non–monetary donations, a phenomenon that is sometimes referred to as "motivational crowding out." Our model cannot explain motivational crowding out, because of our assumption that the recipient's utility function and beliefs are common knowledge. In Ellingsen and Johannesson (2005) we show that crowding out can occur when this assumption is dropped.

Even if pure altruism is insufficient to generate any generous behavior, the combination of true altruism and a prestige motive can be sufficient – even when the prestige motive is perfectly understood by all. The reason is that while the differences in true altruism are too small to generate differential behavior in and of themselves (because altruism is too weak to generate positive donations), the differences in altruism will be apparent once the prestige motive is added. Just as an addition of noise can amplify weak sounds to a level where they can be perceived, the prestige motive can amplify altruism to a level where differences in altruism create perceptible differences in behavior. The generous behavior is designed exclusively to impress, yet it succeeds in doing so.

Appendix

[To be written.]

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