Online Appendix

Measuring the Welfare Effects of Shame and Pride

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A General Formulation of Social Signaling Models

We now consider more general public recognition structures. We let $\mathcal{A}$ denote the action space, which is a subset of $\mathbb{R}$, and we let F denote the distribution of types. We let $G(\sigma|a)$ denote the distribution of signals σ conditional on an individual choosing action a. For example, two-tier schemes that recognize people who chose $a \geq a^\dagger$ can be represented as schemes where $\sigma = 1$ if $a \geq a^\dagger$ and $\sigma = 0$ otherwise. Schemes where people's performance is revealed with some probability q can be represented as $\sigma = a$ with probability q and $\sigma = \emptyset$ with probability $1 - q$. The signals are completely uninformative if $G(\sigma|a)$ does not depend on a.

We consider general formulations of the action-signaling and characteristics-signaling models that have the following three features. First, in a fully-revealing equilibrium, these models correspond to the models we introduced in Section 2 and, in particular, can be consistent with any non-negative value of ρ. Second, these models make the sensible prediction that when nothing is revealed about an individual's action and type, then the individual derives zero utility from public recognition. Third, individuals' utility from public recognition is continuous in the audience inference, and is continuous in the population distribution of behavior or types (in the weak topology).

To see how the second criterion can be limiting, suppose that for general signal structures, individuals' utility from public recognition is given by $\nu S(\mathbb{E}[\theta|\sigma] - \rho\bar{\theta})$, where $\mathbb{E}[\theta|\sigma]$ denotes the audience's expectation of the individual's action, and $\rho > 1$. If the signal is fully revealing, then this formulation is consistent with the signaling model we presented in Section 2. However, if the signals are completely uninformative—meaning that nothing is in fact learned about the individual's behavior and type—then this formulation makes the odd prediction that the individual's utility from public recognition is $\nu S(\bar{\theta} - \rho\bar{\theta}) < S(0) = 0$; that is, that the individual derives negative utility from public recognition when in fact nothing is learned about the individual.

To see how the third criterion can be limiting, consider a public recognition scheme that divides individuals into K tiers $[0, a_1), [a_1, a_2), ..., [a_{K-1}, a_K]$, and that in equilibrium the mean type in each tier is $\bar{\theta}_1, \bar{\theta}_2, \ldots, \bar{\theta}_K$. Suppose that individuals' utility is given by $\nu S(\mathbb{E}[\theta|\sigma] - r)$, where r is the largest value such that $Pr(\bar{\theta}_i \leq r) \leq 1/2$. In a separating equilibrium—where each tier in fact corresponds to a possible value of a—this corresponds to the intuitive-sounding formulation in which individuals compare their type to the median type. Note, however, that it is crucial to define r in terms of the tiers, rather than in terms of the underlying distribution of types: if r was always defined as the median of the distribution of θ, and if the mean of the distribution of θ was smaller than the median, then with a completely uninformative signal structure individuals would derive $\nu S(\bar{\theta} - r) < S(0) = 0$ utility from public recognition. The problem with defining r as the median of the tiers is that it leads to discontinuous payoffs from public recognition. For example, consider a two-tier system. If for $\epsilon > 0$, $0.5 + \epsilon$ individuals are in the bottom tier, then r would be defined as the average type in the bottom tier. But if $0.5 - \epsilon$ individuals are in the bottom tier, then r would be defined as the average type in the top tier. This would lead payoffs from public recognition to be sharply discontinuous in the distribution of types in the population, which is not only unintuitive, but also theoretically unattractive as it could lead to non-existence of (pure strategy) equilibria even with convex type spaces.

To satisfy the second and third criteria, we define the reference point against which the audience inference is compared to be a weighted average of the distribution of audience posteriors induced by the equilibrium distribution of behavior. E.g., in the context of the example above, the reference point would be the weighted average of $\bar{\theta}_j$—the mean type in each tier. This implies that when signals are completely uninformative, so that the distribution of audience posteriors places weight 1 on the average type, the reference point is just the average behavior or type in the population. Plainly, the weighted-average function is also a continuous function of the distribution of posteriors, and thus satisfies the third criterion.

A.1 Action Signaling

We let $\mathbb{E}[a|\sigma]$ denote the audience's expectation of the individual's action, given a realization σ of the signal. Let $\boldsymbol{a}: \Theta \to \mathcal{A}$ be the equilibrium action function, and let $G^*(\sigma)$ denote the unconditional distribution of signal values, induced by $\boldsymbol{a}$, F, and $G(\cdot|a)$, that results in equilibrium. We assume that the audience updates according to Bayes' Rule to form the inference $\mathbb{E}[a|\sigma]$, and we let H^* denote the unconditional distribution of audience posteriors, $\mathbb{E}[a|\sigma]$, induced by the distribution G^*.

To illustrate H^*, consider a public recognition scheme that divides individuals into K tiers $[a_0 = 0, a_1), [a_1, a_2), ..., [a_{K-1}, a_K]$. Suppose that in equilibrium, the mean action in each tier is $\bar{a}_1, \bar{a}_2, \ldots, \bar{a}_K$, and that the fraction of people in tier $[a_{k-1}, a_k)$ is μ_k. Then H^* is simply the probability distribution that places weight μ_k on $\bar{a}_k$.

We define utility from public recognition, for an individual generating signal σ, to be

$$\nu S\left(\mathbb{E}[a|\sigma] - \frac{\int_{a\in\mathcal{A}} aw(a)dH^*(a)}{\int_{a\in\mathcal{A}} w(a)dH^*(a)}\right)$$

where ν is the visibility parameter, the weighting function w is a smooth function $w: \mathbb{R} \to \mathbb{R}$, and where S is a smooth function with $S(0) = 0$. The equilibrium action function is such that $\boldsymbol{a}(\theta) \in \mathcal{A}$ maximizes

$$u(a;\theta) + \nu \int_\sigma S\left(\mathbb{E}[a|\sigma] - \frac{\int_{a\in\mathcal{A}} aw(a)dH^*(a)}{\int_{a\in\mathcal{A}} w(a)dH^*(a)}\right) dG(\sigma|a).$$

for each θ, given the Bayesian inference function $\mathbb{E}[a|\sigma]$ and the induced distribution H^*.

Note that when the signals are completely uninformative, $\mathbb{E}[a|\sigma]$ is simply the average action in the population, $\bar{a}$, and H^* places mass 1 on $\bar{a}$. Thus,

$$\mathbb{E}[a|\sigma] - \frac{\int_{a\in\mathcal{A}} aw(a)dH^*(a)}{\int_{a\in\mathcal{A}} w(a)dH^*(a)} = \bar{a} - \bar{a} = 0$$

and individuals derive no utility from public recognition. Conversely, when the signals are fully informative, public recognition utility is given by

$$\nu S\left(a - \frac{\int_{a\in\mathcal{A}} a w(a) dH(a)}{\int_{a\in\mathcal{A}} w(a) dH(a)}\right)$$

where H is the probability distribution over actions. Note that

$$\frac{\int_{a\in\mathcal{A}} a w(a) dH(a)}{\int_{a\in\mathcal{A}} w(a) dH(a)}$$

is simply the weighted average of the population distribution of performance, and is equal to $\rho\bar{a}$ for an appropriately defined constant ρ. If $w(a)$ is constant in a, meaning that there is no reweighting, then $\rho = 1$ in all separating equilibria. If $w(a)$ is increasing (decreasing) in a, meaning that higher levels of performance receive more (less) weight, then $\rho > 1$ ($\rho < 1$) in all separating equilibria. If $w(a)$ places full weight on $a = 0$ (and some individuals choose $a = 0$ in equilibrium), then $\rho = 0$ in all equilibria.

A.2 Characteristics Signaling

We define this general version of characteristics-signaling models analogously to above.

We let $\mathbb{E}[\theta|\sigma]$ denote the audience's expectation of the individual's action, given a realization σ of the signal. Let $\boldsymbol{a} : \Theta \to \mathcal{A}$ be the equilibrium action function, and let $G^*(\sigma)$ denote the unconditional distribution of signal values, induced by $\boldsymbol{a}$, F, and $G(\cdot|a)$, that results in equilibrium. We assume that the audience updates according to Bayes' Rule to form the inference $\mathbb{E}[\theta|\sigma]$, and we let H^* denote the unconditional distribution of audience posteriors, $\mathbb{E}[\theta|\sigma]$, induced by the distribution G^*.

To illustrate H^*, consider a public recognition scheme that divides individuals' performance into K tiers $[0, a_1), [a_1, a_2), ..., [a_{K-1}, a_K]$. Suppose that in equilibrium, the mean type in each tier is $\bar{\theta}_1, \bar{\theta}_2, \ldots, \bar{\theta}_K$, and that the fraction of people in tier $[a_{k-1}, a_k)$ is μ_k. Then H^* is simply the probability distribution that places weight μ_k on $\bar{\theta}_k$.

We define utility from public recognition, for an individual generating signal σ, to be

$$\nu S\left(\mathbb{E}[\theta|\sigma] - \frac{\int_{x\in\Theta} x w(x) dH^*(x)}{\int_{x\in\Theta} w(x) dH^*(x)}\right)$$

where the weighting function w is a smooth function $w : \mathbb{R} \to \mathbb{R}$, and where S is a smooth function with $S(0) = 0$. The equilibrium action function is such that $\boldsymbol{a}(\theta) \in \mathcal{A}$ maximizes

$$u(a;\theta) + \nu \int_\sigma S\left(\mathbb{E}[\theta|\sigma] - \frac{\int_{x\in\Theta} x w(x) dH^*(x)}{\int_{x\in\Theta} w(x) dH^*(x)}\right) dG(\sigma|a).$$

for each θ, given the Bayesian inference function $\mathbb{E}[a|\sigma]$ and the induced distribution H^*.

Note that when the signals are completely uninformative, $\mathbb{E}[\theta|\sigma]$ is simply the average type in the population, $\bar{\theta}$, and H^* places mass 1 on $\bar{\theta}$. Thus,

$$\mathbb{E}[\theta|\sigma] - \frac{\int_{x\in\Theta} xw(x)dH^*(x)}{\int_{x\in\Theta} w(x)dH^*(x)} = \bar{\theta} - \bar{\theta} = 0$$

and individuals derive no utility from public recognition. Conversely, in a separating equilibrium, public recognition utility is given by

$$\nu S\left(\mathbb{E}[\theta|a] - \frac{\int_{x\in\Theta} xw(x)dF(x)}{\int_{x\in\Theta} w(x)dF(x)}\right)$$

where F is the probability distribution over types. Note that

$$\frac{\int_{x\in\Theta} xw(x)dF(x)}{\int_{x\in\Theta} w(x)dF(x)}$$

is simply the weighted average of the distribution of types, and is equal to $\rho\bar{\theta}$ for an appropriately defined constant ρ. If $w(\theta)$ is constant in θ, meaning that there is no reweighting, then $\rho = 1$ in all separating equilibria. If $w(\theta)$ is increasing (decreasing) in θ, meaning that higher levels of performance receive more (less) weight, then $\rho > 1$ ($\rho < 1$) in all separating equilibria. If $w(\theta)$ places full weight on some lowest type θ_m, then $\rho = \theta_m/\bar{\theta}$ in all equilibria.

A.3 The Net Image Payoff

For the sake of parsimony, we focus on the characteristics-signaling model, as the arguments for the action-signaling model are nearly identical.

We establish the following simple result:

Proposition 1. *Assume that S is increasing. If S is concave and w is increasing, then the net image payoff is negative. If S is convex and w is decreasing, then the image payoff is positive.*

Proof. Suppose that S is concave and that w is increasing. Then Jensen's inequality implies that

$$\begin{aligned}
&\int_{\theta'\in\Theta}\int_{\sigma} S\left(\mathbb{E}[\theta|\sigma] - \frac{\int_{x\in\Theta} xw(x)dH^*(x)}{\int_{x\in\Theta} w(x)dH^*(x)}\right) dG(\sigma|\boldsymbol{a}(\theta'))dF(\theta') \\
\leq & S\left(\mathbb{E}[\theta|\sigma]dG(\sigma|\boldsymbol{a}(\theta'))dF(\theta') - \frac{\int_{x\in\Theta} xw(x)dH^*(x)}{\int_{x\in\Theta} w(x)dH^*(x)}\right) \\
= & S\left(\int_{x\in\Theta} xdH^*(x) - \frac{\int_{x\in\Theta} xw(x)dH^*(x)}{\int_{x\in\Theta} w(x)dH^*(x)}\right) \qquad (9) \\
\leq & S(0) = 0. \qquad (10)
\end{aligned}$$

Line (10) follows from line (9) because S is increasing and $Cov_{H^*}[x, w(x)] > 0$ by assumption.

The case in which S is convex and w is decreasing follows analogously. □

B Deadweight Loss Relative to Financial Incentives

B.1 Unidimensional Heterogeneity

Suppose first that types are one-dimensional, meaning that the type space Θ is a subset of $\mathbb{R}$. Assume also that all individuals share the same structural PRU S. In any equilibrium, possibly not fully separating, let $R : \mathcal{A} \to \mathbb{R}$ denote the resulting reduced-form PRU. Thus, individuals choose a to maximize $u(a;\theta) + R(a) + y$, where y is numeraire consumption. We let $\boldsymbol{a}(\theta)$ denote individuals' choices.

We can construct a revenue-neutral financial incentive scheme that induces exactly the same decisions $\boldsymbol{a}(\theta)$ as follows. Revenue-neutrality could be obtained in the YMCA setting, for example, by giving individuals a per-attendance incentive, and raising money for that by increasing the membership fees. Let $p(a)$ be the financial reward that individuals receive for choosing action a, and set $p(a) = R(a) - \int_{\theta\in\Theta} R(\boldsymbol{a}(\theta))dF(\theta)$, where F is the distribution over types θ. By construction, $\boldsymbol{a}(\theta)$ maximizes $u(a;\theta) + p(a) + y$, and $\int_{\theta\in\Theta} p(\boldsymbol{a}(\theta))dF(\theta) = 0$.

Plainly, every individual will be better (worse) off under the revenue-neutral financial incentive scheme if $\int_{\theta\in\Theta} R(\boldsymbol{a}(\theta))dF(\theta)$ is negative (positive). In other words, if the net image payoff from public recognition is negative, then every individual will be made better off if the public recognition intervention is instead replaced by the revenue-neutral financial incentive scheme $p(a)$. The difference in each individuals' utility will be $-\int_{\theta\in\Theta} R(\boldsymbol{a}(\theta))dF(\theta)$. We thus refer to $-\int_{\theta\in\Theta} R(\boldsymbol{a}(\theta))dF(\theta)$ as the deadweight loss of public recognition relative to financial incentives. Note that if the image payoff from public recognition are on net positive ($\int_{\theta\in\Theta} R(\boldsymbol{a}(\theta))dF(\theta) > 0$), then welfare with public recognition is higher than with the equivalent revenue-neutral financial incentive scheme.

B.2 Costly Public Funds and Constraints on the Sign of the Incentive Scheme

Above, we assumed that it is possible to use a revenue-neutral incentive scheme. In the YMCA context, this revenue-neutral scheme could involve raising monthly or annual membership fees to finance a per-attendance incentive. However, this may not always be possible. In such cases, the relative benefits of public recognition versus financial incentives are more nuanced where there is a shadow cost of public funds.

In particular, let the marginal value of public funds be $1 + \lambda$, where $\lambda \geq 0$ is the shadow cost of raising funds due to distortionary effects. When $\lambda > 0$, financial incentives are particularly attractive relative to public recognition if they can be implemented as additional taxes or fines, since doing so raises government revenue. Examples include taxing behaviors that generate environmental externalities (e.g., energy use), or fining behaviors that violate the law (e.g., tax delinquency). However, there are other cases where financial incentives most naturally take the form of positive rewards, such as incentivizing charitable behavior by making it tax-deductible. In these cases there is an additional cost to using financial incentives in lieu of public recognition.

Formally, consider a non-revenue-neutral financial incentive scheme $p(a) = p_0 + R(a)$ that induces the same behavior change as does public recognition. Under public recognition, the net image payoff experienced by individuals is, as before, $\int_{\theta\in\Theta} R(\boldsymbol{a}(\theta))dF(\theta)$. Under the incentive scheme, individuals' earnings change by $\bar{p} = \int_{\theta\in\Theta} p(\boldsymbol{a}(\theta))dF(\theta)$ in total, and the cost to the government is $\lambda\bar{p}$. Thus, the net advantage of financial incentives versus public recognition is given by

$$(1-\lambda)\bar{p} - \int_{\theta\in\Theta} R(\boldsymbol{a}(\theta))dF(\theta).$$

When $\bar{p}$ is negative, meaning that on net the planner collects revenue, financial incentives are particularly attractive. When $\bar{p}$ is positive, meaning that on net the planner gives out financial rewards, financial incentives are less attractive. But when $\lambda = 1$ or when the incentive scheme is revenue-neutral, the relative advantage of financial incentives over public recognition is simply given by $-\int_{\theta\in\Theta} R(\boldsymbol{a}(\theta))dF(\theta)$, the net image payoff.

As an example, suppose that $p(a)$ is required to be non-negative, and return to the welfare estimate in column (1) of Table 9a, where the net image payoff was found to be -3.41. Assume also that the predicted 1.75 attendance change could be obtained with a \$1 per attendance financial incentive, as implied by participants' forecasts. For the social costs of a \$1 per attendance subsidy to be higher than the costs of using public recognition, the cost of public funds would need to be approximately $\lambda = 0.7$, which is substantially higher than the typical estimate of 0.3 (Finkelstein, 2019).[38]

B.3 Multidimensional Heterogeneity

We now consider the case where types θ are multidimensional because, for example, individuals have varying sensitivities to public recognition. For each individual of type θ, let $\Delta(\theta)$ denote the behavior change induced by public recognition, and let $e(\theta)$ denote the marginal social value of increasing type θ's choice of a. Let $r(\theta)$ denote each individual's realization of public recognition utility, and let $\bar{r} = \int_{\theta\in\Theta} r(\theta)dF(\theta)$ denote the net image payoff. In the one-dimensional case, $r(\theta) = R(\boldsymbol{a}(\theta))$. The total behavior change is given by $\bar{\Delta} = \int_{\theta\in\Theta} \Delta(\theta)dF(\theta)$, and the average marginal benefit of increasing a is $\bar{e} = \int_{\theta\in\Theta} e(\theta)dF(\theta)$. The incremental welfare effect of public recognition is given by

$$\begin{aligned}\Delta W^R &= \int_{\theta\in\Theta} \left(\Delta(\theta)e(\theta) + r(\theta)\right) dF(\theta) \\ &= \bar{\Delta}\bar{e} + \bar{r} + Cov[\Delta(\theta), e(\theta)]. \qquad (11)\end{aligned}$$

Consider now an incentive scheme $p(a)$ that changes each type θ's behavior by $\Delta_p(\theta)$, such that $\int_{\theta\in\Theta} \Delta_p(\theta)dF(\theta) = \bar{\Delta}$. Let $\bar{p} = \int_{\theta\in\Theta} p(\boldsymbol{a}(\theta))dF(\theta)$ denote the net financial transfer to individuals.

[38] A 1.75 attendance increase would lead to average attendance of $3.14 + 1.75 = 4.89$, and thus to generate a per-person social cost of \$3.41, the cost of public founds would need to be $3.41/4.89 \approx 0.7$.

The incremental effect of these financial incentives is given by

$$\begin{aligned} \Delta W^p &= \int_{\theta \in \Theta} \left(\Delta_p(\theta) e(\theta) + p(\boldsymbol{a}(\theta))\right) dF(\theta) - \lambda \int_{\theta \in \Theta} p(\boldsymbol{a}(\theta)) dF(\theta) \\ &= \bar{\Delta}\bar{e} + Cov[\Delta_p(\theta), e(\theta)] + (1-\lambda)\bar{p}. \end{aligned} \tag{12}$$

Equations (11) and (12) imply that the difference between the welfare effect of public recognition and financial incentives is given by

$$\underbrace{-\bar{r}}_{\text{image payoff}} + \underbrace{Cov[(\Delta_p(\theta) - \Delta(\theta), e(\theta)]}_{\text{relative targeting}} + \underbrace{(1-\lambda)\bar{p}}_{\text{cost of public funds}}. \tag{13}$$

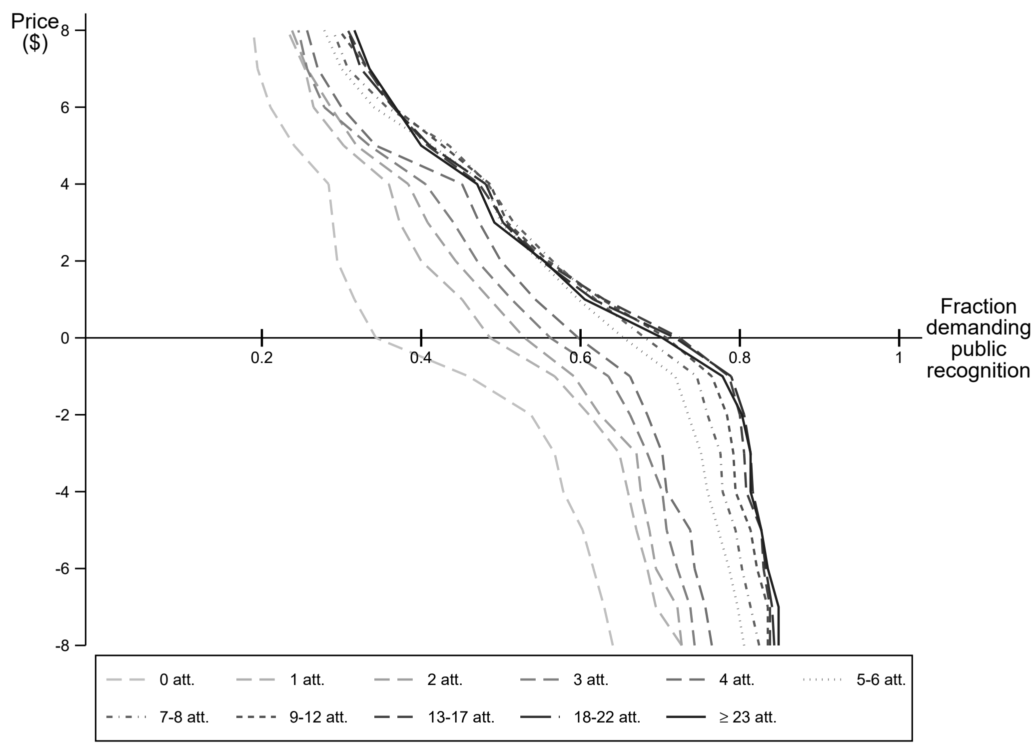
Equation (13) shows that in addition to the image payoff, two other terms determine the welfare effects of financial incentives versus public recognition. The relative targeting term depends on the extent to which the two policy instruments affect the behavior of individuals whose behavior change generates the highest social benefits. This term can be nonzero if individuals' sensitivity to public recognition is, e.g., more correlated with $e(\theta)$ than their responsiveness to financial incentives. In the case where the benefits of behavior change are due to environmental, health, or fiscal externalities—such as energy consumption, vaccinations, or tax delinquency—it is reasonable that $e(\theta)$ is either constant, or at least uncorrelated with $\Delta_p(\theta)$ and $\Delta(\theta)$. In this case, the relative targeting term drops out. In other cases, where the need for behavior change arises from "internalities" such as individuals not attending their health club enough due to self-control problems, $e(\theta)$ is likely to be heterogeneous and could in principle be correlated with incentive effects. However, it is not obvious why $e(\theta)$ would be differentially correlated with responsiveness to financial incentives versus public recognition.

The last term, the impact on the costs of public funds, is discussed above in B.2. This term is zero when the incentive-scheme is revenue-neutral, or when $\lambda = 1$. As we discussed, there are also some natural cases where financial incentives in the form of taxes and fines are clearly doubly beneficial because they create additional revenue, but there are also other cases where financial incentives most naturally take the form of subsidies that must be financed by distortionary taxation.

C Supplementary Empirical Results for YMCA Experiment

C.1 Demand for Public Recognition

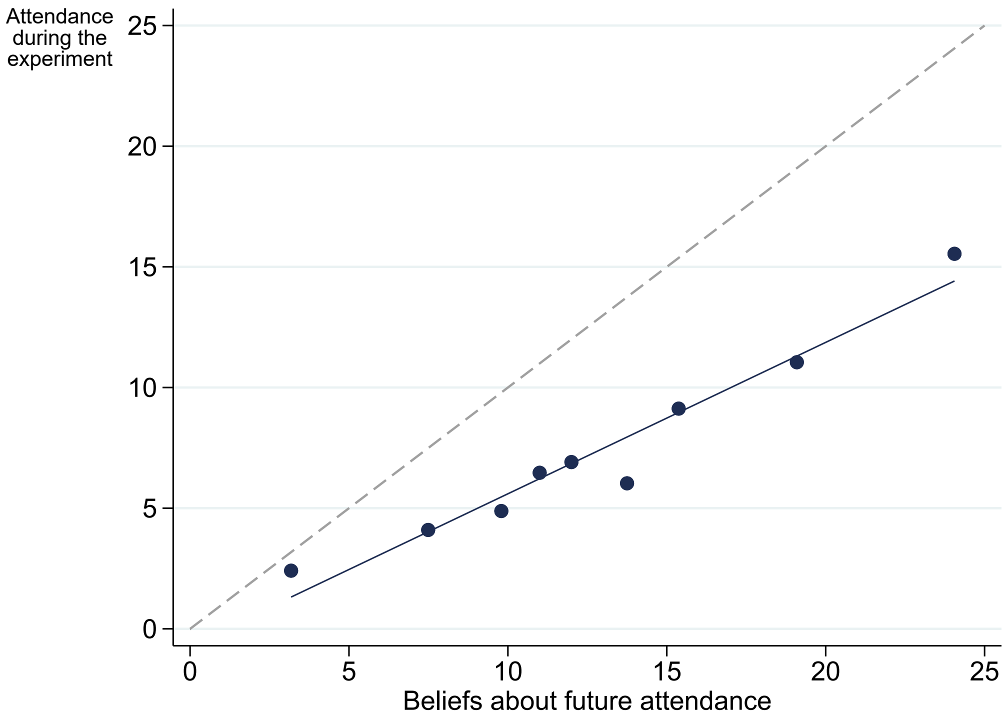
Figure A1: Demand Curves for Public Recognition



Notes: This figure plots the demand curves for public recognition by attendance interval. The analysis excludes 15 participants with "incoherent" preferences for public recognition.

C.2 Actual Versus Forecasted Attendance

Figure A2: Actual versus forecasted attendance in the YMCA experiment



Notes: This figure plots the relationship between participants' forecasted and actual attendance. For participants in the public recognition group, we compare attendance to their beliefs about attendance if they are randomized into the public recognition group. For participants not in the public recognition group, we compare attendance to their beliefs about attendance if they are randomized to not be in the public recognition group. The analysis excludes 15 participants with "incoherent" preferences for public recognition.

C.3 Additional Results about the PRU and Past Attendance

The first table shows that there is no significant interaction between past attendance and the PRU. The second table is analogous to Table 4, but considers visits within 4 of past attendance, rather than expectations.

Table A1: WTP for public recognition by YMCA attendance: heterogeneity along average past attendance

	(1)	(2)	(3)	(4)	(5)	(6)
Model	OLS	OLS	OLS	Tobit	Tobit	Tobit
Dependent var.	WTP	WTP	WTP	WTP	WTP	WTP
N. visits	0.29***	0.43***	0.39***	0.52***	0.72***	0.68***
	(0.05)	(0.05)	(0.05)	(0.10)	(0.10)	(0.10)
N. visits sq.	-0.01***	-0.01***	-0.01***	-0.01***	-0.02***	-0.02***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Avg. past att.			0.02			0.02
			(0.06)			(0.11)
N. visits × Past att.			-0.01			-0.01
			(0.01)			(0.01)
N. visits sq. × Past att.			0.00			0.00
			(0.00)			(0.00)
Constant	-0.19	-0.95**	-0.70	-0.86	-1.81**	-1.48*
	(0.46)	(0.44)	(0.45)	(0.94)	(0.83)	(0.87)
$-\mathrm{R}''/\mathrm{R}'(\bar{a}_{\mathrm{pop}})$	0.068	0.070	–	0.065	0.069	–
95% CI	[0.059, 0.077]	[0.063, 0.077]	–	[0.055, 0.076]	[0.061, 0.076]	–
$-\mathrm{R}''/\mathrm{R}'(\bar{a}_{\mathrm{pop}})\times$ SD	0.332	0.340	–	0.318	0.335	–
95% CI	[0.288, 0.376]	[0.306, 0.375]	–	[0.269, 0.368]	[0.299, 0.372]	–
Restriction	Coh	Coh	Coh	Coh	Coh	Coh
Observations	Above med.	Below med.	–	Above med.	Below med.	–
N. Subjects	2035	2035	4070	2035	2035	4070
N_clust	185	185	370	185	185	370

Notes: This table reports regression estimates from linear and quadratic models of willingness to pay for public recognition by attendance. Columns (1)-(2) use all 11 intervals of future attendance, while columns (3)-(4) restrict to intervals with a midpoint within 4 of a participant's predicted attendance if assigned public recognition. This analysis excludes 15 participants with "incoherent" preferences for public recognition. Standard errors are clustered at the participant level and reported in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table A2: WTP for public recognition by YMCA attendance: using number of visits within 4 of past attendance

	(1)	(2)	(3)	(4)
Model	OLS	OLS	Tobit	Tobit
Dependent var.	WTP	WTP	WTP	WTP
N. visits	0.23***	0.52***	0.41***	0.88***
	(0.05)	(0.11)	(0.10)	(0.22)
N. visits sq.		-0.02***		-0.03***
		(0.01)		(0.01)
Constant	-0.40	-1.01**	-0.98	-1.98**
	(0.42)	(0.47)	(0.84)	(0.93)
$-\mathrm{R}''/\mathrm{R}'(\bar{a}_{\mathrm{pop}})$	–	0.085	–	0.083
95% CI	–	[0.051, 0.118]	–	[0.043, 0.124]
$-\mathrm{R}''/\mathrm{R}'(\bar{a}_{\mathrm{pop}})\times$ SD	–	0.412	–	0.406
95% CI	–	[0.250, 0.575]	–	[0.209, 0.603]
Observations	1645	1645	1645	1645
N. Subjects	370	370	370	370

Notes: These tables report regression estimates from linear and quadratic models of willingness to pay for public recognition by attendance, restricting to intervals with a midpoint within 4 visits of a participant's average past attendance. The standard deviation of the difference between average past attendance and attendance during the month of the experiment is 4.51for the monotonic sample control group, 4.42 for the coherent sample control group, and 3.19 for the general YOTA population. Measures of the curvature of the estimated reduced-form public recognition function are $-R''_{exp}/R'_{exp}(\bar{a}_{pop})$ and $-R''_{exp}/R'_{exp}(\bar{a}_{pop}) \times SD$, where $\bar{a}_{pop}$ and $SD = 4.86$ are the average attendance and standard deviation of attendance for the general YOTA population, respectively. This analysis excludes 15 participants with "incoherent" preferences for public recognition. Standard errors are clustered at the participant level and reported in parentheses. 95 percent confidence intervals for the curvature statistics are computed using the delta method. *** p<0.01, ** p<0.05, * p<0.1.

C.4 Excluding High Visits Intervals

Table A3: WTP for public recognition by YMCA attendance, excluding high number of visits questions

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Model	OLS	OLS	Tobit	Tobit	OLS	OLS	Tobit	Tobit
Dependent var.	WTP	WTP	WTP	WTP	WTP	WTP	WTP	WTP
N. visits	0.15***	0.47***	0.26***	0.81***	0.21***	0.57***	0.37***	0.99***
	(0.02)	(0.05)	(0.04)	(0.09)	(0.02)	(0.06)	(0.05)	(0.12)
N. visits sq.		-0.02***		-0.03***		-0.03***		-0.04***
		(0.00)		(0.00)		(0.00)		(0.01)
Constant	-0.01	-0.79**	-0.39	-1.74***	-0.24	-0.96***	-0.81	-2.04***
	(0.31)	(0.32)	(0.60)	(0.64)	(0.31)	(0.32)	(0.62)	(0.65)
$-\mathrm{R}''/\mathrm{R}'(\bar{a}_{\mathrm{pop}})$	–	0.092	–	0.090	–	0.120	–	0.118
95% CI	–	[0.084, 0.100]	–	[0.081, 0.099]	–	[0.106, 0.135]	–	[0.101, 0.134]
$-\mathrm{R}''/\mathrm{R}'(\bar{a}_{\mathrm{pop}})\times$ SD	–	0.446	–	0.439	–	0.586	–	0.573
95% CI	–	[0.406, 0.486]	–	[0.395, 0.482]	–	[0.514, 0.657]	–	[0.493, 0.653]
Excl. int.	Coh	Coh	Coh	Coh	Coh	Coh	Coh	Coh
Observations	Top	Top	Top	Top	Top 2	Top 2	Top 2	Top 2
N. Subjects	3700	3700	3700	3700	3330	3330	3330	3330
N_clust	370	370	370	370	370	370	370	370

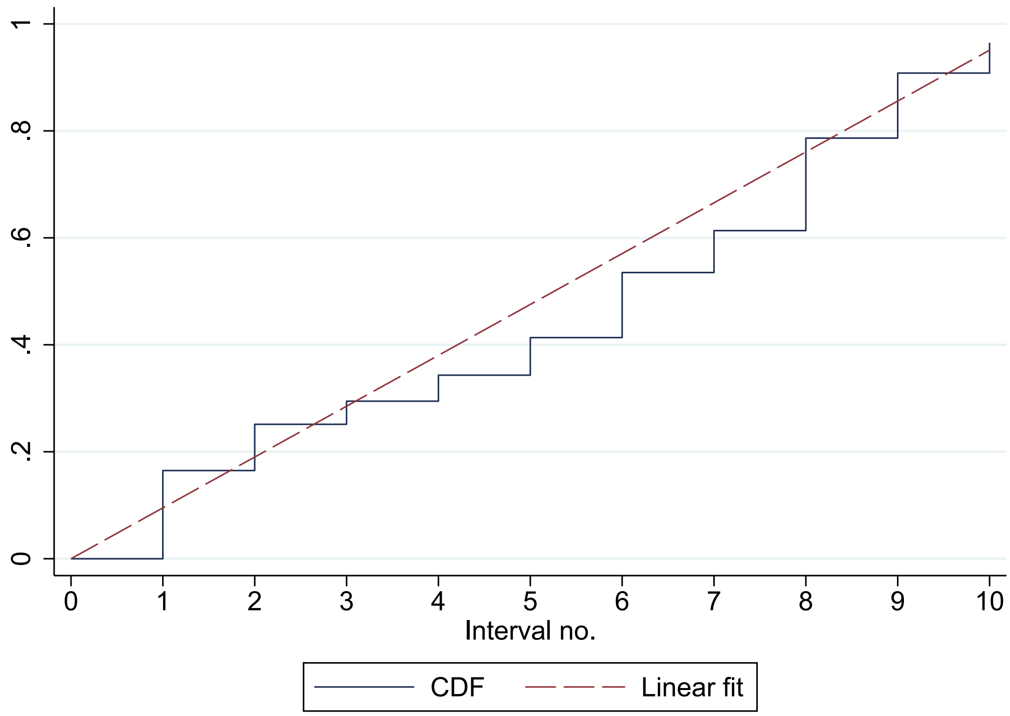
Notes: This table reports regression estimates from linear and quadratic models of willingness to pay for public recognition by attendance. Columns (1)-(4) exclude data from the top interval (23 or more attendances) while columns (5)-(8) exclude data from the top two intervals (18 or more attendances). The fraction of the sample who predicted 18 or more attendances is 0.26, and the fraction who predicted 23 or more attendances is 0.10. Measures of the curvature of the estimated reduced-form public recognition function are $-R''_{exp}/R'_{exp}(\bar{a}_{pop})$ and $-R''_{exp}/R'_{exp}(\bar{a}_{pop}) \times SD$, where $\bar{a}_{pop}$ and $SD = 4.86$ are the average attendance and standard deviation of attendance for the general YOTA population, respectively. This analysis excludes 15 participants with "incoherent" preferences for public recognition. Standard errors are clustered at the participant level and reported in parentheses. 95 percent confidence intervals for the curvature statistics are computed using the delta method. *** p<0.01, ** p<0.05, * p<0.1.

C.5 Rescaling the Visits Intervals to Have Equal Width

One potential concern with the intervals used in the YMCA intervals chosen is that participants might generate a WTP profile that changes by the same amount with each successive interval, either because of confusion or perceived experimenter demand. This may bias the results to overestimate concavity PRU; for example, if participants had a PRU that is linear in the index of the interval, it would look concave plotted against the midpoints of intervals that are increasing in length.

In this section, we provide evidence against this potential confound. First, Figure A3 shows that the cumulative distribution function of attendance during Grow & Thrive is approximately linear in the attendance interval number. Thus, the intervals that included a wider range of visits did not actually include a larger share of realized attendance values. Second, Tables A4 and A5 show that the PRU is still estimated to be highly concave when we index intervals not by their midpoint, but instead by their sequential order. Moreover, our estimate of curvature is, if anything, slightly higher with respect to this recoding. This suggests that our results about concavity are not driven by participants trying to generate a WTP profile that is linearly increasing in the interval numbers.

Figure A3: Distribution of Grow & Thrive attendance over elicitation intervals



Notes: This figure plots the cumulative distribution function for the fraction of participants with attendance below the minimum of each interval of attendance used in the WTP elicitation. Interval number takes values from 0 to 10, corresponding to the 11 intervals of future attendance. The analysis excludes 15 participants with “incoherent” preferences for public recognition.

Table A4: WTP for public recognition by index of attendance interval

	(1)	(2)	(3)	(4)
Model	OLS	OLS	Tobit	Tobit
Dependent var.	WTP	WTP	WTP	WTP
Interval no.	0.33***	0.73***	0.58***	1.24***
	(0.04)	(0.08)	(0.07)	(0.16)
Interval no. sq.		-0.04***		-0.07***
		(0.01)		(0.01)
Constant	-0.53	-1.15***	-1.33**	-2.31***
	(0.34)	(0.32)	(0.65)	(0.64)
$-\mathrm{R}''/\mathrm{R}'(\bar{a}_{\mathrm{pop}})$	–	0.171	–	0.158
95% CI	–	[0.121, 0.220]	–	[0.105, 0.212]
$-\mathrm{R}''/\mathrm{R}'(\bar{a}_{\mathrm{pop}})\times$ SD	–	0.830	–	0.771
95% CI	–	[0.590, 1.070]	–	[0.508, 1.033]
Observations	4070	4070	4070	4070
N. Subjects	370	370	370	370

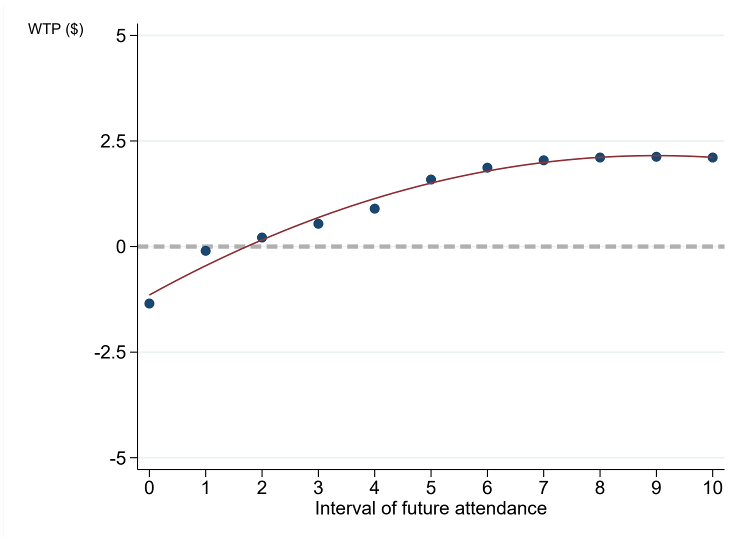
Notes: These tables report regression estimates from linear and quadratic models of willingness to pay for public recognition, by index of the interval. The interval index takes values from 0 to 10, corresponding to the 11 intervals of future attendance. Measures of the curvature of the estimated reduced-form public recognition function are $-R''_{exp}/R'_{exp}(\bar{a}_{pop})$ and $-R''_{exp}/R'_{exp}(\bar{a}_{pop}) \times SD$, where $\bar{a}_{pop}$ and $SD = 4.86$ are the average attendance and standard deviation of attendance for the general YOTA population, respectively. The analysis excludes 15 participants with "incoherent" preferences for public recognition. Standard errors are clustered at the participant level and reported in parentheses. 95 percent confidence intervals for the curvature statistics are computed using the delta method. *** p<0.01, ** p<0.05, * p<0.1.

Table A5: WTP for public recognition by index of attendance interval, restricting to number of visits questions within 4 of predicted PR attendance

	(1)	(2)	(3)	(4)
Model	OLS	OLS	Tobit	Tobit
Dependent var.	WTP	WTP	WTP	WTP
Interval no.	0.70***	0.99***	1.17***	1.50**
	(0.12)	(0.34)	(0.23)	(0.67)
Interval no. sq.		-0.03		-0.03
		(0.03)		(0.06)
Constant	-3.18***	-3.75***	-5.56***	-6.22***
	(0.90)	(1.06)	(1.67)	(2.09)
$-\mathrm{R}^{''}/\mathrm{R}^{'}(\bar{a}_{\mathrm{pop}})$	–	0.067	–	0.049
95% CI	–	[-0.063, 0.197]	–	[-0.110, 0.207]
$-\mathrm{R}^{''}/\mathrm{R}^{'}(\bar{a}_{\mathrm{pop}})\times$ SD	–	0.327	–	0.236
95% CI	–	[-0.304, 0.957]	–	[-0.534, 1.006]
Observations	923	923	923	923
N. Subjects	370	370	370	370

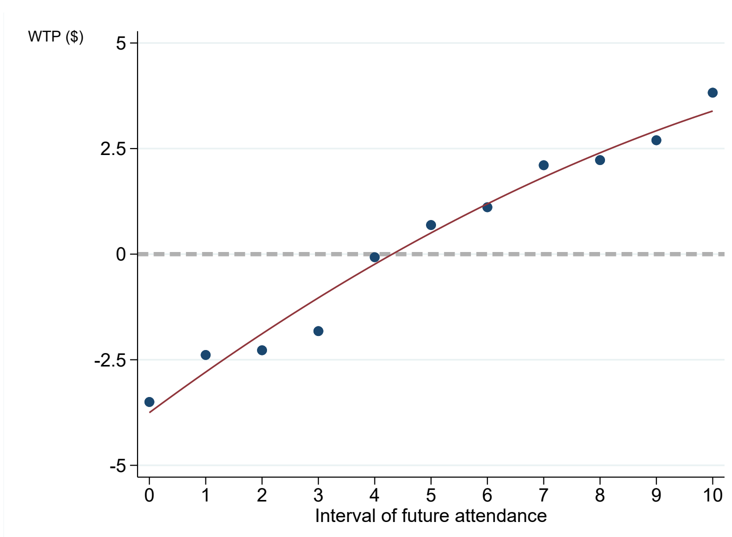
Notes: These tables report regression estimates from linear and quadratic models of willingness to pay for public recognition, by index of the interval. The interval index takes values from 0 to 10, corresponding to the 11 intervals of future attendance. Data is restricted to visits intervals with a midpoint within 4 of a participant's predicted attendance if assigned to the public recognition group. Measures of the curvature of the estimated reduced-form public recognition function are $-R''_{exp}/R'_{exp}(\bar{a}_{pop})$ and $-R''_{exp}/R'_{exp}(\bar{a}_{pop}) \times SD$, where $\bar{a}_{pop}$ and $SD = 4.86$ are the average attendance and standard deviation of attendance for the general YOTA population, respectively. The analysis excludes 15 participants with "incoherent" preferences for public recognition. Standard errors are clustered at the participant level and reported in parentheses. 95 percent confidence intervals for the curvature statistics are computed using the delta method. *** p<0.01, ** p<0.05, * p<0.1.

Figure A4: WTP for public recognition by index of interval



Notes: These figures plot the average WTP for public recognition by each of the eleven intervals of possible future attendance. Interval number takes values from 0 to 10, corresponding to the 11 intervals of future attendance. The analysis excludes 15 participants with "incoherent" preferences for public recognition.

Figure A5: The reduced-form public recognition function: by interval, restricting to number of visits questions within 4 predicted PR attendance



Notes: These figures plot the average WTP for each of the eleven intervals of possible future attendances to the YMCA during the experiment, restricting to intervals whose midpoint is within 4 visits of a participant's predicted attendance if assigned public recognition. For intervals including more than one number of visits (e.g., "between 7 and 8 visits"), the WTP is plotted at the average point of visits. The analysis excludes 15 participants with "incoherent" preferences for public recognition.

C.6 Interaction between Demand for Commitment and WTP for Public Recognition

To develop our measure of the WTP for motivation, we follow Carrera et al. (forthcoming) and Allcott et al. (forthcoming). Letting w_i be individual i's WTP for a \$1 attendance incentive, and letting $\alpha_i(0)$ and $\alpha_i(1)$ be this individual's expected visits in the absence and presence of the attendance incentive, Carrera et al. (forthcoming) and Allcott et al. (forthcoming) show that

$$m_i = w_i - \frac{\alpha_i(0) + \alpha_i(1)}{2}$$

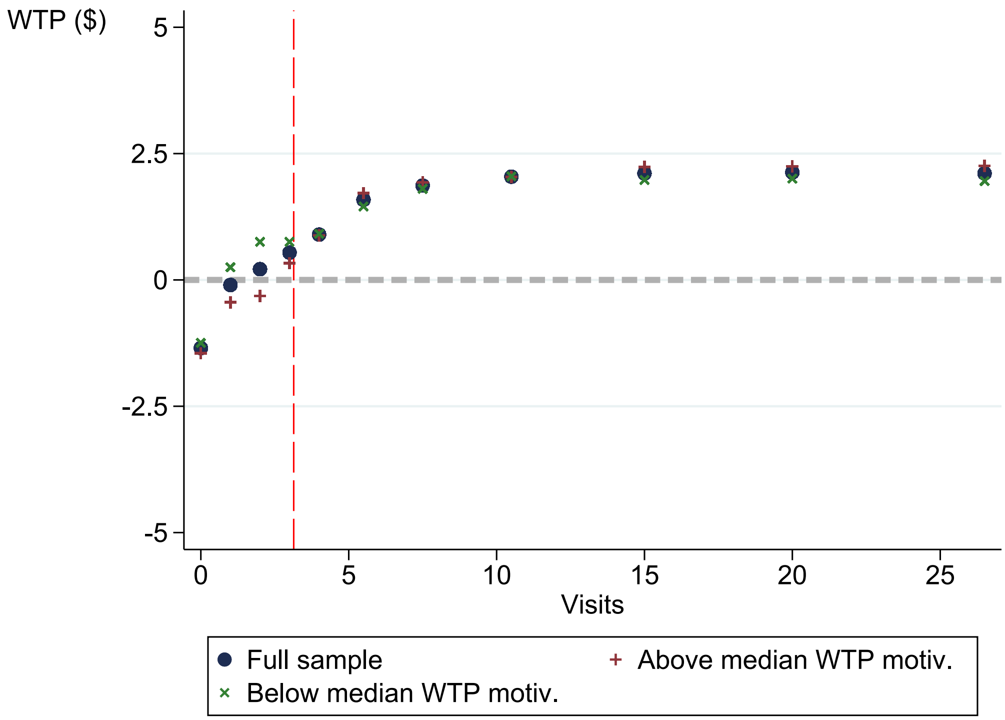
is a measure of individuals' perceived time-inconsistency. This measure equals 0 for individuals who perceive themselves to be time-consistent, is positive for individuals who would like to attend the YMCA more, and is negative for individuals who believe that they attend the YMCA too much. Below, we study whether this measure relates to participants' profile of WTP for public recognition. We present regression results in Table A6 and graphical results in Figure A6.

Table A6: WTP for public recognition by YMCA attendance: heterogeneity along demand for commitment

	(1)	(2)	(3)	(4)
Model	OLS	OLS	Tobit	Tobit
Dependent var.	WTP	WTP	WTP	WTP
N. visits	0.36***	0.62***	0.59***	0.92***
	(0.04)	(0.08)	(0.14)	(0.26)
N. visits sq.	-0.01***	-0.02***	-0.01***	-0.02**
	(0.00)	(0.00)	(0.00)	(0.01)
WTP motivation	-0.03	-0.04	0.08	0.14
	(0.03)	(0.07)	(0.10)	(0.20)
N. visits × WTP motiv.	0.00	-0.00	-0.01	-0.01
	(0.00)	(0.01)	(0.01)	(0.03)
N. visits sq. × WTP motiv.	-0.00	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)
Constant	-0.64*	-1.45**	-2.81***	-4.77***
	(0.33)	(0.63)	(0.91)	(1.69)
Restriction	All	All	≤ 4	≤ 4
Observations	4070	4070	923	923
N. Subjects	370	370	370	370

Notes: This table reports regression estimates of quadratic models of willingness to pay for public recognition by YMCA attendance. Columns (1)-(2) use all 11 intervals of future attendance, while columns (3)-(4) restrict to intervals with a midpoint within 4 of a participant's predicted attendance if assigned public recognition. WTP for motivation, m_i, is defined as $m_i := w_i - \frac{\alpha_i(0)+\alpha_i(1)}{2}$, where w_i is individual i's WTP for a \$1 attendance incentive, and $\alpha_i(0)$ and $\alpha_i(1)$ are the individual's expected visits in the absence and presence of the attendance incentive. The analysis excludes 15 participants with "incoherent" preferences for public recognition. Standard errors are clustered at the participant level and reported in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Figure A6: WTP for public recognition by YMCA attendance: heterogeneity along demand for commitment

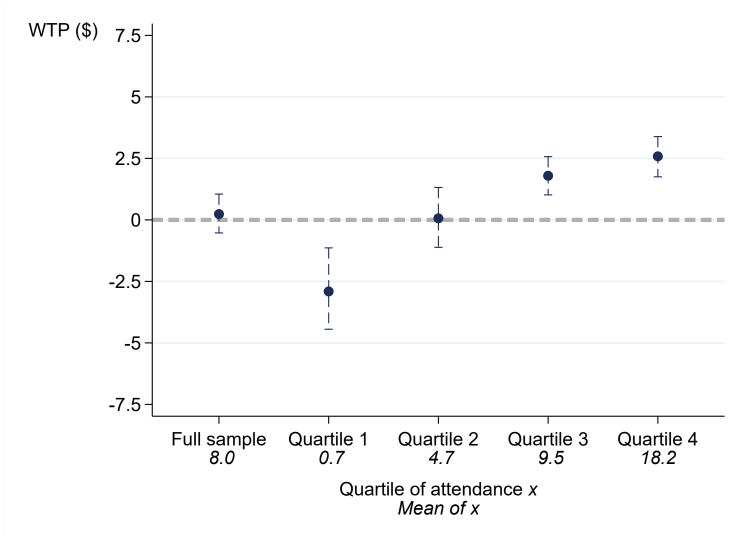


Notes: This figure plots the average WTP for public recognition by YMCA attendance. For intervals including more than one value of visits (e.g., "5 or 6 visits"), the WTP is plotted at the midpoint the interval. The figure separately reports the average WTP for the whole sample of coherent participants, and for coherent participants whose average attendance prior the experiment was below/above the median WTP for motivation. WTP for motivation, m_i, is defined as $m_i := w_i - \frac{\alpha_i(0)+\alpha_i(1)}{2}$, where w_i is individual i's WTP for a \$1 attendance incentive, and $\alpha_i(0)$ and $\alpha_i(1)$ are the individual's expected visits in the absence and presence of the attendance incentive. The average YOTA attendance is indicated by the dashed red line. The analysis excludes 15 participants with "incoherent" preferences for public recognition.

C.7 Additional Results on Realized Image Payoffs

To construct the figures below, we instead estimated the reduced-form PRU non-parametrically. We define a participants' realized payoff as follows: If the participant attended the YMCA a times, then we compute $R_{exp}(a)$ to be the average WTP reported by participants for the elicitation interval containing a visits. To counter potential scaling bias, we continue limiting to data where the midpoints of the visits intervals are within 4 of participants' expected number of visits.

Figure A7: The image payoff in the YMCA experiment



Notes: These figures plot the average realized payoff from public recognition, of participants assigned public recognition. We present results for both the full sample and each quartile of actual attendance. The average attendance is reported below each subsample label. The analysis excludes 15 participants with "incoherent" preferences for public recognition. Bootstrapped percentile-based confidence intervals, sampled by participant with 1000 iterations, are displayed.

C.8 Replication of Main Results Restricting to Participants with Monotonic Preferences for Public Recognition

In this Appendix, we replicate our main analyses excluding an additional 31 participants with non-monotonic preferences for public recognition. This *monotonic sample* is of particular interest because it is consistent with the typical monotonicity assumptions of the models in Section 2.

Table A7: The impact of public recognition on YMCA attendance

	(1)	(2)	(3)
Public recognition	1.20	1.26***	1.34***
	(0.73)	(0.48)	(0.47)
Avg. past att.		0.89***	0.78***
		(0.04)	(0.05)
Beliefs			0.20***
			(0.05)
Control mean	6.95	6.95	6.95
	(0.49)	(0.49)	(0.49)
N. Subjects	339	339	339

Notes: This table reports regression estimates of the effects of public recognition on attendance during the experiment. "Beliefs" reports the expectations YMCA members had about their attendance assuming that they would be part of the public recognition treatment. The analysis excludes 46 participants with "incoherent" preferences for public recognition. The control mean is the average attendance for participants in the experiment who are not in the public recognition program. Standard errors are clustered at the participant level and reported in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table A8: WTP for public recognition by YMCA attendance

	(1)	(2)	(3)	(4)
Model	OLS	OLS	Tobit	Tobit
Dependent var.	WTP	WTP	WTP	WTP
N. visits	0.13***	0.39***	0.25***	0.68***
	(0.01)	(0.04)	(0.03)	(0.08)
N. visits sq.		-0.01***		-0.02***
		(0.00)		(0.00)
Constant	-0.14	-0.91***	-0.69	-2.00***
	(0.32)	(0.34)	(0.63)	(0.68)
$-\mathrm{R}''/\mathrm{R}'(\bar{a}_{\mathrm{pop}})$	–	0.062	–	0.061
95% CI	–	[0.058, 0.067]	–	[0.056, 0.065]
$-\mathrm{R}''/\mathrm{R}'(\bar{a}_{\mathrm{pop}})\times$ SD	–	0.303	–	0.294
95% CI	–	[0.282, 0.325]	–	[0.270, 0.318]
Observations	3729	3729	3729	3729
N. Subjects	339	339	339	339

Notes: This table reports regression estimates from linear and quadratic models of willingness to pay for public recognition by attendance. Measures of the curvature of the estimated reduced-form public recognition function are $-R''_{exp}/R'_{exp}(0)$ and $-R''_{exp}/R'_{exp}(0)\times SD$, where $SD = 4.86$ is the standard deviation attendance for the general YOTA population. The analysis excludes 46 participants with "incoherent" preferences for public recognition. Standard errors are clustered at the participant level and reported in parentheses. 95 percent confidence intervals for the curvature statistics are computed using the delta method. *** p<0.01, ** p<0.05, * p<0.1.

Table A9: WTP for public recognition by YMCA attendance, restricting to questions about visits close to participants' expectations

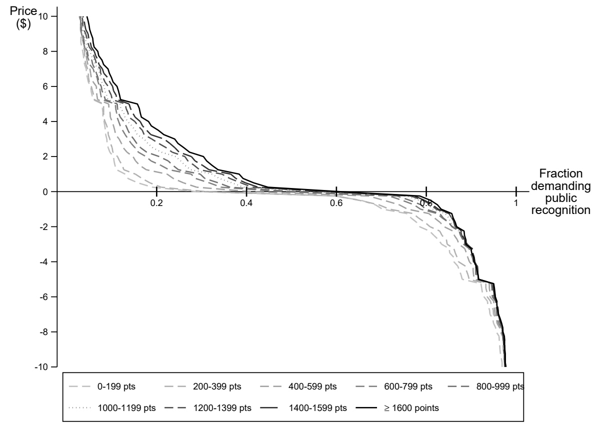
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Model	OLS	OLS	Tobit	Tobit	OLS	OLS	Tobit	Tobit
Dependent var.	WTP	WTP	WTP	WTP	WTP	WTP	WTP	WTP
N. visits	0.27***	0.65***	0.47***	1.04***	0.22***	0.67***	0.43***	1.19***
	(0.05)	(0.14)	(0.09)	(0.27)	(0.05)	(0.18)	(0.10)	(0.38)
N. visits sq.		-0.02***		-0.02**		-0.01**		-0.03**
		(0.00)		(0.01)		(0.01)		(0.01)
Constant	-1.83***	-3.41***	-3.54***	-5.87***	-0.94	-3.67***	-2.51*	-7.11***
	(0.69)	(0.94)	(1.28)	(1.81)	(0.74)	(1.29)	(1.41)	(2.59)
$-\mathrm{R}''/\mathrm{R}'(\bar{a}_{\mathrm{pop}})$	–	0.057	–	0.053	–	0.052	–	0.050
95% CI	–	[0.040, 0.073]	–	[0.031, 0.074]	–	[0.034, 0.069]	–	[0.028, 0.071]
$-\mathrm{R}''/\mathrm{R}'(\bar{a}_{\mathrm{pop}})\times$ SD	–	0.275	–	0.257	–	0.252	–	0.241
95% CI	–	[0.194, 0.356]	–	[0.152, 0.361]	–	[0.166, 0.338]	–	[0.135, 0.347]
Restriction	≤ 4	≤ 4	≤ 4	≤ 4	Exact	Exact	Exact	Exact
Observations	830	830	830	830	339	339	339	339
N. Subjects	339	339	339	339	339	339	339	339

Notes: These tables report regression estimates from linear and quadratic models of willingness to pay for public recognition by attendance. Columns (1)-(4) restrict to visits intervals with a midpoint within 4 of a participant's predicted attendance if assigned to the public recognition group. Columns (5)-(8) restrict to intervals that contain the participant's predicted attendance if assigned to the public recognition group. Measures of the curvature of the estimated reduced-form public recognition function are $-R''_{exp}/R'_{exp}(\bar{a}_{pop})$ and $-R''_{exp}/R'_{exp}(\bar{a}_{pop}) \times SD$, where $\bar{a}_{pop}$ and $SD = 4.86$ are the average attendance and standard deviation of attendance for the general YOTA population, respectively. The analysis excludes 46 participants with "incoherent" preferences for public recognition. Standard errors are clustered at the participant level and reported in parentheses. 95 percent confidence intervals for the curvature statistics are computed using the delta method. *** p<0.01, ** p<0.05, * p<0.1.

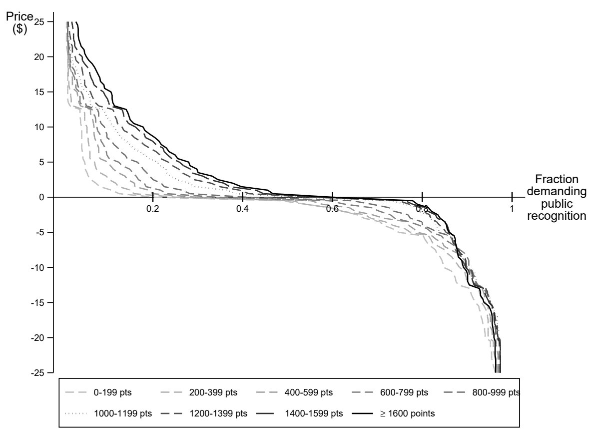
D Supplementary Empirical Results for Charitable Contribution Experiments

D.1 Demand for Public Recognition

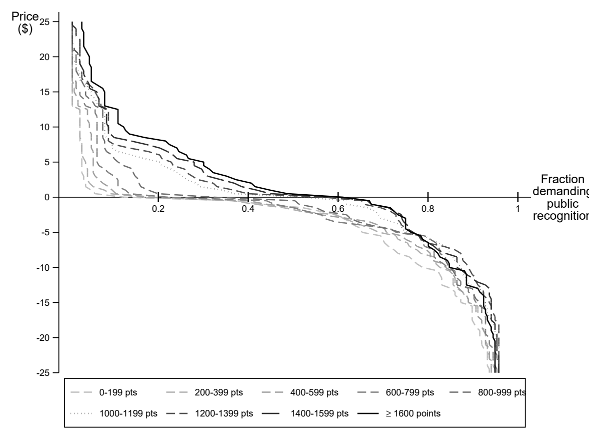
Figure A8: Demand Curves for Public Recognition



(a) Prolific



(b) Berkeley



(c) BU

Notes: This figure plots the demand curves for public recognition by attendance interval. The analysis excludes 40 Prolific participants, 11 Berkeley participants, and 2 BU participants with "incoherent" preferences for public recognition

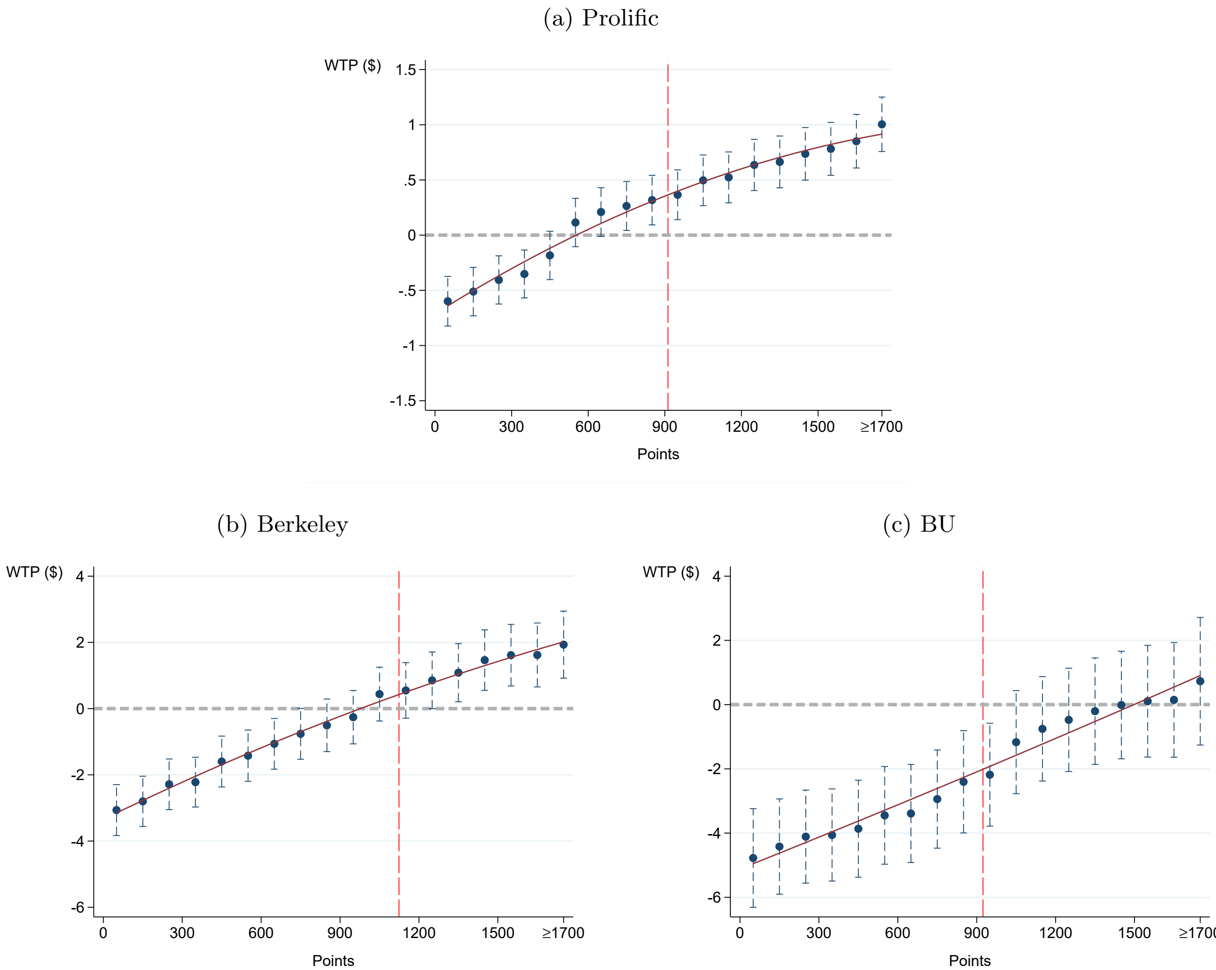
D.2 Robustness and Heterogeneity Analysis

Table A10: The effect of public recognition on points scored, first round only

	(1)	(2)	(3)
Model	OLS	OLS	OLS
Dependent var.	Points	Points	Points
Public recognition	104.33***	132.68**	-27.67
	(39.85)	(58.75)	(130.50)
Financial incentives	174.83***	153.18**	-50.94
	(38.31)	(59.45)	(123.83)
Control mean	824.0	1012.4	974.8
	(26.7)	(42.5)	(91.0)
Sample	Prolific	Berkeley	BU
N. Subjects	968	384	118

Notes: This table reports regression estimates of the effects of public recognition and financial incentives on points scored and is limited to observations from the first round randomly assigned to be completed by each participant. The control mean is the mean points scored in the Anonymous Effort Round. The analysis excludes 40 Prolific participants, 11 Berkeley participants, and 2 BU participants with "incoherent" preferences for public recognition. Heteroskedasticity-robust standard errors are reported in parentheses. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Figure A9: WTP for public recognition by effort in the charitable contribution experiments



Notes: These figures plot the average WTP for public recognition with 95 percent confidence intervals for each of the eighteen intervals of possible points scored in the round selected for public recognition. The WTP is plotted at the midpoint of each of the first seventeen intervals and at ≥1700 points for the 1700 or more points interval. The mean Publicly-Shared Effort Round scores are indicated by dashed red lines. The analysis excludes 40 Prolific participants, 11 Berkeley participants, and 2 BU participants with "incoherent" preferences for public recognition. 95 percent confidence intervals are constructed using standard errors clustered by participant.

Table A11: WTP for public recognition by effort in the charitable contribution experiments, restricting to questions about scores that are "close" to participants' actual scores

	(1)	(2)	(3)	(4)	(5)	(6)
Model	OLS	OLS	OLS	OLS	OLS	OLS
Dependent var.	WTP	WTP	WTP	WTP	WTP	WTP
Points (00s)	0.106***	0.150***	0.371***	0.376	0.390***	0.341
	(0.020)	(0.055)	(0.072)	(0.230)	(0.135)	(0.288)
Points (00s) sq.		-0.003		-0.000		0.003
		(0.003)		(0.010)		(0.014)
Constant	-0.591***	-0.737**	-3.520***	-3.538***	-5.298***	-5.145***
	(0.214)	(0.286)	(0.804)	(1.252)	(1.178)	(1.483)
$-\mathrm{R}''/\mathrm{R}'(\bar{a}_{\mathrm{pop}})$	–	0.046	–	0.001	–	-0.015
95% CI	–	[-0.044, 0.136]	–	[-0.107, 0.110]	–	[-0.162, 0.133]
$-\mathrm{R}''/\mathrm{R}'(\bar{a}_{\mathrm{pop}}) \times \mathrm{SD}$	–	0.174	–	0.007	–	-0.095
95% CI	–	[-0.073, 0.421]	–	[-0.558, 0.573]	–	[-1.184, 0.994]
Sample	Prolific	Prolific	Berkeley	Berkeley	BU	BU
Observations	8602	8602	3330	3330	982	982
N. Subjects	968	968	383	383	118	118

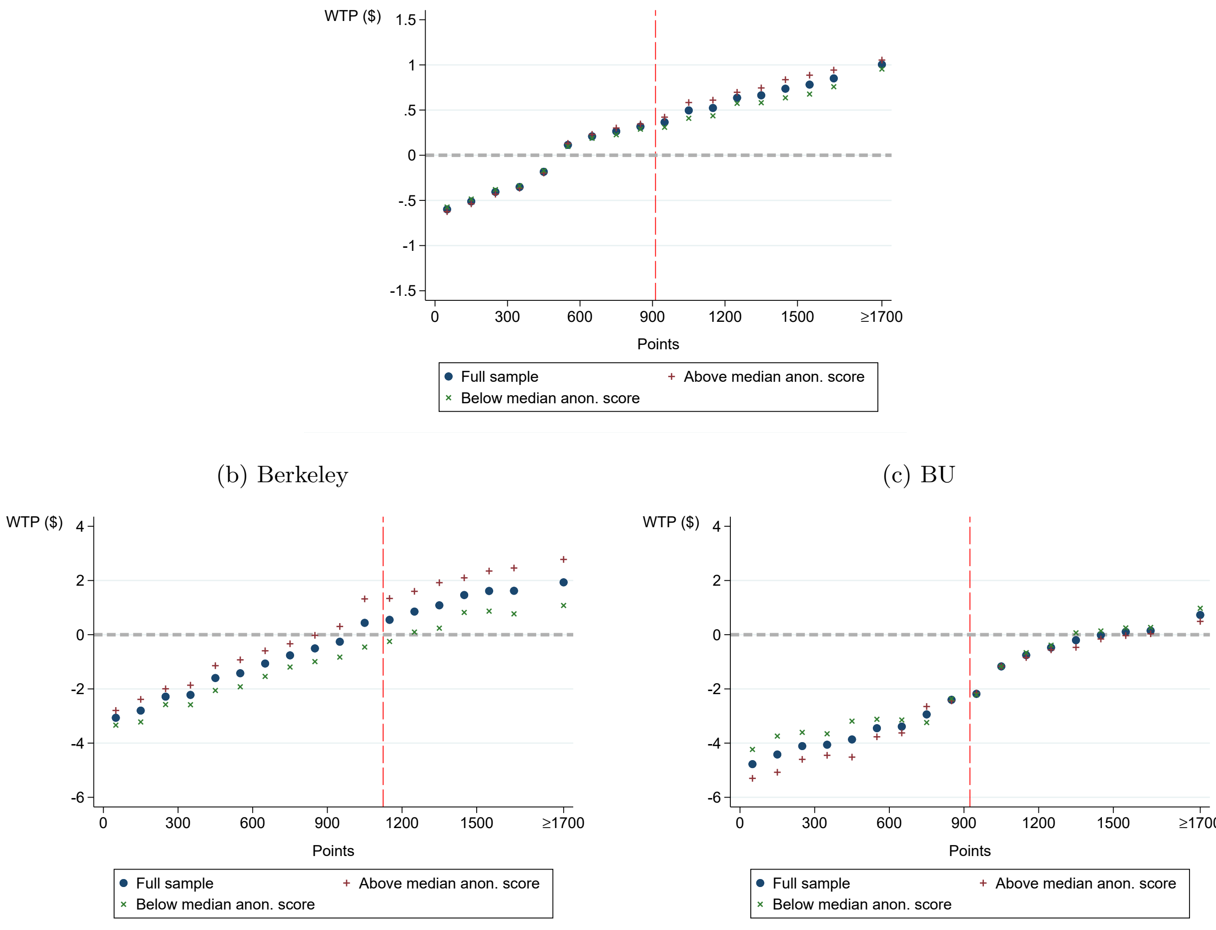
Notes: This table reports regression estimates from linear and quadratic models of willingness to pay for public recognition by the level of publicized effort. The data is restricted to observations in which the midpoint of the points interval for which willingness to pay is reported is within 500 points of the participant's average score across the three experimental rounds. Effort is measured in 100s of points scored. The regressions exclude the $\geq$1700 points interval. Measures of the curvature of the estimated reduced-form public recognition function are $-R''_{exp}/R'_{exp}(\bar{a}_{pop})$ and $-R''_{exp}/R'_{exp}(\bar{a}_{pop}) \times SD$, where $\bar{a}_{pop}$ and $SD = 4.86$ are the average and standard deviation of points scored in the anonymous round (in units of hundreds of points), respectively. The analysis excludes 40 Prolific participants, 11 Berkeley participants, and 2 BU participants with "incoherent" preferences for public recognition. Standard errors are clustered at the participant level and reported in parentheses. 95 percent confidence intervals for the curvature statistics are computed using the delta method. *** p<0.01, ** p<0.05, * p<0.1.

Figure A10: Willingness to pay for public recognition by effort in the charitable contribution experiments, setting top interval at average performance

(a) Prolific

(b) Berkeley

(c) BU



Notes: These figures plot the average WTP for public recognition by each of the 18 possible intervals of points scored. The WTP is plotted at the midpoint of each of the first seventeen intervals. For the ≥ 1700 points interval, publicized effort is calculated as the average of the mean points scored among participants whose score lies in that interval for the public recognition round. Panel (a) presents results for the Prolific sample, panel (b) presents results for the Berkeley sample, and panel (c) presents results for the BU sample. The mean Publicly-Shared Effort Round scores are indicated by dashed red lines. The analysis excludes 40 Prolific participants, 11 Berkeley participants, and 2 BU participants with “incoherent” preferences for public recognition.

Table A12: WTP for public recognition by effort in the charitable contribution experiments, including the $\geq$ 1700 interval

	(1)	(2)	(3)
Model	OLS	OLS	OLS
Dependent var.	WTP	WTP	WTP
Points (00s)	0.146***	0.405***	0.356***
	(0.017)	(0.065)	(0.107)
Points (00s) sq.	-0.003***	-0.006**	-0.001
	(0.001)	(0.003)	(0.005)
Constant	-0.713***	-3.383***	-5.184***
	(0.120)	(0.422)	(0.816)
$-\mathrm{R}''/\mathrm{R}'(\bar{a}_{\mathrm{pop}})$	0.063	0.040	0.006
95% CI	[0.039, 0.087]	[-0.001, 0.081]	[-0.048, 0.060]
$-\mathrm{R}''/\mathrm{R}'(\bar{a}_{\mathrm{pop}}) \times \mathrm{SD}$	0.217	0.153	0.032
95% CI	[0.162, 0.271]	[0.042, 0.264]	[-0.249, 0.313]
Sample	Prolific	Berkeley	BU
Observations	17424	6912	2124
N. Subjects	968	384	118

Notes: This table reports regression estimates from linear and quadratic models of willingness to pay for public recognition by the level of publicized effort. Effort is measured in 100s of points scored. For the $\geq$ 1700 points interval, publicized effort is calculated as the average of the mean points scored among participants whose score lies in that interval for the public recognition round. Measures of the curvature of the estimated reduced-form public recognition function are $-R''_{exp}/R'_{exp}(\bar{a}_{pop})$ and $-R''_{exp}/R'_{exp}(\bar{a}_{pop}) \times SD$, where $\bar{a}_{pop}$ and $SD = 4.86$ are the average and standard deviation of points scored in the anonymous round (in units of hundreds of points), respectively. The analysis excludes 40 Prolific participants, 11 Berkeley participants, and 2 BU participants with "incoherent" preferences for public recognition. Standard errors are clustered at the participant level and reported in parentheses. 95 percent confidence intervals for the curvature statistics are computed using the delta method. *** p<0.01, ** p<0.05, * p<0.1.

Table A13: WTP for public recognition by effort in the charitable contribution experiments: heterogeneity in sensitivity

	(1)	(2)	(3)	(4)	(5)	(6)
Model	OLS	OLS	OLS	OLS	OLS	OLS
Dependent var.	WTP	WTP	WTP	WTP	WTP	WTP
Points (00s)	0.069***	0.131***	0.252***	0.304***	0.333***	0.418**
	(0.009)	(0.025)	(0.047)	(0.086)	(0.092)	(0.187)
Points (00s) sq.		-0.004***		-0.003		-0.005
		(0.001)		(0.004)		(0.009)
Above med. PR impact	-0.171	-0.168	-0.861	-0.955	-1.141	-0.440
	(0.226)	(0.242)	(0.799)	(0.839)	(1.580)	(1.621)
Points (00s) ×	0.047***	0.046	0.117*	0.150	0.028	-0.219
Above med. PR impact	(0.014)	(0.035)	(0.066)	(0.140)	(0.121)	(0.232)
Points (00s) sq. ×		0.000		-0.002		0.015
Above med. PR impact		(0.002)		(0.007)		(0.011)
Constant	-0.471***	-0.649***	-2.699***	-2.847***	-4.616***	-4.856***
	(0.162)	(0.173)	(0.628)	(0.635)	(0.997)	(1.046)
Sample	Prolific	Prolific	Berkeley	Berkeley	BU	BU
Observations	16456	16456	6528	6528	2006	2006
N. Subjects	968	968	384	384	118	118

Notes: This table reports coefficient estimates from linear and quadratic models of willingness to pay for public recognition at different levels of points scored, in units of hundreds of points. It includes an indicator for the difference between the participant's scores in the anonymous and public recognition rounds being above the median as well as its interactions with points levels. The analysis excludes 40 Prolific participants, 11 Berkeley participants, and 2 BU participants with "incoherent" preferences for public recognition. Standard errors are clustered at the participant level and reported in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table A14: WTP for public recognition by effort in the charitable contribution experiments: heterogeneity by intrinsic motivation

	(1)	(2)	(3)	(4)	(5)	(6)
Model	OLS	OLS	OLS	OLS	OLS	OLS
Dependent var.	WTP	WTP	WTP	WTP	WTP	WTP
Points (00s)	0.083***	0.142***	0.275***	0.333***	0.315***	0.177
	(0.010)	(0.025)	(0.049)	(0.110)	(0.083)	(0.166)
Points (00s) sq.		-0.003***		-0.003		0.008
		(0.001)		(0.006)		(0.009)
Above med. anon. score	-0.077	-0.094	0.548	0.488	-0.998	-1.550
	(0.227)	(0.242)	(0.800)	(0.841)	(1.572)	(1.605)
Points (00s) ×	0.018	0.024	0.070	0.091	0.064	0.258
Above med. anon. score	(0.015)	(0.035)	(0.066)	(0.140)	(0.120)	(0.232)
Points (00s) sq. ×		-0.000		-0.001		-0.011
Above med. anon. score		(0.002)		(0.007)		(0.011)
Constant	-0.518***	-0.686***	-3.405***	-3.570***	-4.679***	-4.287***
	(0.168)	(0.178)	(0.573)	(0.615)	(0.920)	(0.919)
Sample	Prolific	Prolific	Berkeley	Berkeley	BU	BU
Observations	16456	16456	6528	6528	2006	2006
N. Subjects	968	968	384	384	118	118

Notes: This table reports coefficient estimates from linear and quadratic models of willingness to pay for public recognition at different levels of points scored, in units of hundreds of points. It includes an indicator for the participant having scored above the median number of points in the anonymous round as well as its interactions with points levels. The analysis excludes 40 Prolific participants, 11 Berkeley participants, and 2 BU participants with "incoherent" preferences for public recognition. Standard errors are clustered at the participant level and reported in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table A15: WTP for public recognition by effort in the charitable contribution experiments: heterogeneity along public recognition group size

	(1)	(2)
Model	OLS	OLS
Dependent var.	WTP	WTP
Points (00s)	0.098***	0.159***
	(0.011)	(0.027)
Points (00s) sq.		-0.004***
		(0.001)
Group of 300	0.121	0.141
	(0.256)	(0.268)
Group of 300 × Points (00s)	-0.016	-0.024
	(0.017)	(0.039)
Group of 300 × Points (00s) sq.		0.001
		(0.002)
Group of 15	0.332	0.305
	(0.293)	(0.307)
Group of 15 × Points (00s)	-0.001	0.009
	(0.018)	(0.044)
Group of 15 × Points (00s) sq.		-0.001
		(0.002)
Constant	-0.676***	-0.852***
	(0.163)	(0.175)
Observations	16456	16456
N. Subjects	968	968

Notes: This table reports regression estimates from linear and quadratic models of willingness to pay for public recognition by the level of publicized effort in the Prolific sample. Effort is measured in 100s of points scored. The regressions exclude the ≥1700 points interval. The regressions include interactions with group size variables in the Prolific sample, which indicate the approximate number of individuals in the participant's randomly assigned public recognition group. The omitted group size category is 75 participants. The analysis excludes 40 Prolific participants, 11 Berkeley participants, and 2 BU participants with "incoherent" preferences for public recognition. Standard errors are clustered at the subject level and reported in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

D.3 Results for QM221 Sample

Before the experiment started, we preregistered our analysis plan on the AEA RCT Registry (AEARCTR-0005737). We had originally planned to also create a fourth sample from the QM221 statistics class for first-year students (who know each other less well than the QM222 students), but the response rate was too low to make use of this data. For transparency, we report reduced-form results for the QM 221 class below.

Table A16: **Reduced-form results for the QM 221 sample**

(a) The effect of public recognition on points scored

	(1)
Model	OLS
Dependent var.	Points
Public recognition	122.20*
	(72.11)
Financial incentives	156.36**
	(71.77)
Control mean	910.7
	(80.1)
Observations	156
N. Subjects	52

(b) WTP for public recognition by effort in the charitable contribution experiments

	(1)	(2)
Model	OLS	OLS
Dependent var.	WTP	WTP
Points (00s)	0.297***	0.397*
	(0.109)	(0.217)
Points (00s) sq.		-0.006
		(0.009)
Constant	-1.797	-2.080
	(1.109)	(1.272)
95% CI	–	0.040
$-\mathrm{R}''/\mathrm{R}'(\bar{a}_{\mathrm{pop}})$	–	[-0.082, 0.163]
95% CI	–	0.171
$-\mathrm{R}''/\mathrm{R}'(\bar{a}_{\mathrm{pop}})\times$ SD	–	[-0.208, 0.549]
95% CI	884	884
Observations	52	52

Notes: Panel (a) reports regression estimates of the effects of public recognition and financial incentives on points scored..The control mean is the mean points scored in the Anonymous Effort Round. Dummy variables for the order in which the round appeared (first, second, or third) are included. Panel (b) reports regression estimates from linear and quadratic models of willingness to pay for public recognition by the level of publicized effort in the Prolific sample. Effort is measured in 100s of points scored. The regressions exclude the $\geq$1700 points interval. Measures of the curvature of the estimated reduced-form public recognition function are $-R''_{exp}/R'_{exp}(\bar{a}_{pop})$ and $-R''_{exp}/R'_{exp}(\bar{a}_{pop}) \times SD$, where $\bar{a}_{pop}$ and $SD = 4.86$ are the average and standard deviation of points scored in the anonymous round (in units of hundreds of points), respectively. The analysis excluded participants with "incoherent" preferences for public recognition. Standard errors are clustered at the subject level and reported in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

D.4 Model Selection

We formally test for the appropriate functional form using the Bayesian Information Criteria (BIC), which penalizes model complexity and rewards goodness-of-fit:[39]

$$BIC = \underbrace{-2 \cdot \ln(l)}_{\text{reward for fit}} + \underbrace{k \cdot \ln(n)}_{\text{penalty for complexity}} .$$

Here l denotes the maximized value of the likelihood function for the model, k the number of parameters in the model, and n the sample size. The magnitude of the BIC is not on its own informative, but is instead to be compared with the BIC of other models. When considering similar models, the one with the lowest BIC best fits the data. Kass and Raftery (1995) and Raftery (1995) discuss guidelines for interpreting the differences in magnitudes of the BIC, which we list in Table A17.

Table A17: Guidelines for comparing BIC magnitude

$BIC(modelA) - BIC(modelB)$	Interpretation
$\in (-\infty, -10]$	Decisive evidence for model A
$\in (-10, -6]$	Strong evidence for model A
$\in (-6, -2]$	Positive evidence for model A
$\in (-2, 2)$	Weak evidence for either model
$\in [2, 6)$	Positive evidence for model B
$\in [6, 10)$	Strong evidence for model B
$\in [10, \infty)$	Decisive evidence for model B

Sources: Kass and Raftery (1995) and Raftery (1995). While Kass and Raftery (1995) label a difference of $(-2, 0)$ as weak evidence for model A and $(0, 2)$ as weak evidence for model B, we follow Raftery (1995) in labeling these as weak evidence for either model.

Columns (1)-(4) of Tables A18-A20 present the BIC of the linear to quartic models for the Prolific, Berkeley, and BU samples, respectively. For the Prolific sample, the BIC is minimized for the quadratic specification, where it is roughly 9 points lower than the BIC of the cubic model, and 18 points lower than the quartic model. Per the guidelines in Table A17, this provides strong evidence to reject the cubic model in favor of the quadratic model, and decisive evidence to reject the quartic model.

While the BIC provides strong to decisive evidence to reject the cubic and quartic models, visual examination of the PRUs suggests moderate jumps in the WTP around 500 and 1000 points, which makes the PRU look S-shaped. We hypothesize that these jumps are attributable to a round-number heuristic. Under this hypothesis, participants might heuristically feel most compelled to

[39] The BIC was first developed in Schwarz (1978), which now has over 46,000 Google Scholar citations. The approach is widely used in model selection for social science research, including economics (see e.g., Kim (1998) and Steel (2020)).

significantly adjust their WTP when they pass a multiple of 500. This hypothesis is consistent with the fact that we see the jumps appear most prominently for the Prolific sample, where participants move through the experiment more quickly than in the university samples, and thus may be more likely to rely on heuristics.

To test this round-number heuristic, we re-estimate the linear to quartic models including dummy variables for having the points scored exceed 500, 1000, or 1500 points. Columns (5)-(8) of Tables A18-A20 present the results. For all three samples, third- and fourth-order terms are no longer significant. However, the quadratic term in the Prolific sample is still significant. The results suggest the statistical significance of higher-order polynomial terms is likely not due to multiple inflection points in the aggregate PRU, but rather due to some modest round-number bias.

While we present estimates of the model with the dummy variables to highlight the round-number bias, including these is not costless. Including these fixed effects reduces the precision of our estimates, particularly in the BU sample where the sample size is the smallest. Additionally, when comparing the BIC of all columns for the Prolific sample, where the round-number bias appears most prominent, we again see strong to decisive evidence to prefer the quadratic specification in column (2). These results suggest that the specifications in columns (1) and (2) should be the primary specification.

Similarly, for the Berkeley and BU samples, we see strong evidence to prefer the linear specification in column (1) and to reject the higher-order specifications in columns (3) and (4).

Table A18: Willingness to pay for public recognition: Prolific sample

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dependent var.	WTP	WTP	WTP	WTP	WTP	WTP	WTP	WTP
Points (00s)	0.094***	0.157***	0.158***	0.046	0.074***	0.099***	0.120***	0.106***
	(0.007)	(0.018)	(0.025)	(0.035)	(0.007)	(0.016)	(0.024)	(0.035)
Points (00s)^2		-0.004***	-0.004	0.025***		-0.002**	-0.006*	-0.001
		(0.001)	(0.003)	(0.009)		(0.001)	(0.003)	(0.009)
Points (00s)^3			0.000	-0.003***			0.000	-0.000
			(0.000)	(0.001)			(0.000)	(0.001)
Points (00s)^4				0.000***				0.000
				(0.000)				(0.000)
Points $\geq$ 500					0.308***	0.265***	0.284***	0.273***
					(0.054)	(0.052)	(0.051)	(0.053)
Points $\geq$ 1000					-0.011	0.028	0.052	0.059*
					(0.039)	(0.033)	(0.034)	(0.033)
Points $\geq$ 1500					-0.052*	0.021	-0.021	-0.034
					(0.029)	(0.026)	(0.029)	(0.022)
Constant	-0.556***	-0.736***	-0.736***	-0.639***	-0.594***	-0.643***	-0.669***	-0.658***
	(0.113)	(0.121)	(0.122)	(0.118)	(0.114)	(0.117)	(0.118)	(0.119)
BIC	267,329	267,316	267,327	267,334	267,328	267,338	267,348	267,359
Observations	49470	49470	49470	49470	49470	49470	49470	49470
N. Subjects	970	970	970	970	970	970	970	970

Table A19: Willingness to pay for public recognition: Berkeley sample

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dependent var.	WTP	WTP	WTP	WTP	WTP	WTP	WTP	WTP
Points (00s)	0.310***	0.379***	0.271**	0.436***	0.295***	0.373***	0.363***	0.412**
	(0.033)	(0.070)	(0.126)	(0.164)	(0.035)	(0.080)	(0.124)	(0.166)
Points (00s)^2		-0.004	0.012	-0.031		-0.005	-0.003	-0.019
		(0.004)	(0.016)	(0.036)		(0.004)	(0.017)	(0.038)
Points (00s)^3			-0.001	0.003			-0.000	0.001
			(0.001)	(0.003)			(0.001)	(0.003)
Points (00s)^4				-0.000				-0.000
				(0.000)				(0.000)
Points $\geq$ 500					0.118	-0.018	-0.027	0.010
					(0.137)	(0.123)	(0.111)	(0.113)
Points $\geq$ 1000					0.206	0.327*	0.315	0.291
					(0.228)	(0.193)	(0.195)	(0.199)
Points $\geq$ 1500					-0.292**	-0.063	-0.042	0.004
					(0.141)	(0.128)	(0.124)	(0.095)
Constant	-3.130***	-3.325***	-3.171***	-3.315***	-3.131***	-3.285***	-3.273***	-3.308***
	(0.400)	(0.420)	(0.419)	(0.418)	(0.392)	(0.415)	(0.417)	(0.417)
BIC	137,830	137,837	137,846	137,856	137,856	137,865	137,875	137,885
Observations	19584	19584	19584	19584	19584	19584	19584	19584
N. Subjects	384	384	384	384	384	384	384	384

Table A20: Willingness to pay for public recognition: BU sample

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dependent var.	WTP	WTP	WTP	WTP	WTP	WTP	WTP	WTP
Points (00s)	0.347***	0.309***	-0.125	0.323	0.282***	0.252**	0.098	0.273
	(0.060)	(0.116)	(0.221)	(0.274)	(0.060)	(0.104)	(0.206)	(0.301)
Points (00s)^2		0.002	0.066**	-0.052		0.002	0.031	-0.025
		(0.006)	(0.030)	(0.066)		(0.006)	(0.036)	(0.072)
Points (00s)^3			-0.002**	0.008			-0.001	0.004
			(0.001)	(0.006)			(0.001)	(0.005)
Points (00s)^4				-0.000*				-0.000
				(0.000)				(0.000)
Points $\geq$ 500					-0.035	0.015	-0.122	0.011
					(0.298)	(0.252)	(0.303)	(0.338)
Points $\geq$ 1000					0.942**	0.897**	0.720*	0.634*
					(0.391)	(0.352)	(0.399)	(0.373)
Points $\geq$ 1500					-0.336	-0.420	-0.116	0.049
					(0.262)	(0.260)	(0.245)	(0.152)
Constant	-5.186***	-5.076***	-4.456***	-4.848***	-4.950***	-4.893***	-4.709***	-4.835***
	(0.791)	(0.810)	(0.806)	(0.804)	(0.782)	(0.783)	(0.786)	(0.810)
BIC	43,022	43,031	43,035	43,043	43,042	43,051	43,059	43,068
Observations	6018	6018	6018	6018	6018	6018	6018	6018
N. Subjects	118	118	118	118	118	118	118	118

E Individual Differences Analysis

In this section we allow for heterogeneity in individuals' reduced-form PRU. Each individual i's reduced-form PRU is given by $r_{0i} + r_{1i}a + r_{2i}a^2$, where the parameters r_{0i}, r_{1i}, and r_{2i} are jointly distributed as follows:

$$\begin{bmatrix} r_{0i} \\ r_{1i} \\ r_{2i} \end{bmatrix} \sim N\left(\begin{bmatrix} E[r_0] \\ E[r_1] \\ E[r_2] \end{bmatrix}, \begin{bmatrix} Var[r_0] & 0 & 0 \\ 0 & Var[r_1] & Cov[r_1, r_2] \\ 0 & Cov[r_1, r_2] & Var[r_2] \end{bmatrix}\right)$$

To estimate the moments in this joint distribution, we use a mixed effects model. Specifically, we define w_{ij} to denote the WTP for public recognition of individual i if their performance lies in interval j, and estimate the following model:

$$w_{ij} = \beta_0 + \beta_1 a_{ij} + \beta_2 a_{ij}^2 + u_{0j} + u_{1i} a_{ij} + u_{2i} a_{ij}^2 + \varepsilon_{ij} \tag{14}$$

Here β_0, β_1, and β_2 identify the population average reduced-form PRU, with $\hat{\beta}_0 = \mathbb{E}[r_0]$, $\hat{\beta}_1 = \mathbb{E}[r_1]$, and $\hat{\beta}_2 = \mathbb{E}[r_2]$. u_{0i}, u_{1i}, and u_{2i} are mean-zero random effects on the scalar, linear and quadratic terms of the reduced-form PRU, respectively, and capture individual deviations from the population average. We estimate the variance-covariance matrix of the random effects using maximum likelihood, imposing zero covariance between the random effect for the constant and those for the linear and quadratic terms. By construction, the estimated variance of the random effects u_{0i}, u_{1i}, and u_{2i} identify $Var[r_0]$, $Var[r_1]$, and $Var[r_2]$, respectively, and the estimated covariance between u_{1i} and u_{2i} identifies $Cov[r_1, r_2]$.

Tables A21-A22 present the results for the YMCA sample and the charity samples, respectively. Across all samples, we estimate small variances for r_1 and r_2, and a large negative covariance between r_1 and r_2. Collectively, these results suggest that the ratio of r_2/r_1 is nearly constant across individuals, and thus that there is little heterogeneity in curvature. We also estimate larger variances for r_0, suggesting larger heterogeneity in the reference point parameter ρ.

Table A21: Individual differences: YMCA sample

	(1)	(2)		(3)	(4)
Parameter	Point estimate	Std. Error	Parameter	Point estimate	Std. Error
$\mathbb{E}[r_0]$	-1.125	0.701	$Var[r_0]$	19.669	1.772
$\mathbb{E}[r_1]$	0.410	0.095	$Var[r_1]$	0.262	0.070
$\mathbb{E}[r_2]$	-0.011	0.003	$Var[r_2]$	0.00024	0.00009
			$Cov[r_1, r_2]$	-0.008	0.003

Notes: This table reports regression estimates of willingness to pay for public recognition by YMCA attendance using equation 14. .The analysis restricts to intervals with a midpoint within 4 of a participant's predicted attendance if assigned public recognition, and analysis excludes 31 participants with "incoherent" preferences for public recognition. Standard errors are clustered at the subject level.

Table A22: Individual differences: charity samples

(a) Prolific sample

Parameter	(1) Point estimate	(2) Std. Error	Parameter	(3) Point estimate	(4) Std. Error
$\mathbb{E}[r_0]$	-0.733	0.121	$Var[r_0]$	13.624	0.943
$\mathbb{E}[r_1]$	0.155	0.018	$Var[r_1]$	0.277	0.038
$\mathbb{E}[r_2]$	-0.004	0.001	$Var[r_2]$	0.00055	0.00008
			$Cov[r_1, r_2]$	-0.011	0.002

(b) Berkeley sample

Parameter	(1) Point estimate	(2) Std. Error	Parameter	(3) Point estimate	(4) Std. Error
$\mathbb{E}[r_0]$	-3.325	0.420	$Var[r_0]$	62.907	7.724
$\mathbb{E}[r_1]$	0.379	0.070	$Var[r_1]$	1.647	0.298
$\mathbb{E}[r_2]$	-0.004	0.004	$Var[r_2]$	0.00420	0.00074
			$Cov[r_1, r_2]$	-0.072	0.014

(c) BU sample

Parameter	(1) Point estimate	(2) Std. Error	Parameter	(3) Point estimate	(4) Std. Error
$\mathbb{E}[r_0]$	-5.076	0.810	$Var[r_0]$	70.867	13.540
$\mathbb{E}[r_1]$	0.309	0.116	$Var[r_1]$	1.299	0.483
$\mathbb{E}[r_2]$	0.002	0.006	$Var[r_2]$	0.00309	0.00093
			$Cov[r_1, r_2]$	-0.053	0.021

Notes: This table reports regression estimates of willingness to pay for public recognition by the level of publicized effort in the Prolific sample using equation 14. The Effort is measured in 100s of points scored. The regressions exclude the $\geq$1700 points interval. The analysis excludes 40 Prolific participants, 11 Berkeley participants, and 2 BU participants with "incoherent" preferences for public recognition. Standard errors are clustered at the subject level.

F Structural Estimation Details

F.1 Action-signaling Model

Public recognition utility has the form $\nu S^a(a - \rho^a \bar{a}_{pop}) = \gamma_1^a(a - \rho^a \bar{a}_{pop}) + \gamma_2^a(a - \rho^a \bar{a}_{pop})^2$, where participants compare their action to a multiple of the average action $\bar{a}_{pop}$ of the general population. Total utility $U(a;\theta)$ is thus:

$$U(a;\theta) = \theta a - \frac{c}{2}a^2 + y + pa + \gamma_1^a(a - \rho^a \bar{a}_{pop}) + \gamma_2^a(a - \rho^a \bar{a}_{pop})^2 \tag{15}$$

Unless otherwise noted, we make the simplifying assumption that $p = 0$.

Before introducing public recognition, the population is initially in equilibrium given by $a^*(\theta) = \theta/c$ and $\bar{a}^0_{pop} := \mathbb{E}[\theta/c]$. We verify this by taking the F.O.C. of equation (15) with respect to a when $\gamma^a_1 = \gamma^a_2 = 0$ and solving for a.

F.1.1 Equilibrium Behavior

We now consider the impact of introducing public recognition to the population. We first solve for the equilibrium action function $a^*(\theta)$:

$$a^*(\theta) = \frac{\theta/c + \gamma^a_1/c - 2\gamma^a_2\rho^a\bar{a}^{eq}_{pop}/c}{1 - 2\gamma^a_2/c} \tag{16}$$

Here $\bar{a}^{eq}_{pop}$ denotes the equilibrium average attendance, and its form depends on whether we are in a partial equilibrium or a full equilibrium. In a partial equilibrium, the reference population is not receiving public recognition and $\bar{a}^{eq}_{pop}$ thus remains constant at its initial value $\bar{a}^0_{pop}$:

$$\bar{a}^{eq}_{pop} = \bar{a}^0_{pop} \tag{17}$$

In a full equilibrium, public recognition is scaled up to the entire population, and so average attendance will increase until it reaches an equilibrium value $\bar{a}^{eq}_{pop}$. This equilibrium value is given by:

$$\bar{a}^{eq}_{pop} = \frac{\bar{a}^0_{pop} + \gamma^a_1/c}{(1 - 2(1-\rho^a)\gamma^a_2/c)} \tag{18}$$

In sum, the partial equilibrium is defined by equations (16) and (17), and the full equilibrium is defined by equations (16) and (18).

To see why these equations define the equilibrium, we take the F.O.C. of equation (15) with respect to a and solve for $a^*(\theta)$. From this we immediately recover equation (16). To verify equation (18), we take the expectation of both sides of equation (16), recalling that we are in the case where everyone receives public recognition:

$$\mathbb{E}[a^*(\theta)|PR = 1] = \frac{\mathbb{E}[\theta/c] + \gamma^a_1/c - 2\gamma^a_2\rho^a\bar{a}^{eq}_{pop}/c}{1 - 2\gamma^a_2/c}$$

To simplify the above expression, we first note that since everyone is receiving public recognition $\mathbb{E}[a^*(\theta)|PR = 1] = \bar{a}^{eq}_{pop}$. Second, we recall that $E[\theta/c] = \bar{a}^0_{pop}$. Substituting both of these into the equation above yields the following expression:

$$\bar{a}^{eq}_{pop} = \frac{\bar{a}^0_{pop} + \gamma^a_1/c - 2\gamma^a_2\rho^a\bar{a}^{eq}_{pop}/c}{1 - 2\gamma^a_2/c}$$

By isolating $\bar{a}^{eq}_{pop}$ in the equation above, we recover equation (18).

F.1.2 The Predicted Impact of Financial Incentives

With a financial incentive p per a and no public recognition, the utility function is given by $U(a;\theta) = \theta a - \frac{c}{2}a^2 + y + pa$. We use the first order condition to solve for a as a function of p:

$$a^*(\theta; p) = \theta/c + p/c \tag{19}$$

The impact of financial incentives on attendance, $a^*(\theta;p) - a^*(\theta;0)$, is thus equal to p/c.

F.1.3 Mapping the Model Parameters to a Reduced-Form PRU

If the structural PRU is quadratic, it is immediate that the reduced-form PRU is also quadratic. We denote the reduced-form PRU by $R(a) = r_0 + r_1 a + r_2 a^2$. Unlike νS^a, the reduced-form PRU $R(a)$ is estimable from our data. In this section we derive mapping equations to express the structural parameters γ_1^a, γ_2^a, and ρ^a from a partial equilibrium to the reduced-form parameters r_0, r_1, r_2:

$$\gamma_1^a = \sqrt{r_1^2 - 4r_0 r_2} \tag{20}$$

$$\gamma_2^a = r_2 \tag{21}$$

$$\rho^a = \frac{\sqrt{r_1^2 - 4\gamma_2^a r_0} - r_1}{2\bar{a}_{pop}^0 r_2} \tag{22}$$

To see why equations (20)-(22) hold, we begin by regrouping the terms in $\nu S(a - \bar{a}_{pop}^0)$:

$$\nu S(a - \rho^a \bar{a}_{pop}^0) = \left[\gamma_2^a(\rho^a \bar{a}_{pop}^0)^2 - \gamma_1^a(\rho^a \bar{a}_{pop}^0)\right] + \left[\gamma_1^a - 2\gamma_2^a(\rho^a \bar{a}_{pop}^0)\right] a + \gamma_2^a \cdot a^2$$

We next map this equation to $R(a) = r_0 + r_1 a + r_2 a^2$, which results in the following system of equations:

$$\gamma_2^a(\rho^a \bar{a}_{pop}^0)^2 - \gamma_1^a(\rho^a \bar{a}_{pop}^0) = r_0 \tag{23}$$

$$\gamma_1^a - 2\gamma_2^a(\rho^a \bar{a}_{pop}^0) = r_1 \tag{24}$$

$$\gamma_2^a = r_2 \tag{25}$$

Below we outline the algebra to isolate the structural parameters from mapping equations (23)-(25). First, equation (25) immediately verifies equation (21). Using $\gamma_2^a = r_2$ and the quadratic formula, we solve for ρ^a in terms of γ_1^a:

$$\rho^a = \frac{\gamma_1^a - \sqrt{(\gamma_1^a)^2 + 4r_0r_2}}{2\bar{a}_{pop}^0 r_2} \tag{26}$$

By substituting the above expression and $\gamma_2^a = r_2$ into equation (24), we recover equation (20). By substituting equation (20) into equation (26), we recover equation (22).

F.1.4 Identifying the Model

The reduced-form public recognition function: For the YMCA sample, $R(a)$ corresponds to the quadratic Tobit regression of WTP on visits in column (2) of Table 4b, which restricts to intervals of attendance within four of the participant's predicted attendance with public recognition. For the samples in the charitable contribution experiment, $R(a)$ corresponds to the quadratic OLS regression of WTP on hundreds of points in columns (2), (4), and (6) of Table 6.

The effects of public recognition on performance: We define $\bar{\tau} := \mathbb{E}[a|PR = 1] - \mathbb{E}[a|PR = 0]$ as the difference in average intensity between the experimental population that received public recognition ($PR = 1$) and the experimental population that did not ($PR = 0$). For the YMCA sample, we estimate $\bar{\tau}$ by controlling for past attendance. For the charitable contribution experiments, we estimate $\bar{\tau}$ by controlling for order effects, and allow it to vary by sample. For all samples, $\bar{a}_0 := \mathbb{E}[a|PR = 0]$ is directly observable as the average YMCA attendance from the no PR treatment, or as the average performance in the Anonymous Effort Round.

The cost parameter c: We estimate c using the following equation:

$$c = \frac{r_1 + 2r_2\left(\bar{a}_0 + \bar{\tau}\right)}{\bar{\tau}} \tag{27}$$

To see why this equation recovers c, we recall the partial-equilibrium action function from equation (16):

$$a^*(\theta; 0) = \frac{\theta/c + \gamma_1^a/c - 2\gamma_2^a\rho^a\bar{a}_{pop}^0/c}{1 - 2\gamma_2^a/c}$$

We next take the expectation of both sides, recalling that we are in the case where $PR = 1$:

$$\mathbb{E}[a|PR = 1] = \frac{\mathbb{E}[\theta/c] + \gamma_1^a/c - 2\gamma_2^a\rho^a\bar{a}_{pop}/c}{1 - 2\gamma_2^a/c}$$

We substitute $\mathbb{E}[\theta/c] = \bar{a}_{pop}^0$ and $\mathbb{E}[a|PR = 1] = \bar{a}_0 + \bar{\tau}$ into the expression above, and solve for c:

$$\bar{a}_0 + \bar{\tau} = \frac{\bar{a}^0_{pop} + \gamma^a_1/c - 2\gamma^a_2\rho^a\bar{a}_{pop}/c}{1 - 2\gamma^a_2/c}$$
$$c = \frac{\gamma^a_1 - 2\gamma^a_2\rho^a\bar{a}^0_{pop} + 2\gamma^a_2\left(\bar{a}_0 + \bar{\tau}\right)}{\bar{\tau}} \tag{28}$$

Finally, we substitute the expressions for γ^a_1, γ^a_2, and ρ^a into the equation above, which recovers equation (27).

The net image payoff from scaling up public recognition: Using the attendance rules from equations equations (16) and (18), we estimate each YOTA member's counterfactual attendance when public recognition is scaled up at specified values of γ^a_1, γ^a_2, and ρ^a. We then use the attendances and equation (15) to estimate the net-image payoff.

Estimating confidence intervals: Because the parameters are highly nonlinear functions of these empirical moments, we compute confidence intervals without relying on asymptotic normality approximations. Instead, we compute 95 percent confidence intervals for the estimates reported in Tables 7 and 9 using a percentile-based bootstrap blocked at the individual level.

F.2 Characteristic-Signaling Model

Public recognition utility has the form $\nu S^\theta(\mathbb{E}[\theta|a] - \rho^\theta\bar{\theta}) = \gamma^\theta_1(\mathbb{E}[\theta|a] - \rho^\theta\bar{\theta}) + \gamma^\theta_2(\mathbb{E}[\theta|a] - \rho^\theta\bar{\theta})^2$, where participants compare the signal of their type, $\mathbb{E}[\theta|a]$, given their action to a multiple of the average type, $\rho^\theta\bar{\theta}$. Total utility $U(a;\theta)$ is thus:

$$U(a;\theta) = \theta a - \frac{c}{2}a^2 + y + pa + \gamma^\theta_1(\mathbb{E}[\theta|a] - \rho^\theta\bar{\theta}) + \gamma^\theta_2(\mathbb{E}[\theta|a] - \rho^\theta\bar{\theta})^2 \tag{29}$$

As with the action-signaling model, we make the simplifying assumption that $p = 0$ unless otherwise noted. We also note that, absent public recognition, the optimal action function $a^*(\theta)$ is given by $a^*(\theta) = \theta/c$.

F.2.1 Equilibrium Behavior

We first characterize the unique separating equilibrium under the D1 criterion. We prove that there exist scalars r_0, r_1, and r_2 given by equations (30)-(32) below and an equilibrium action function $a^*(\theta) = \frac{\theta}{c-2r_2} + \frac{r_1}{c-2r_2}$ such that $\nu S^\theta(\mathbb{E}[\theta|a] - \rho^\theta\bar{\theta})$ is given by $r_0 + r_1 a + r_2 a^2$, with $r_2 - \frac{c}{2} < 0$ and $R\left(a^*(\rho^\theta\bar{\theta})\right) = 0$.[40] In terms of the structural parameters, we will show that the scalars r_j are given by:

[40] The condition $r_2 - \frac{c}{2} < 0$ ensures that S is quadratic, and that our solutions are well-defined.

$$r_2 = \frac{1 + 4c\gamma_2^\theta - \sqrt{1 + 8c\gamma_2^\theta}}{8\gamma_2^\theta} \tag{30}$$

$$r_1 = \frac{(c - 2r_2)^2\gamma_1^\theta - 2r_2\rho^\theta\bar{\theta}}{c} \tag{31}$$

$$r_0 = -r_1\frac{\rho^\theta\bar{\theta}/c + r_1/c}{1 - 2r_2/c} - r_2\left(\frac{\rho^\theta\bar{\theta}/c + r_1/c}{1 - 2r_2/c}\right)^2 \tag{32}$$

We first show that there exists a linear equilibrium where $a^*(\theta)$ is linear in θ. Note that if all other players had linear equilibrium action functions, then since $\nu S^\theta(\mathbb{E}[\theta|a] - \rho^\theta\bar{\theta})$ is quadratic in θ, this implies that the reduced-form public recognition function is quadratic. Let this reduced-form PRU be given by $R(a) = r_0 + r_1 a + r_2 a^2$. Given this reduced-form public recognition function, total utility can then be expressed in terms of $R(a)$ as follows:

$$U(a;\theta) = \theta a(\theta) - \frac{c}{2}a(\theta)^2 + y + r_0 + r_1 a(\theta) + r_2 a(\theta)^2 \tag{33}$$

We now verify that each type's best response is $a^*(\theta) = \frac{\theta}{c-2r_2} + \frac{r_1}{c-2r_2}$. We do so by taking the F.O.C of equation (33) with respect to a:

$$\begin{aligned} 0 &= \theta - ca^*(\theta) + r_1 + 2r_2 a^*(\theta) \\ \Leftrightarrow a^*(\theta) &= \frac{\theta/c + r_1/c}{1 - 2r_2/c} \end{aligned} \tag{34}$$

We next verify that equations (30)-(32) map $\nu S^\theta(\mathbb{E}[\theta|a] - \rho^\theta\bar{\theta})$ to $R(a)$. To see this, we begin with $R(a^*(\theta))$ and substitute in equation (34):

$$\begin{aligned} R(a^*(\theta)) &= r_0 + r_1 a^*(\theta) + r_2 a^*(\theta)^2 \\ &= r_0 + r_1 \cdot \frac{\theta/c + r_1/c}{1 - 2r_2/c} + r_2\left(\frac{\theta/c + r_1/c}{1 - 2r_2/c}\right)^2 \end{aligned}$$

The above expression is algebraically equivalent to the following:

$$\begin{aligned} R\left(a^*(\theta)\right) &= r_0 + r_1\frac{\rho^\theta\bar{\theta}/c + r_1/c}{1 - 2r_2/c} + r_2\left(\frac{\rho^\theta\bar{\theta}/c + r_1/c}{1 - 2r_2/c}\right)^2 \\ &\quad + \frac{cr_1 + r_1 r_2 + 2r_2\rho^\theta\bar{\theta}}{(c - 2r_2)^2}(\theta - \rho^\theta\bar{\theta}) + \frac{r_2}{(c - 2r_2)^2}(\theta - \rho^\theta\bar{\theta})^2 \end{aligned} \tag{35}$$

The first three terms in the equation above sum to $R\left(a^*(\rho^\theta\bar{\theta})\right)$, which equals 0 if and only if $r_0 = -r_1\frac{\rho^\theta\bar{\theta}/c + r_1/c}{1-2r_2/c} - r_2\left(\frac{\rho^\theta\bar{\theta}/c+r_1/c}{1-2r_2/c}\right)^2$. This verifies equation (32).

From equation (35), we see that $R(a(\theta))$ maps to $\nu S^{\theta}(\mathbb{E}[\theta|a] - \rho^{\theta}\bar{\theta})$ if and only if the following two equations hold:

$$\gamma_1^{\theta} = \frac{cr_1 + r_1 r_2 + 2r_2\rho^{\theta}\bar{\theta}}{(c-2r_2)^2} \tag{36}$$

$$\gamma_2^{\theta} = \frac{r_2}{(c-2r_2)^2} \tag{37}$$

Solving these equations for r_1 and r_2 recovers equations (30) and (31), respectively. This completes the proof that $a^*(\theta)$ is an equilibrium action function. Since $a^*(\theta)$ is linear in θ, it also defines a separating equilibrium.

Finally, we argue that $a^*(\theta)$ is the unique equilibrium action function. Because the material utility function $\theta a^*(\theta) - \frac{c}{2}a^*(\theta)^2$ satisfies the single-crossing property, i.e., the derivative with respect to $a^*(\theta)$, $\theta - ca^*(\theta)$, is increasing in θ, the results of Mailath (1987) imply that this separating equilibrium must be a unique separating equilibrium.

F.2.2 The Impact of Scaling up Public Recognition

We consider the counterfactual where public recognition is applied to the full population, and restrict attention to the YMCA case. Because we have an approximately continuous strategy space, the equilibrium in the characteristic-signaling model is a separating equilibrium, in which each type's optimal choice of a depends on the structural public recognition function S and on $\bar{\theta}$, but not on any other moments of the distribution of θ. This implies that even though the types that are in the experiment are not representative of those in the population, the equilibrium choice of action of any given type will be the same. The property that a type's choice of action is independent of the distribution of types, beyond $\bar{\theta}$, generally holds for any signaling model with a continuous action space and a utility function that satisfies the single-crossing property (Mailath, 1987).

We thus take the expectation of the optimal attendance rule in equation (34) to predict equilibrium attendance $\bar{a}_{eq}$:

$$\bar{a}_{pop}^{eq} = \frac{\bar{a}_{pop}^{0} + r_1/c}{1 - 2r_2/c}$$

The optimal attendance, $a^*(\theta)$, is the same as in equation (34). Below we write it in terms of the structural parameters γ_1^{θ}, γ_2^{θ}, and ρ^{θ} which we use in our simulations that exogenously vary these parameters:

$$a^*(\theta) = \frac{4c\gamma_2^{\theta}}{1-\sqrt{1+8c\gamma_2^{\theta}}} \cdot a_0 - \frac{1+4c\gamma_2^{\theta} - \sqrt{1+8c\gamma_2^{\theta}}}{1-\sqrt{1+8c\gamma_2^{\theta}}} \cdot \rho^{\theta}\bar{a}_{pop}^{0} + \frac{1-\sqrt{1+8c\gamma_2^{\theta}}}{4c\gamma_2^{\theta}} \cdot \gamma_1^{\theta} \tag{38}$$

Here $\bar{a}^0_{pop} := \bar{\theta}/c$ corresponds to the action taken by the average type, and $a_0 := \theta/c$ corresponds to the action the individual would take absent public recognition.

F.2.3 Mapping the Model Parameters to a Reduced-Form PRU

In Section F.2.1, we derived a mapping for r_0, r_1, r_2 in terms of the structural parameters γ_1^θ, γ_2^θ, and ρ^θ. In this section we derive equations representing γ_1^θ, γ_2^θ, and ρ^θ in terms of r_0, r_1, and r_2:

$$\gamma_1^\theta = \frac{\sqrt{r_1^2 - 4r_0r_2}}{c - 2r_2}. \tag{39}$$

$$\gamma_2^\theta = \frac{r_2}{(c - 2r_2)^2} \tag{40}$$

$$\rho^\theta = \frac{\sqrt{r_1^2 - 4r_0r_2} - r_1}{2\bar{a}^0_{pop}r_2} - \frac{\sqrt{r_1^2 - 4r_0r_2}}{c\bar{a}^0_{pop}} \tag{41}$$

To verify these equations, we first note that we recovered equation (40) as equation (37) in Section F.2.1. We also recovered equation (36), which defines γ_1^θ in terms of the reduced-form parameters and ρ^θ. We thus next verify equation (41). To do so, we first note that the optimal action function at $\rho^\theta\bar{\theta}$ equals:

$$a^*(\rho^\theta\bar{\theta}) = \frac{\rho^\theta\bar{\theta}/c + r_1/c}{1 - 2r_2/c}$$

Using $\bar{\theta}/c = \bar{a}^0_{pop}$, we rewrite this as:

$$a^*(\rho^\theta\bar{\theta}) = \frac{\rho^\theta\bar{a}^0_{pop} + r_1/c}{1 - 2r_2/c}$$

We next substitute the above expression into $R\left(a(\rho^\theta\bar{\theta})\right) = 0$:

$$0 = r_0 + r_1\frac{\rho^\theta\bar{a}^0_{pop} + r_1/c}{1 - 2r_2/c} + r_2\left(\frac{\rho^\theta\bar{a}^0_{pop} + r_1/c}{1 - 2r_2/c}\right)^2$$

We solve this equation for ρ^θ via the quadratic formula, which yields equation (41).

Finally by substituting (41) into equation (36), we recover equation (39).

F.2.4 Estimating the Model

The reduced-form public recognition function: We use the same procedure as in the action-signaling model.

The effects of public recognition on performance: We again use the same procedure as in the action-signaling model.

The cost parameter c: We recover the same estimate for c as in the action-signaling model:

$$c = \frac{r_1 + 2r_2\left(\bar{a}^0_{pop} + \bar{\tau}\right)}{\bar{\tau}} \tag{42}$$

To see why this equation recovers c, we recall the equilibrium action function from equation (34):

$$a^*(\theta) = \frac{\theta/c + r_1/c}{1 - 2r_2/c}$$

We next take the expectation of both sides, recalling that we are in the case where $PR = 1$:

$$\mathbb{E}[a^*(\theta)|PR = 1] = \frac{\mathbb{E}[\theta/c] + r_1/c}{1 - 2r_2/c}$$

We substitute $\mathbb{E}[\theta/c] = \bar{a}^0_{pop}$ and $\mathbb{E}[a|PR = 1] = \bar{a}_0 + \bar{\tau}$ into the expression above, and solve for c:

$$\begin{aligned}\bar{a}_0 + \bar{\tau} &= \frac{\bar{a}^0_{pop} + r_1/c}{1 - 2r_2/c}\\ c &= \frac{r_1 + 2r_2\left(\bar{a}^0_{pop} + \bar{\tau}\right)}{\bar{\tau}}\end{aligned}$$

The net image payoff from scaling up public recognition: Using the optimal attendance rule from equation (38), we estimate each YOTA member's counterfactual attendance when public recognition is scaled up at specified values of γ_1^θ, γ_2^θ, and ρ^θ. We then use these values and equation (29) to estimate the net-image payoff.

Estimating confidence intervals: As with the action-signaling model, we compute 95 percent confidence intervals for the estimates reported in Tables 7 and 9 using a percentile-based bootstrap blocked at the individual level.

F.3 Incorporating Heterogeneity

Consider heterogeneity in marginal costs, so that the cost of effort is given by $C(a, \xi) = ca^2/2 + \xi a$. For simplicity, assume that $\mathbb{E}[\xi|\theta] = 0$ and that $Pr(\xi + \theta < 0) = 0$. Then the optimal action given a reduced-form PRU $R(a) = r_0 + r_1 a + r_2 a^2$ is

$$a^*(\theta, \xi) = \frac{(\theta - \xi)/c}{1 - 2r_2/c} + \frac{r_1/c}{1 - 2r_2/c} \tag{43}$$

and thus

$$\mathbb{E}[a^*(\theta, \xi)|\theta] = \frac{\theta/c}{1 - 2r_2/c} + \frac{r_1/c}{1 - 2r_2/c} \tag{44}$$

In other words, the expected action of a person with intrinsic motivation θ remains unchanged. This immediately implies that all of the conclusions derived above for the action-signaling model remain unchanged, since the reduced-form PRU will be quadratic if and only if the structural PRU is quadratic.

Consider now the characteristics-signaling model, where individuals derive utility about the audience's impression of their intrinsic motivation θ, but not the marginal cost ξ. We show that we can microfound a quadratic reduced-form PRU with an approximately quadratic structural PRU. From equation (43), note that if $Var[\xi|\theta]$ is sufficiently small, then $\mathbb{E}[\theta|a] = (c - 2r_2)a - r_1 + O(Var[\xi|\theta])$, where terms $O(Var[\xi|\theta])$ are negligible. In Bénabou and Tirole (2006), this linear approximation holds when θ and ξ are distributed normally, and the domain of a is all of $\mathbb{R}$. As long as this linear approximation is valid, the structural PRU in the characteristics-signaling model can again be written as $\nu S(\theta - \rho^{\theta}\bar{\theta}) = r_0 + r_1 \cdot a^*(\theta) + r_2 \cdot a^*(\theta)^2$, where $a^*(\theta) = \frac{\theta}{c-2r_2} + \frac{r_1}{c-2r_2}$.

Complete Experimental Instructions for "Measuring the Welfare Effects of Shame and Pride"

Luigi Butera, Robert Metcalfe, William Morrison, and Dmitry Taubinsky

July 2021

1 Additional details of the YMCA experiment

The experiment proceeded in the following order. First, participants participants were first shown an introduction screen, which is shown in Section 1.1. Then participants participants were shown four screens containing the experiment instructions. Figures 2-5 contain screenshots of these instructions. After, participants answered WTP questions for 11 intervals of future attendance. For each interval, participants first answered whether they would prefer to receive public recognition or not at each of the intervals. Based on their answer, they were then directed to a slider question eliciting their WTP to be part of the PRP or not be part of the PRP. Figure 6 contains an example of these questions. After answering the WTP questions, participants answered the questions in Section 1.5.

Figure 7 in Section 7 contains a copy of the invitation email. Section 1.7 contains a copy of transcript provided to YMCA employees to answer any questions from members.

1.1 Introduction

Figure 1: Introduction screen

The YMCA has selected you as a potential participant in the **Grow & Thrive** pilot program! As a reminder, this is a pilot program in partnership with the YMCA of the USA, the University of Chicago and an anonymous benefactor who has a strong passion for promoting healthy living and supporting the broader community.

Once you complete this short survey, you will:

(1) be entered into a drawing to receive a $250 Y program voucher funded by an anonymous benefactor.

and

(2) have the opportunity to join our innovative Grow & Thrive pilot program. In this pilot program, every time you visit the YMCA over the course of one month, we will donate $2 on your behalf to the Y in support of vital programs like after school care. The donation is capped at one visit per day, with a maximum donation amount per person of $60. You may also be able to earn cash rewards for yourself as well.

We want you and your community to **Grow & Thrive** together.

Completing the survey and joining *Grow & Thrive* will take approximately 10 minutes.

1.2 Introductory questions

Q1: How many times do you typically exercise per week?

- Less than once per week
- Once a week
- Between one and three times per week
- Between three and five times per week
- More than five times per week

Q2: How long is your typical exercise routine, in minutes? *(answered on a slider, min 0, max 120)*

Q3: Are you a regular smoker *(Options: yes/no)*

Q4: Overall, how satisfied are you with your health? *(answered on a scale, min 1, max 10)*

Q5: Overall, how satisfied are you with the Y's facilities? *(answered on a scale, min 1, max 10)*

Q5: What is the highest level of education that you have completed?

- Below high school diploma

- High school diploma or equivalent
- Bachelor's degree or equivalent
- Master's degree or equivalent
- Doctorate or equivalent
- I prefer not to respond

Q6: What is your approximate gross household income?

- Between \$0 and \$40k
- Between \$41 and \$80k
- Between \$81 and \$120k
- Between \$121 and \$200k
- More than \$200k
- I prefer not to respond

1.3 Instructions

Figure 2: Instructions: Grow & Thrive explanation

The *Grow & Thrive* program

You now have the unique opportunity to join our 1-month *Grow & Thrive* program!

If you participate, an anonymous benefactor will donate \$2 on your behalf to vital community support programs (such as after school care programs and childcare) for every day you utilize your YMCA facilities during the 30 days of the program (up to \$60 in total per person).

At the end of the program the Y will check the number of times you came to work out between June 15th and July 15th, and our donor will provide the corresponding donation. Just complete the next short survey, agree to participate at the end of it, and you may be randomly selected to participate.

Figure 3: Instructions: Personal Recognition Program

The Personal Recognition Program

We will also provide you with the unique opportunity to join our exclusive **personal recognition program**. If you are selected into this additional program, you will receive a thank-you email at the end of the month, which will:

- list your name and the names of all those chosen in the personal recognition group;
- highlight your Y attendance and the attendance of every other Y Member in this group; and
- highlight the $ value that you and everyone in the group have provided to YMCA charitable programs by attending the Y during the month.

If you are not part of the personal recognition program you will not receive or be listed in this thank-you email. This is the only difference between being part of the personal recognition program or not.

Figure 4: Instructions: overview of choices for Public Recognition

Choose extra rewards and the personal recognition program

In addition to the $2 donation per visit to the Y, with 10% probability you may also receive a one-time extra reward of $8 (which will be paid to you at the end of Grow & Thrive). If you do, you will also be able to choose whether to participate in the personal recognition program. The next eleven questions will ask you whether you want to be part of the personal recognition program. It is in your best interest to answer these questions honestly.

With 90% chance you will still be eligible for the $250 prize, but whether or not you participate in the personal recognition program will be randomly determined.

Figure 5: Instructions: WTP elicitation for Public Recognition

(a) Structure of WTP elicitation

How it works: We want you to tell us whether you want to participate in the personal recognition program. For example, we will ask you: “If you go to the YMCA one time during Grow & Thrive, do you want to participate in the personal recognition program?”

If you say **YES**, we will then ask you:
"How much money (from $0 to $8) would you give up to guarantee that you will participate in the personal recognition program?"

The more you are willing to give up, the more likely you are to be part of the personal recognition program at the end of the Grow & Thrive month.

If you say **NO**, we will then ask you:
"How much money (from $0 to $8) would you give up to guarantee that you will NOT participate in the personal recognition program?"

The more you are willing to give up, the more likely you are to NOT to be part of the personal recognition program at the end of the Grow & Thrive month.

For your information, members of your Y attended the Y facilities 4 times on average per month in the last year.

(b) Description of incentive compatibility

This procedure is designed so that **it is in your best interest to be honest about whether you want to participate in the personal recognition program, and how much of the $8 reward you would give up to ensure that you will or will not participate in the personal recognition program**.

How will we pay you?

We will notify you at the end of the 30 day G&T program if you are in the 10% of people who will randomly receive the cash reward, and therefore whether one of your eleven decisions will determine your participation to the personal recognition program.

The value of your cash reward will generated as follows:

1. At the end of the program a computer will check how many times you actually attended the Y and then match it with your answers.
2. Then a computer will randomly choose a number between $0 and $8.
   -If the computer chooses a $ value smaller or equal to the amount you would give up, then your favorite decision about the personal recognition program will be implemented. If so, your extra reward will either be equal to $8 with 50% chance, or equal to $8 minus the $ value chosen by the computer with 50% chance.
   - If the computer chooses a $ value that is larger than the amount that you would give up, your favorite decision will be implemented with only 50% probability and you will receive a reward of $8.

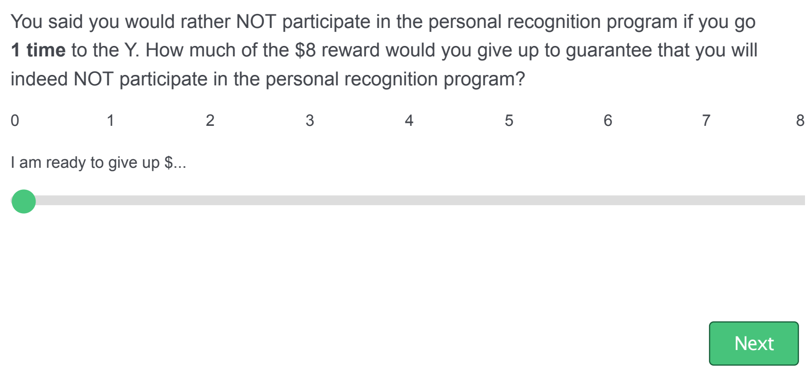
1.4 WTP elicitation

The figure below shows our WTP elicitation questions.[1]

Figure 6: Non-parametric elicitation of WTP: an example

(a) Ordinal preference for Public Recognition

(b) Cardinal preference for Public Recognition



Notes: The figures present screenshots of the WTP elicitation for each number of possible visits to the YMCA during the experiment. The example above reports the elicitation of WTP for attending one time. The top panel asks whether a participant wants to be socially recognized for attending one time. Participants make their choice by clicking their favorite option. The bottom panel asks how much a participant is willing to pay (from $0 to $8) to guarantee that his favorite option is implemented (notice that the bottom panel assumes that the participant answered that he prefers not be recognized for attending one time). Participants choose the amount by moving the slider bar.

1.5 Post-WTP attendance questions

Before answering questions, participants were shown "As a reminder, members of your Y attended the Y facilities **4** times on average per month in the last year."

[1]For participants for whom their WTP is censored at $8.00 or -$8.00, we also asked a follow-up question asking for their unincentivized WTP. Due to an error, these data are not usable.

Q1: Do you think you will go to the Y more than 4 times during the Grow & Thrive program if you are also part of the personal recognition program? *(Options: yes/no)*

Q2: How many times do you think you will go to the Y during the 1 month Grow & Thrive program if you happen to also participate in the personal recognition program? *(answered on a slider, min 0, max 28)*

Q3: How many times do you think you will go to the Y during the 1 month Grow & Thrive program if you happen to NOT be part of the personal recognition program? *(answered on a slider, min 0, max 28)*

Q4: How many times do you think you would go to the Y during the next month if you happen not to be part of Grow & Thrive program? *(answered on a slider, min 0, max 28)*

Q5: Now, imagine that in addition to your $2 donation per visit, you were to receive additional money for yourself and not be part of the personal recognition program. How many times do you think you would go to the Y during the 1 month Grow & Thrive program if... ?

- . . . you received additional $1 per visit for yourself *(answered on a slider, min 0, max 30)*
- . . . you received additional $3 per visit for yourself *(answered on a slider, min 0, max 30)*
- . . . you received additional $6 per visit for yourself *(answered on a slider, min 0, max 30)*
- . . . you received additional $10 per visit for yourself *(answered on a slider, min 0, max 30)*
- . . . you received additional $15 per visit for yourself *(answered on a slider, min 0, max 30)*

Q6: What is the smallest one-time payment (e.g., independent of number of Y visits) that you would take instead of...

- ...a $1 per visit incentive for yourself *(answered on a slider, min 0, max 30)*
- ...a $3 per visit incentive for yourself *(answered on a slider, min 0, max 90)*
- ...a $6 per visit incentive for yourself *(answered on a slider, min 0, max 180)*
- ...a $10 per visit incentive for yourself *(answered on a slider, min 0, max 300)*
- ...a $15 per visit incentive for yourself *(answered on a slider, min 0, max 450)*

1.6 Invitation email

Figure 7: Invitation email to participate in Grow & Thrive

Dear YMCA Member,

The YMCA of the USA, the University of Chicago, and an anonymous benefactor are partnering again to bring you Grow & Thrive, an initiative that helps YMCA members live healthier and happier lives by staying active and supporting their community at the same time. We are inviting you as a YMCA member to be a part of this exciting pilot program!

To get started, we're asking you to complete a short survey. Once you complete the survey, you'll be entered in a drawing to win a $250 Y program voucher. At the end of the survey, you'll be given the chance to participate in the Grow & Thrive pilot. **Grow & Thrive lasts for one month and if you agree to participate you will receive an incentive each time you exercise at the Y between June 15 and July 15.**

To learn from the Grow & Thrive pilot program, we will share anonymous, aggregated data with University of Chicago researchers. This data will not contain any of your personal information.

Please click the survey link below to receive more program information. The survey closes on June 10, 2017.

Grow & Thrive Survey Link

Thank you for being a part of the Y. We hope you'll be a part of this exciting initiative and help us continue to look for ways to build a stronger, healthier community.

1.7 Transcript of frequently asked questions provided to YMCA employees

FAQ – Grow & Thrive

Prepared for YMCA employees

Some general comments

If asked questions at the front desk, it is best if the front desk person says that he/she is aware of the Grow & Thrive program, but that she encourages the Y member to email questions to a specific person who can answer more thoroughly. For instance, the Y member inquiring could be provided with an email address.

Y staff should NOT reveal to Y members that they are part of an economic experiment. If Y members ask about why different people get different incentives, answer as per FAQ.

Below you will find a list of questions that YMCA members may ask, and the corresponding suggested answers.

Q: I have only completed the first part of the survey: will I still participate in drawing of $250 Y voucher?
A: Yes

Q: I am curious: why are people randomized/assigned to the personal recogntion program and to receive extra rewards?
A: Grow & Thrive is a pilot program: as such, we are evaluating different ways in which we might implement it on a larger scale in the future. [*if the person insists*:] We cannot provide further details at this moment.

Q: I have agreed to participate but now I don't want to be in the social recognition program: can you take me out of the social recognition program?
A: By agreeing to participate in Grow & Thrive, you have also accepted the possibility to be randomly assigned by a computer lottery to participate in the social recognition program. If you do not want to be part of the social recognition program, you may withdraw from Grow & Thrive, in which case however you will also NOT receive any of the incentives of the program.

Q: Why is University of Chicago involved?
A: University of Chicago scholars will help us evaluating our Grow & Thrive program and help us to improve it in the future.

Q: Is this an experiment?
A: Grow & Thrive is a pilot program: if successful, we hope in the future to implement it on a larger scale to help our YMCA members live a healthier and fuller life.

Q: When will my donations be made?
A: In July after the end of the Grow & Thrive program, we will email you with details on how the donations will be implemented.

Q: During Grow & Thrive, do I have to check in with the front desk when I come to the Y?
A: No, if you are part of Grow & Thrive, at the end of the month the Y staff will check how many times you came to the Y by counting the number of days you swiped your Y card to access the facilities.

Q: How will I know if I won the $250 Y voucher?
A: We will notify the winner of the drawing after the end of Grow & Thrive

Q: If I win, will I receive the $250 in cash?
A: You will receive it in the form of a discount on your future YMCA membership.

Q: Who is providing the money for Grow & Thrive?
A: An anonymous benefactor who has a strong passion for promoting healthy living and supporting the broader community.

Q: Who else is participating in the social recognition program?
A: I don't have this information at the moment, I am sorry.

Q: In which group am I? [*bits of this answer can also be used for people asking why they didn't get the extra reward, or why they are (are not) in the social recognition program despite their answers in the survey etc.*]
A: We will email you by June 15th to let you know which group you have been randomly assigned to. If you agreed to participate, with 10% chance a computer lottery will randomly select one of the answers you gave, and what you chose in that question will determine your program and reward. Otherwise, your program and reward will be randomly assigned to you: in this case you may or may not be part of the social recognition program.

Q: What is the social recognition program again?
A: Some Grow & Thrive members will also be part of a social recognition program. This group will receive at the end of the month a thank-you email, which will list their names and highlight the good that they have done for themselves by going to the Y during the month. The email will show how many times each participant of the social recognition program went to the Y during the 1-month Grow & Thrive. If you are not part of the social recognition program you will not receive nor be listed in this thank-you email. This is the only difference between being part or not of the social recognition program.

2 Additional details of the charitable contribution experiments

The experiments proceeded in the following order. After giving consent, participants were first shown instructions for the button-clicking task and given the opportunity to practice for 30 seconds. Section 2.1 contains screenshots of these instructions and the practice screen. Participants were then provided an overview of the experiment, the incentives corresponding to each round, and an overview of how public recognition worked in the experiment. Section 2.2 contains the corresponding screenshots.

For the BU and Berkeley samples, we then asked participants for their name and email. Participants in all three samples then took a picture of themselves using their webcam, and were given the option to upload their own picture. Section 2.3 contains the corresponding screenshots.

Participants were then provided instructions for the WTP elicitation and information about the performance in the pilot studies. At the end of the instructions, participants answered an attention check question. Section 2.4 contains the corresponding screenshots.

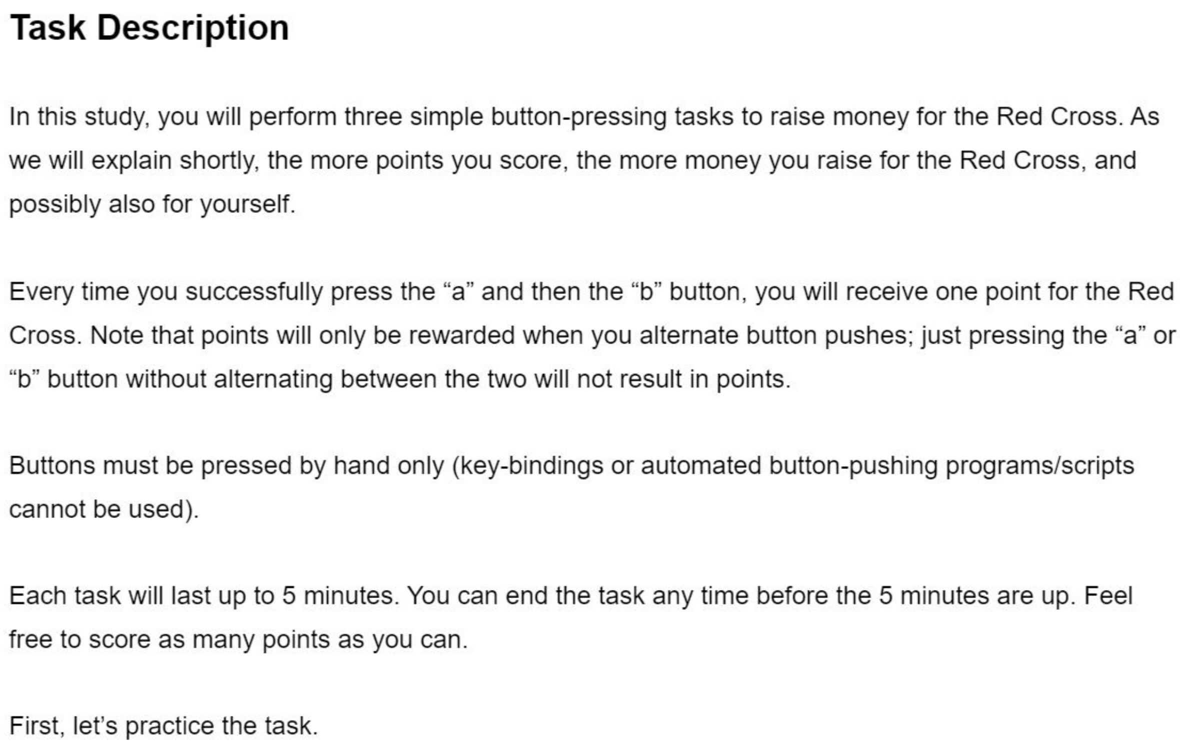
Participants then answered WTP questions for 17 intervals of performance. Figure 22 contains an example of these questions. Participants first answered the ordinal questions for each of the 17 intervals of performance seen in Panel (a). For each interval participants chose anonymous, they answered the questions seen in Panel (b). Questions were listed in ascending order. For each interval participants selected \$25, or \$10 for the Prolific sample, participants then answered the questions in Panel (c), also in ascending order. Participants then answered the repeated Panels (b) and (c) for each interval participants preferred to be publicly recognized. Here the intervals were listed in descending order.

After answering the WTP questions, participants completed the three rounds in random order. Section 2.6 contains screenshots of the interface during each round. Participants then answered the questions in Section 2.7.

Except for Figures 18 and 20, all screenshots come from the Berkeley experiment. Participants in the BU and Prolific experiments saw identical screens, except where noted in the figure notes.

2.1 Task instructions

Figure 8: Task description



Task Description

In this study, you will perform three simple button-pressing tasks to raise money for the Red Cross. As we will explain shortly, the more points you score, the more money you raise for the Red Cross, and possibly also for yourself.

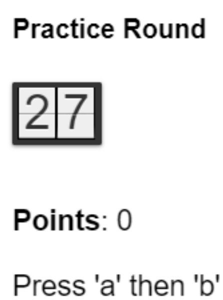
Every time you successfully press the “a” and then the “b” button, you will receive one point for the Red Cross. Note that points will only be rewarded when you alternate button pushes; just pressing the “a” or “b” button without alternating between the two will not result in points.

Buttons must be pressed by hand only (key-bindings or automated button-pushing programs/scripts cannot be used).

Each task will last up to 5 minutes. You can end the task any time before the 5 minutes are up. Feel free to score as many points as you can.

First, let’s practice the task.

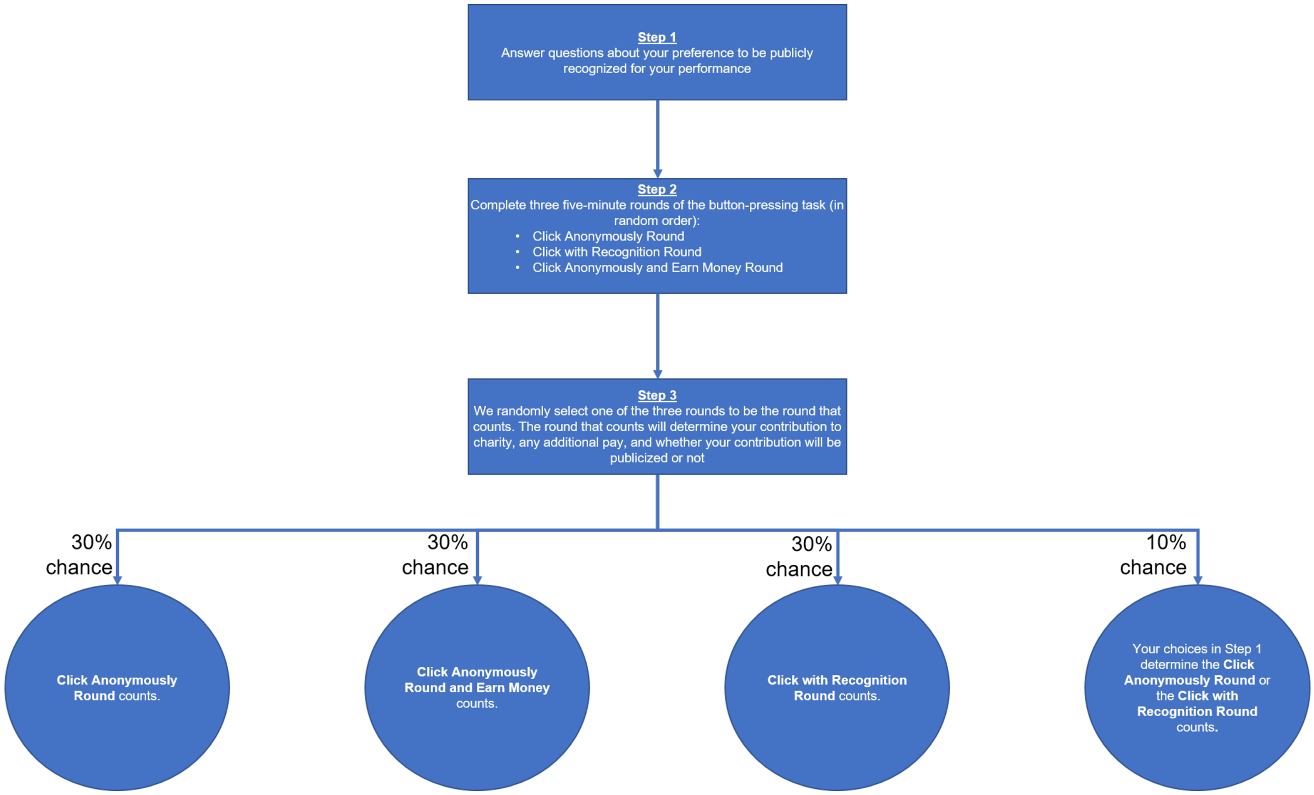
Figure 9: Practice round



Notes: The timer at the stop of the screen started at 30. The round automatically ended when the timer reached 0. After 5 seconds, a button appeared allowing participants to end the practice round early.

2.2 Experiment overview

Figure 10: Overview of the charitable contribution experiment



Notes: This flowchart was shown to participants right before Figure 11.

Figure 11: Summary of each round

Above is a summary of the study. For more information on the Red Cross, the charity that will benefit from your effort, please visit https://www.redcross.org/.

- First, you will answer questions about whether you want your effort to raise money for the Red Cross to be publicly shared with others.
- Second, you will complete three rounds of the button-pressing task. The more points you score in the button-pressing tasks, the more money you raise for the Red Cross.
- Third, you will be randomly assigned to one of the four options described in the table below, which will determine your contribution to the Red Cross, any additional pay, and whether your effort to raise money for the Red Cross will be publicly shared with others.

Each round has a 30% chance of being selected as the round that counts. There is also a 10% chance that your answers in the first part of the study will determine whether your effort will be publicly shared with others or not. We will explain this Choose Your Visibility option in a few screens.

Below is a summary of each round.

	Anonymous Effort Round	**Anonymous and Paid Effort Round**	**Publicly-Shared Effort Round**	**Choose Your Visibility**
Contribution to the Red Cross	5 cents for every 10 points	5 cents for every 10 points	5 cents for every 10 points	5 cents for every 10 points
Payment to You	None	5 cents for every 10 points	None	Depends on your choices
Effort Publicly Shared with Others?	No	No	Yes	Depends on your choices

Notes: The above screenshot is from the Berkeley experiment. In the Prolific sample, the incentive size was 2 cents for every 10 points instead.

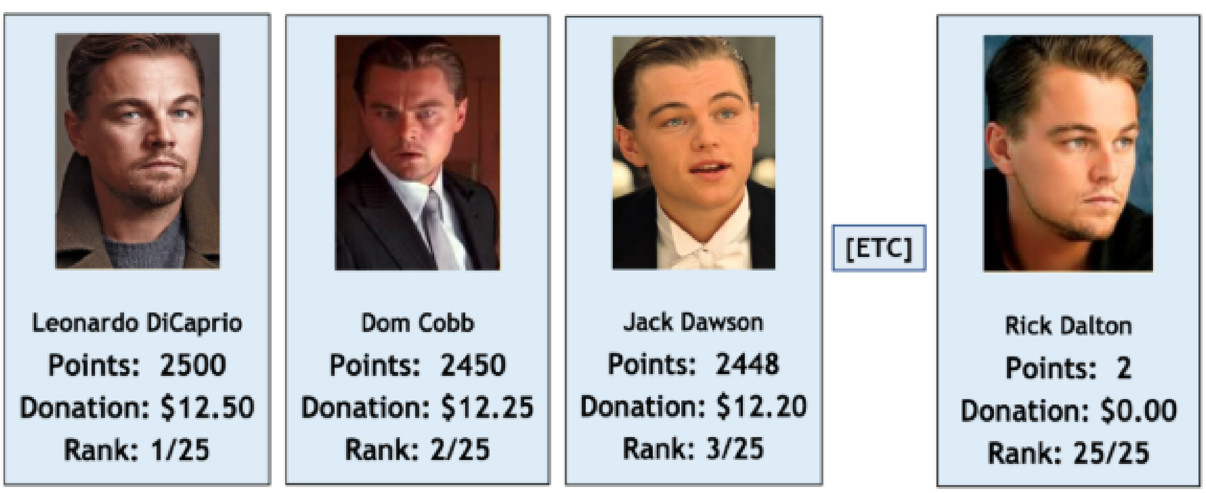
Figure 12: Instructions: Publicly-Shared Effort

Publicly Sharing Your Effort to Help the Red Cross

After all participants have completed the study, we will randomly divide participants into groups. You will receive an email with a link to view the pictures and contributions raised for the Red Cross of all participants in your group assigned to have their effort publicly shared with others. All effort in anonymous rounds will remain anonymous to both other participants and researchers. No one will view the amount you raised alongside your photo. Participants will receive a **$1 electronic Amazon gift card** for using the link to view the photos and contributions selected to be publicly shared. If you are selected to have your effort publicly shared with others, other participants in your group will see:

- Your picture.
- Your name.
- Your score in the button-pressing task.
- The money you raised for the Red Cross.
- Your rank compared to other participants in your group assigned to have their effort publicly shared with others.

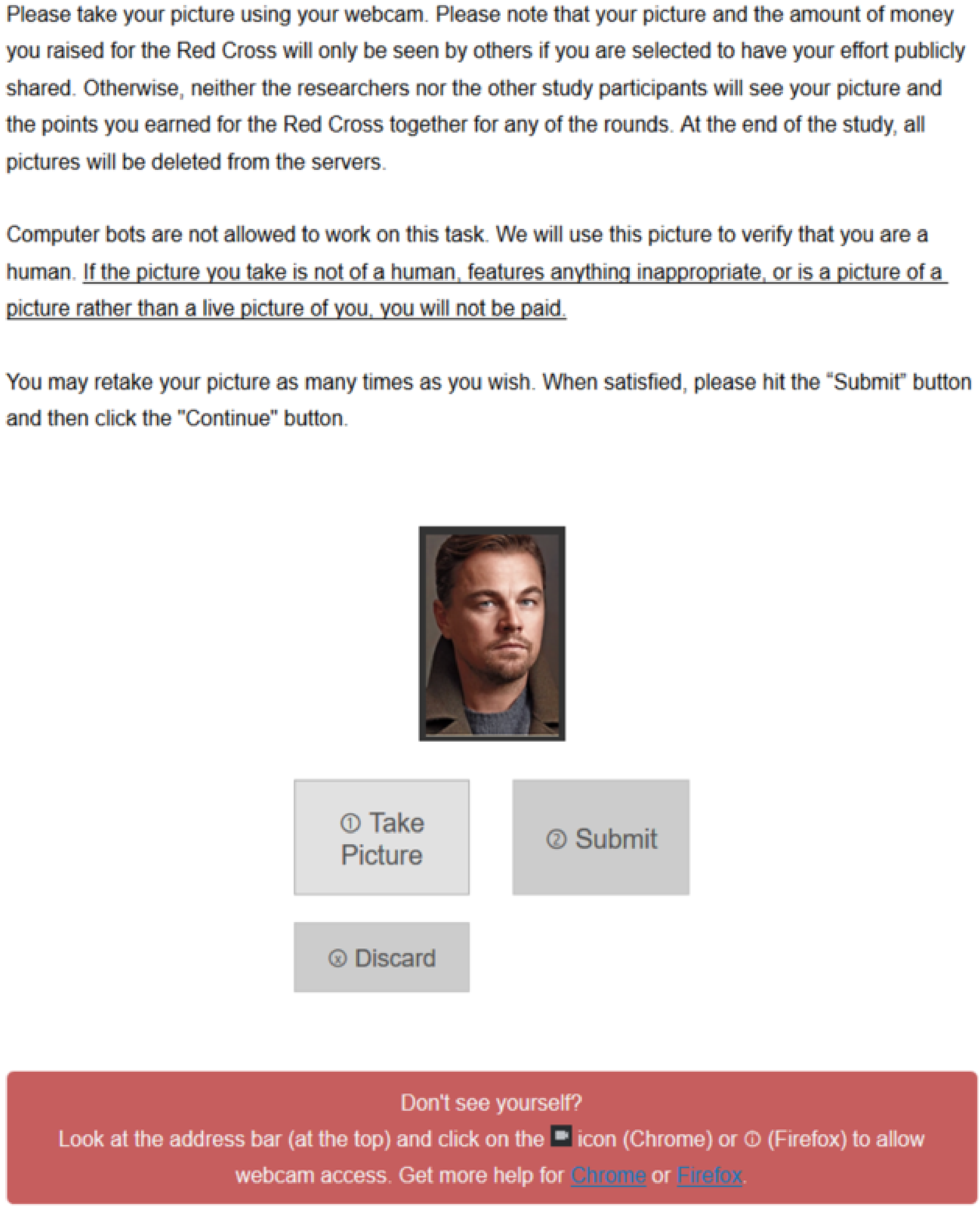
Below is an example of how we will display the information to other participants. We will sort these graphics from most money raised to least money raised.



Notes: The above screenshot is from the Berkeley experiment. For the BU sample, the rank in the attached image was listed as out of 50. For the Prolific sample, the rank was listed as out of out of either 5, 25, or 100 based on the randomly assigned group size. Additionally, the incentive size was 2 cents for every 10 points instead, and there were no names in the image.

2.3 Procedure for obtaining participants' pictures

Figure 13: Procedure for obtaining webcam pictures: example using a stock photo



Notes: Participants were able to move freely between the screens in Figures 13-15, and could both retake webcam pictures and re-upload pictures as many times as they wished.

Figure 14: Procedure for uploading alternative picture: example using a stock photo

You can choose to upload a different picture for us to display if your effort is selected to be publicly shared. If you choose to upload a new picture, it must be a picture of you (as identified by your webcam picture), or else your response will be rejected.

Please select a picture file smaller than 3 MB in JPEG or PNG format that is longer than it is wide, similar to the picture you just took above, and ensure that it is upright. If it is displaying sideways when you upload it below, it will display sideways on a later screen. You can replace your upload by simply dragging a new picture into the box or clicking it and selecting a new file to upload. Larger files will take longer to upload and display.

Drop files or click here to upload

If you click the back button below, you will have to retake your webcam picture.

Notes: Participants were able to move freely between the screens in Figures 13-15, and could both retake webcam pictures and re-upload pictures as many times as they wished.

Figure 15: Picture confirmation: example using a stock photo

Leonardo DiCaprio

Points: ?

Donation: $?.??

Rank: ?

If your effort is publicly shared, your picture will display in a badge similar to the one above. If you would like a different picture to display, please press the back button to retake and re-upload your picture.

Notes: The above screenshots is from the Berkeley experiment. For the Prolific sample, the incentive size was 2 cents for every 10 points instead, and there were no names in the image. In the experiment, the participant's picture and name would appear instead of the Leonardo DiCaprio name and image. Participants were able to move freely between the screens in Figures 13-15, and could both retake webcam pictures and re-upload pictures as many times as they wished.

2.4 WTP elicitation instructions

Figure 16: Instructions: choose your visibility

(a) First screen

Choose Your Visibility

10% of participants will be assigned the Choose Your Visibility option. This means that their contribution to the Red Cross will be randomly determined by the points they score in one of the three rounds, but they will choose whether their effort will be publicly shared with others or be anonymous. Only their name, score, rank, and contribution to the Red Cross will be publicly shared. We will not share which round was randomly chosen.

If you are randomly selected into that 10%:

- Your answers to questions on the screens that follow will determine whether or not we share your effort to raise money for the Red Cross with others. You will be presented with various scenarios and given a $25 budget to make decisions about whether or not you want your effort to be shared with others in each scenario.
- You will receive the unspent portion of the $25 at the end of the study.

Review Structure of the Study

(b) Second screen

Choose Your Visibility

The choices: We will ask you a series of questions of the following form: “Suppose you raise **$2.50-$3.00** for the Red Cross. Would you want your effort to be publicly shared with others?"

- If you answer **yes**, we will then ask you: "How much of your $25 budget would you be willing to use to have your effort be **publicly shared with others**?" The <u>more money</u> you are willing to use, the <u>more likely</u> it is that your effort will be **shared**.

- If you answer **no**, we will then ask you: "How much of your $25 budget would you be willing to use to have your effort be **anonymous**?" The <u>more money</u> you are willing to use, the <u>more likely</u> it is that your effort will be **anonymous**.

Notes: The above screenshots are from the Berkeley experiment. For the Prolific sample, the incentive size was 2 cents for every 10 points instead.

Figure 17: Instructions: incentive compatibility

How Your Decisions Impact You

We have set up a procedure that ensures that **carefully and honestly answering the questions is in your best interest**. You can scroll through the rules below to verify that it is really in your best interest to answer honestly.

We will notify you at the end of the study if you are in the 10% of people assigned the Choose Your Visibility option. <u>If you are part of this 10%</u>, the value of your cash reward and whether your effort will be publicly shared or not will be determined as follows:

1. At the end of the study, a computer will randomly choose one of the three rounds, check how much money you raised for the Red Cross in that round, and then match it with your answers.

2. With 50% chance, you will receive a $25 bonus and your preferred choice for having your effort publicly shared or be anonymous.

Notes: The above screenshot is from the Berkeley experiment. For the Prolific sample, the incentive size was 2 cents for every 10 points instead. Section 5 contains the full text listed in the scrollbox.

Figure 18: Information on past performance: Prolific sample

(a) Summary of performance in the pilot study

How Did Past Participants Perform in the Task?

In a past version of this study with 79 participants, participants raised $1.92 on average for the Red Cross in the Publicly-Shared Effort Round.

Half of the participants raised more than $2.16 in the Publicly-Shared Effort Round, a quarter raised more than $2.60 in the Publicly-Shared Effort Round, and only the bottom quarter of participants raised less than $1.12 in the Publicly-Shared Effort Round. You can click the button below to see more information on how past participants performed in the Publicly-Shared Effort Round.

Detailed Summary of Past Contributions

You are in a group of 75 participants in this study, and approximately 25 will have their effort publicly shared with others.

(b) Summary of performance in the pilot study

Contributions in a Past Version of the Study

Percent of people raising at least ...	
... $0.20	89%
... $0.40	87%
... $0.60	87%
... $0.80	85%
... $1.00	84%
... $1.20	75%
... $1.40	72%
... $1.60	72%
... $1.80	71%
... $2.00	63%
... $2.20	48%
... $2.40	38%
... $2.60	25%
... $2.80	13%
... $3.00	6%
... $3.20	1%
... $3.40	1%

Figure 19: Information on past performance: Berkeley sample

(a) Summary of performance in the pilot study

How Did Past Participants Perform in the Task?

In a past version of this study with 52 participants, participants raised $5.54 on average for the Red Cross in the Publicly-Shared Effort Round.

Half of the participants raised more than $6.50 in the Publicly-Shared Effort Round, a quarter raised more than $7.35 in the Publicly-Shared Effort Round, and only the bottom quarter of participants raised less than $4.75 in the Publicly-Shared Effort Round. You can click the button below to see more information on how past participants performed in the Publicly-Shared Effort Round.

Detailed Summary of Past Contributions

You are in a group of 75 participants in this study, and approximately 25 will have their effort publicly shared with others.

(b) Summary of performance in the pilot study

Contributions in a Past Version of the Study

Percent of people raising at least ...	
... $0.50	88%
... $1.00	87%
... $1.50	87%
... $2.00	87%
... $2.50	83%
... $3.00	83%
... $3.50	81%
... $4.00	79%
... $4.50	75%
... $5.00	75%
... $5.50	69%
... $6.00	62%
... $6.50	52%
... $7.00	40%
... $7.50	15%
... $8.00	4%
... $8.50	2%

Figure 20: Information on past performance: BU sample

(a) Summary of performance in the pilot study

How Did Past Participants Perform in the Task?

In a past version of this study with 52 participants, students raised $5.54 on average for the Red Cross in the Publicly-Shared Effort Round.

Half of the the students raised more than $6.50 in the Publicly-Shared Effort Round, a quarter raised more than $7.35 in the Publicly-Shared Effort Round, and only the bottom quarter of students raised less than $4.75 in the Publicly-Shared Effort Round. You can click the button below to see more information on how past student participants performed in the Publicly-Shared Effort Round.

Detailed Summary of Past Contributions

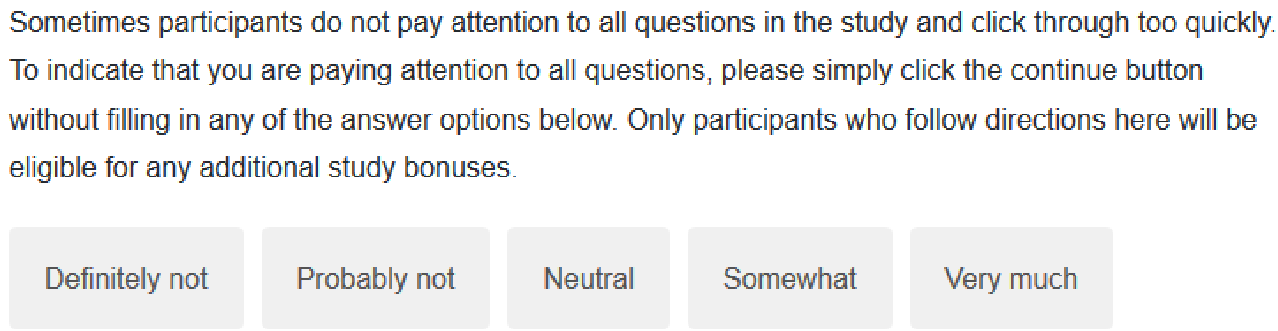
Approximately 30-40% of the QM222 students in this study will have their effort publicly shared with others.

(b) Summary of performance in the pilot study

Contributions in a Past Version of the Study

Percent of people raising at least ...	
... $0.50	88%
... $1.00	87%
... $1.50	87%
... $2.00	87%
... $2.50	83%
... $3.00	83%
... $3.50	81%
... $4.00	79%
... $4.50	75%
... $5.00	75%
... $5.50	69%
... $6.00	62%
... $6.50	52%
... $7.00	40%
... $7.50	15%
... $8.00	4%
... $8.50	2%

Figure 21: Attention check



2.4.1 Full text of incentive compatibility procedure

Note: the text below is from the Berkeley experiment. For the Prolific sample, the incentive size was 2 cents for every 10 points instead.

We will notify you at the end of the study if you are in the 10% of people assigned the Choose Your Visibility option. If you are part of this 10%, the value of your cash reward and whether your effort will be publicly shared or not will be determined as follows:

1. *At the end of the study, a computer will randomly choose one of the three rounds, check how much money you raised for the Red Cross in that round, and then match it with your answers.*

2. *With 50% chance, you will receive a $25 bonus and your preferred choice for having your effort publicly shared or be anonymous.*

3. *Otherwise, with 50% chance a computer will randomly choose a number between $0 and $25. If the computer chooses a value less than or equal to the value you were willing to use from your $25 budget, then your preferred choice for having your effort publicly shared or be anonymous will be implemented. You will receive a bonus of $25 minus the number chosen by the computer. If the computer chooses a value greater than the value you were willing to use from your $25 budget, then your preferred choice for having your effort publicly shared or be anonymous will NOT be implemented. You will receive a $25 bonus. All money you receive is in addition to the $7.50 compensation everyone will receive for completing the study.*

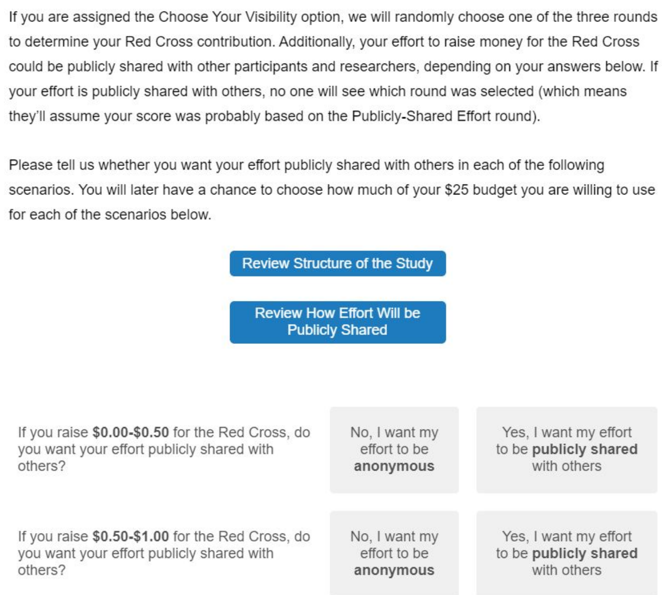
4. *The Red Cross will receive a donation based on your effort in the randomly-chosen round.*

If you are not part of the 10% assigned the Choose Your Visibility option, we will instead randomly choose one of the three rounds to be the round that counts for you. This round will determine your contribution to the Red Cross, any additional pay, and whether your effort to raise money for the Red Cross will be shared with others or be anonymous.

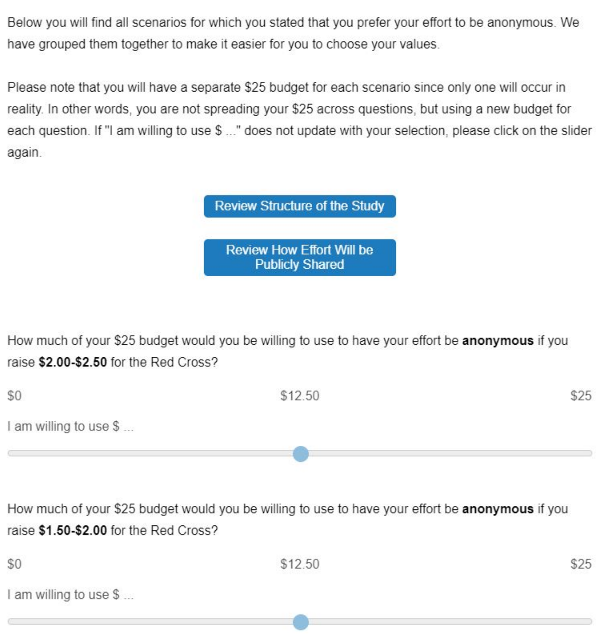
2.5 WTP elicitation

Figure 22: Non-parametric elicitation of WTP: an example

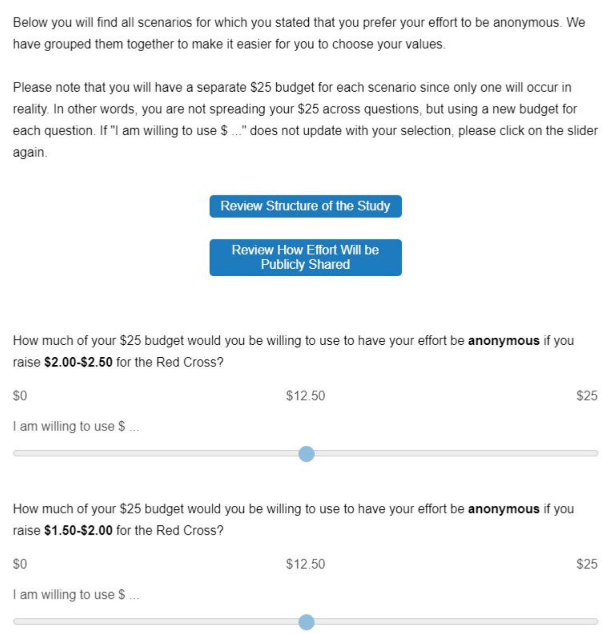
(a) Ordinal preference for Public Recognition



(b) Cardinal preference for Public Recognition



(c) Cardinal preference for Public Recognition: censored responses



Notes: The above screenshots are from the Berkeley experiment. For the Prolific sample, the incentive size was 2 cents for every 10 points instead, and there were no names in the image. Participants first answered the ordinal questions for each of the 17 intervals of performance seen in Panel (a). For each interval participants chose anonymous, they answered the questions seen in Panel (b). Questions were listed in ascending order. For each interval participants selected $25, or $10 for the Prolific sample, participants then answered the questions in Panel (c), also in ascending order. Participants then answered the repeated Panels (b) and (c) for each interval participants preferred to be publicly recognized. Here the intervals were listed in descending order.

2.6 Rounds

Figure 23: Publicly-Shared Effort Round

(a) Intro screen

Round 1

You will first complete the **Publicly-Shared Effort Round**. There is a 30% chance you will be randomly assigned to this round, regardless of your effort or the decisions you made.

If assigned to this round, 5 cents will be donated to the Red Cross for every 10 points that you score. Additionally, **your effort to raise money for the Red Cross will be shared with others**.

Round 1 will last for up to 5 minutes. You can end the round early at any time.

(b) Task screen

Publicly-Shared Effort Round

04 54

Your effort to raise money for the Red Cross in this round will be publicly shared with others.

Press 'a' then 'b'

You can track your contribution in the graphic above and click the button below to end the round early.

Notes: The above screenshots are from the Berkeley experiment. For the Prolific sample, the incentive size was 2 cents for every 10 points instead, and there were no names in the image. In the experiment, the participant's picture and name would appear instead of the Leonardo DiCaprio name and image. Participants completed the three rounds in random order.

Figure 24: Anonymous Effort Round

(a) Intro screen

Round 2

You will next complete the **Anonymous Effort Round**. There is a 30% chance you will be randomly assigned to have this round count, regardless of your effort or the decisions you made.

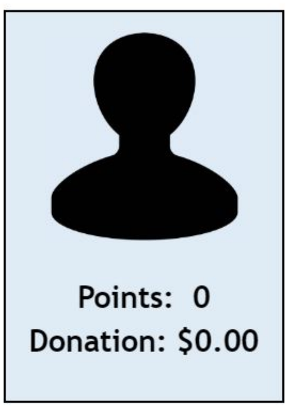
If assigned to this round, 5 cents will be donated to the Red Cross for every 10 points that you score. **Your effort to raise money for the Red Cross in this round will be anonymous.**

Round 2 will last for up to 5 minutes. You can end the round early at any time.

(b) Task screen

Anonymous Effort Round

Your effort to raise money for the Red Cross in this round is anonymous.



Press 'a' then 'b'

You can track your contribution in the graphic above and click the button below to end the round early.

Notes: The above screenshots are from the Berkeley experiment. For the Prolific sample, the incentive size was 2 cents for every 10 points instead. Participants completed the three rounds in random order.

Figure 25: Anonymous Effort Round

(a) Intro screen

Round 3

You will now complete the **Anonymous and Paid Effort Round**. There is a 30% chance you will be randomly assigned to this round, regardless of your effort or the decisions you made.

If assigned to this round, 5 cents will be donated to the Red Cross for every 10 points that you score. Your effort to raise money for the Red Cross in this round will be anonymous, but **you will earn a bonus payment of 5 cents for every 10 points that you score**.

Round 3 will last for up to 5 minutes. You can end the round early at any time.

(b) Task screen

Anonymous and Paid Effort Round

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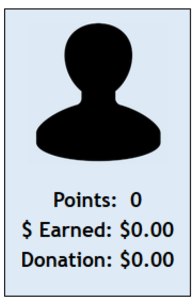
Your effort to raise money for the Red Cross in this round is anonymous.
Additionally, you earn 5 cents for every 10 points that you score.



Press 'a' then 'b'

You can track your contribution in the graphic above and click the button below to end the round early.

Notes: The above screenshots are from the Berkeley experiment. For the Prolific sample, the incentive size was 2 cents for every 10 points instead. Participants completed the three rounds in random order.

2.7 Additional questions

Q1: What is your age? (Leave blank if you prefer not to respond)

Q2: What is your gender?

- Male
- Female

- Other/non-binary
- Prefer not to respond

Q3: What race/ethnicity best describes you?

- American Indian or Alaska Native
- Asian or Pacific Islander
- Black or African American
- Hispanic or Latino
- White
- Other
- Prefer not to respond

Q4: Approximately how many studies have you completed on Prolific? (Leave blank if you prefer not to respond) *(asked only to the Prolific sample)*

Q5: Which of the following best describes your affiliation with UC Berkeley? *(asked only to the Berkeley sample)*

- Undergraduate student
- Masters student
- Ph.D. student
- Other/not a student
- Prefer not to respond