

# Social Preferences and Fairness Norms as Informal Institutions: Experimental Evidence

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In many communities where the reach of government is limited, formal legal and political institutions are less important than the *informal* rules of the game. These “informal institutions” are defined by Douglass C. North (1995) as: “conventions, norms of behavior, and self imposed codes of conduct.” Economic experiments can be used to measure such internalized informal institutions by eliminating the potential for strategic or reputational considerations which arise in non-anonymous environments. Recent experimental studies document substantial variation in generalized altruism, conditional cooperation, and costly punishment across societies.<sup>1</sup>

In this paper, we conduct dictator games in which the relative status of the dictator and the receiving player varies across treatments. Within the experiment, relative status depends on both nominal ownership claims and earned property rights generated when subjects are paid for completing a real effort task. Experiments were conducted in two distinct cultural environments: one subject pool is made up of students from a top university in the United States, while another set of subjects are recruited from poor villages in rural Kenya. Results suggest that status influences the individual compunction to be generous in both cultural contexts. However, the type of status which matters differs substantially across subject pools. Subjects in the US lab sample reward those who exert effort, but are not influenced by unearned status; the opposite is true among

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<sup>1</sup>See Joseph Henrich, Jean Ensminger, Richard McElreath, Abigail Barr, Clark Barrett, Alexander Bolyanatz, Juan Camilo Cardenas, Michael Gurven, Edwins Gwako, Natalie Henrich, Carolyn Lesorogol, Frank Marlowe, David Tracer and John Ziker (2010) and Joseph Henrich, Steven Heine and Ara Norenzayan (2008).

Kenyan subjects.

## 1 Experimental Design and Procedures

We conduct four variants of the dictator game<sup>2</sup> (DG) in two distinct cultural environments. Within each experiment, one player — the dictator — decides how to divide money between herself and another player. Dictators’ identities are not revealed during or after the experiment, so players have no strategic incentive to make positive offers. Dictators who allocate money to others are motivated by some form of social preferences — for example, altruism, guilt, or an internalized compunction to adhere to norms of fairness.<sup>3</sup> Hence, the experiments provide a direct measure of self-imposed codes of conduct underlying decisions about charitable giving, interhousehold transfers, and other forms of income-sharing.

In standard DG experiments, dictators receive their budgets like manna from heaven — without having to exert any effort. In DG variants where dictators earn either their budgets or the right to play the role of dictator, subjects tend to be substantially less generous (Elizabeth Hoffman, Kevin McCabe, Keith Shachat and Vernon Smith 1994, Todd L. Cherry, Peter Frykblom and Jason F. Shogren 2002). René Fahr and Bernd Irlenbusch (2000) refer to the additional claim generated by earning one’s budget as an “earned property right,” while James C. Cox, Daniel Friedman and Steven Gjerstad (2007) argue that earning the right to make the allocation decision induces a difference in “status” between the dictator and the other player. We focus on the extent to which responses to such changes in status differ across cultures. Several recent studies suggest that the level of giving observed in DGs varies substantially across societies, with individuals who are more integrated into markets offering more to other players (cf. Henrich et al. 2010). However, little is known about how status effects — for example, respect for earned property rights — differ across populations. We conduct experiments in two distinct cultural communities: eight sessions in the US used a standard university lab student subject pool made up of undergraduate and graduate

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<sup>2</sup>See Daniel Kahneman, Jack Knetsch and Richard Thaler (1986) and Robert Forsythe, Joel Horowitz, N. S. Savin and Martin Sefton (1994).

<sup>3</sup>Steven D. Levitt and John A. List (2007) argue that subjects in social preference experiments are motivated by moral norms, but that behavior in the lab is also influenced by differences in stake size and the extent to which (anonymous) actions are scrutinized.

students, while fourteen other sessions were conducted in poor rural communities in western Kenya. Thus, we compare the importance of status in the achievement-oriented environment of a US university to its importance in a rural village with strong egalitarian norms.<sup>4</sup>

We conduct four different DG treatments which differ along two dimensions: *how* the budget is generated and *who* decides how to divide it. First, the size of the dictator’s budget was either determined by chance or by the actions of one player. In Luck Treatments, players won money by rolling a die, so the amount a player received was random. In Effort Treatments, players were paid for completing a simple piece-rate task, so dictator budgets depended only on individual effort. We also vary which player was assigned the dictator role — i.e. whether the player making the allocation decision was the same person who had won or earned the budget being divided. Giving Treatments are standard DGs where players decide how to divide money that they themselves won or earned; in Taking Treatments, players decided how much of another player’s (earned or unearned) income to appropriate.<sup>5</sup> Thus, the Luck  $\times$  Giving treatment is a conventional DG in which players divide their own unearned income. The other three treatments introduce variation in the relative status of the dictator and the receiving player by varying the nature and extent nominal ownership claims and earned property rights. In the Effort  $\times$  Taking treatment, for example, the dictator decides how much of the other player’s labor income to take for herself.

Experimental sessions were conducted in fourteen rural communities in Busia District, Kenya, and in the Experimental Social Science Lab at UC Berkeley. Experimental procedures were identical in the US and Kenya save for the fact that instructions were presented in Swahili rather than English.<sup>6</sup> Both Luck and Effort treatments included a range of possible budget sizes, depending on either the outcome of the die roll or the amount of labor exerted by the earning player; the strategy method was used to elicit allocation decisions for every feasible budget size.

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<sup>4</sup>Henrich, Steven Heine and Ara Norenzayan (2009) discuss evidence that student subject pools are not representative of most populations. See Jean-Philippe Platteau (2000) for a discussion of egalitarianism in rural communities.

<sup>5</sup>Dictator games which allow for both giving and taking have been employed by List (2007) and Nicholas Bardsley (2008).

<sup>6</sup>Details of the experimental protocol are described in the online appendix.

## 2 Do the Correlates of DG Giving Differ across Cultures?

We begin by examining the individual correlates of DG giving in the benchmark Luck  $\times$  Giving treatment. Our aim is to test whether the predictors of generosity differ substantially across cultures. The main outcome variable,  $Offer_{ib}$  is the percentage of the budget that Dictator  $i$  offers to the other player at budget size  $b$ .<sup>7</sup> We estimate the OLS regression equation

$$Offer_{ib} = \alpha + \beta Kenya_i + \mathbf{X}'_i \delta + \gamma_i + \nu_b + \varepsilon_{ib} \quad (1)$$

where  $Kenya_i$  is an indicator for being in the Kenyan subject pool,  $\mathbf{X}'_i$  is a vector of individual characteristics,  $\gamma_i$  is an individual random effect, and  $\nu_b$  is a budget-size fixed effect.  $\mathbf{X}'_i$  includes both demographic characteristics — gender, age categories, and education level — and cultural variables designed to capture individual values and beliefs. The variable  $CommunityGroups_i$  measures the number of civic organizations a subject belongs to, while  $TrustsNeighbors_i$  is an indicator for trusting one’s neighbors completely or somewhat.  $MostPeopleFair_i$  is an indicator for giving the latter response to the World Values Survey question: “Do you think that most people would try to take advantage of you if they got the chance, or would they try to be fair?” Similarly,  $PoorTreatedUnfairly_i$  indicates that a subject’s answer to the question “Why, in your opinion, are their people in this country who live in need?” was “They are poor because society treats them unfairly” and not “They are poor because of laziness and a lack of willpower.”

Table 1 reports regression results. Gender predicts DG giving in the US lab sample, but not among Kenyan dictators. Moreover, while the variables  $MostPeopleFair_i$ ,  $TrustsNeighbors_i$ , and  $PoorTreatedUnfairly_i$  are all positively signed in the US sample, they are negatively signed in the Kenyan sample. Both  $MostPeopleFair_i$  and  $TrustsNeighbors_i$  gauge beliefs about the trustworthiness and benevolence of others, and the two variables are positively correlated in both subject pools.<sup>8</sup> Table 1 reports a joint test of the significance of these two variables and the entire set of culture variables (these two plus  $CommunityGroups_i$  and  $PoorTreatedUnfairly_i$ ). Survey questions measuring cultural values are highly predictive in the US lab sample, but have no pre-

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<sup>7</sup>In Taking treatments,  $Offer_{ib}$  is the percentage of the budget that Dictator  $i$  does not take for herself, i.e. the amount she allocates to the other player.

<sup>8</sup>The correlation is 0.21 in the US lab sample and 0.14 in the Kenyan sample.

dictive power when the sample is restricted to Kenyan villagers. Thus, the evidence suggests that correlates of DG giving vary across cultures.

### 3 Culture, Individual Status, and Earned Property Rights

Cox, Friedman and Gjerstad (2007) propose a framework for analyzing dictators’ allocation decisions in which offers depend on innate altruism and the relative “status” of the receiving subject, as compared to the dictator. They argue that standard dictator games involving unearned income should not induce a status differential, but games in which dictators’ earn the right to make the allocation decision enhance the status of the dictator relative to the other player. We define  $EarnedStatus_i$  to be directly analogous to the status variable used by Cox, Friedman and Gjerstad (2007): we set earned status equal to one when the other player earns the money being divided (in Effort  $\times$  Taking treatments); when the dictator earns the her budget herself (in Effort  $\times$  Giving treatments), we set  $EarnedStatus_i$  equal to negative one. We also define an additional variable —  $UnearnedStatus_i$  — which is equal to one in both the Luck  $\times$  Taking and Effort  $\times$  Taking treatments, and zero otherwise.

In Table 2, we report the results of the OLS regression:

$$Offer_{ib} = \alpha + \beta Kenya_i + \phi UnearnedStatus_i + \lambda EarnedStatus_i + \gamma_i + \nu_b + \varepsilon_{ib}. \quad (2)$$

Specifications include budget-size fixed effects ( $\nu_b$ ), individual random effects ( $\gamma_i$ ), and a control for the Kenyan subject pool. In the pooled sample, both the unearned and earned status variables are positive and significant. However, when the two subject pools are considered separately, it is clear that patterns differ across cultures. In the US lab sample, the  $UnearnedStatus_i$  is negative and only marginally significant, while  $EarnedStatus_i$  is positive and significant at the 99 percent confidence level. In contrast, when the sample is restricted to Kenyan subjects, only  $UnearnedStatus_i$  is significantly associated with increased sharing.  $EarnedStatus_i$  is not statistically significant, and the point estimate is extremely close to zero.

Finally, we distinguish status concerns which align with one’s own self-interest from those which work in the opposite direction. In even-numbered columns, we separate  $EarnedStatus_i$  into two

separate variables:  $OwnEarnedStatus_i$  is equal to negative one in Effort  $\times$  Giving treatments and zero otherwise, while  $OthersEarnedStatus_i$  is an indicator for Effort  $\times$  Taking treatments. Within the US lab sample, the coefficient on  $OthersEarnedStatus_i$  is the larger in magnitude, though both are positive. In contrast, there is suggestive evidence that Kenyan dictators do, in fact, reward their own efforts — the coefficient on  $OwnEarnedStatus_i$  is positive and marginally significant — but do not do the same for others.

## 4 Conclusion

We report the results of a series of dictator games in which we vary the relative status of the dictator and the receiving player. Experiments are conducted in two cultural environments: a conventional university lab setting and among rural villagers in Kenya. Status is an important determinant of dictator game giving, but the way in which status impacts allocations differs substantially across cultures.

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Table 1: OLS Regressions of Dictator Game Offer.

<i>Subjects:</i>	ALL (1)	US LAB (2)	KENYAN (3)
Female	1.932 (2.735)	9.377* (5.445)	0.449 (3.403)
Completed Primary School	4.710 (4.202)	.	3.751 (4.239)
Completed Secondary School	-2.868 (4.174)	.	-1.239 (4.320)
Years of undergraduate study	-0.945 (1.573)	3.770 (2.478)	.
Community groups	-0.809 (0.962)	-1.804 (1.846)	-0.257 (1.114)
Most people fair	0.959 (2.856)	6.407 (5.060)	-1.566 (3.218)
Trusts neighbors	0.14 (3.029)	10.297** (5.097)	-2.411 (3.701)
Poor treated unfairly	-3.008 (2.927)	3.254 (5.156)	-2.816 (3.346)
Constant	21.852*** (5.088)	-6.276 (6.259)	29.212*** (5.424)
Significance of education variables (p-value)	0.523	0.128	0.672
Significance of trust, fairness variables (p-value)	0.939	0.02	0.683
Significance of all culture variables (p-value)	0.767	0.008	0.815
Observations	2860	720	2140

Robust standard errors clustered at player level. \*\*\* indicates significance at the 99 percent level; \*\* indicates significance at the 95 percent level; and \* indicates significance at the 90 percent level. Budget size and age category fixed effects and a constant included in all specifications.

Table 2: OLS Regressions of Dictator Game Offer on Status Variables

<i>Subjects:</i>	ALL (1)	ALL (2)	US LAB (3)	US LAB (4)	KENYAN (5)	KENYAN (6)
Kenyan	14.633*** (1.540)	14.672*** (1.545)	.	.	.	.
Unearned status	10.338*** (1.971)	10.190*** (1.962)	-6.103* (3.389)	-5.661* (3.381)	16.686*** (2.281)	16.382*** (2.261)
Earned status	2.735** (1.341)	.	9.197*** (2.533)	.	0.157 (1.542)	.
Own earned status	.	4.300** (1.790)	.	5.215 (3.536)	.	3.629* (2.034)
Other's earned status	.	1.262 (2.034)	.	12.547*** (3.585)	.	-3.242 (2.367)
Observations	18790	18790	4977	4977	13813	13813

Robust standard errors clustered at player level. \*\*\* indicates significance at the 99 percent level; \*\* indicates significance at the 95 percent level; and \* indicates significance at the 90 percent level. Budget size fixed effects and a constant included in all specifications.