

You Get What You Deserve: Experimental Evidence on Redistribution Preferences in China, Paraguay and Uganda¹

WORKING PAPER – PRELIMINARY RESULTS ONLY – DO NOT CITE

Sam Leone⁺ and Ty Turley[#]

⁺University of Zurich

[#]Brigham Young University

Abstract

We run an experiment in China, Paraguay and Uganda to determine how preferences for redistribution depend on the cause of the original inequality. Unlike previous studies, we move beyond the rudimentary luck/skill distinction in designing the activities subjects use to generate their income. First, we employ tasks that differentiate between two types of luck: (1) *chance*, in which the subject's payoff is the realization of a lottery chosen exogenously by the experimenter, and (2) *risk*, in which the subject herself chooses between lotteries with known payoff distributions. Second, we decompose skill into its constituent categories: (a) *aptitude*, as measured by an IQ test, and (b) *effort*, as measured by a computerized real-effort task that controls for baseline ability. We hypothesize that subjects will exhibit a preference for redistributing their group's income in order to achieve a more equitable distribution, and that the magnitude of this preference is decreasing with how much control subjects feel they have over their income level. Specifically, we hypothesize that redistribution levels will consistently be greatest in the *chance* treatment and least in the *effort* treatment, and that we can predict the likelihood of subjects redistributing more income from *risk* than from *aptitude* based on *a priori* knowledge about a country's average beliefs about locus of control. Though some of our results are only marginally statistically significant, we find that we can confirm our hypothesized universal attitudes toward *chance* and *effort*. Furthermore, Ugandan subjects, with on average an external locus of control, exhibit higher redistribution for *aptitude* relative to *risk*, whereas Chinese and Paraguayan subjects, with on average an internal locus of control, exhibit the opposite. Our results are related to the question of designing optimal tax policies when inequality arises, or is perceived to arise, from different sources.

JEL: H21, H23, O57, P35

¹ We thank research assistants at Xiamen University, Universidad Nacional de Asuncion, Kampala International University, and Brigham Young University. We are indebted to their determination. We also thank Daniele Passerman, Olga Stoddard, Holger Herz, Yagiz Ozdemir, Charles Efferson, and Ernst Fehr for helpful design feedback, coding assistance, and results interpretation. We gratefully acknowledge the Global Management Center at Brigham Young University for partially funding this project.

Introduction

Experimental economists have long sought to understand the social preferences that determine how humans make tradeoffs between their own welfare and the welfare of others. An active research area is the study of attitudes toward income inequality and the redistribution policies designed to address it. In this literature, varying norms of fairness and deservedness play a significant role in predicting preferred levels of redistribution. Furthermore, feelings about fairness and deservedness vary even within the same person depending on the way the income is earned. For example, recent evidence suggests that an individual's attitude toward inequality depends on the degree to which she perceives that inequality as deserved. Our paper tests the hypothesis that this perceived deservedness is a function of the control individuals have over their income level.

There have been a number of studies over the past two decades showing that individuals behave differently in social-preference games when they earn their endowments, rather than receive a windfall payment at the beginning of the experiment. Hoffman et al. (1994), Cherry (2001), Cherry et al. (2002), List and Cherry (2008), Cappelen et al. (2013), and others use IQ tests, general-knowledge quizzes, portfolios of lotteries, and various real-effort tasks to show that dictators become less generous toward receivers when first required to earn their income. Fahr and Irlenbusch (2000), Jakiela et al. (2014), Cherry et al. (2005) and Cherry et al. (2007) find similar results using trust games and public goods games.

These results have led to a more careful investigation of the ways in which preferences for fairness or equality vary based on the *way* in which subjects earn these endowments. Like the papers above, Cappelen et al. (2007) and Cappelen et al. (2009) examine dictator games in which the dictator first performs an income-generating task, but here the parameters vary between treatments. For the former, subjects choose their level of investment but not their rate of return; for the latter, subjects choose their working time, but have little choice over their productivity or wages. Krawczyk (2010), Vostroknutov et al. (2011), Durnate et al. (2013) and Lefgran et al. (2014) perform a similar analysis of differential earnings effects while departing from the dictator-game framework. In these experiments subjects play games that fall somewhere on the luck/skill spectrum, then place subjects into groups and observe their redistribution decisions. Krawczyk (2010), for example, assigns players to either a random-number draw or an IQ test; Rustichini et al. (2011) assign players to either a dice roll or an interactive video game. Lefgren et al. (2014) allows players to earn money by taking a math quiz but then randomly allows some low performers to win and some high performers to lose based on good or bad luck. Perhaps unsurprisingly, the major takeaway from these studies is that participants are more willing to redistribute income from luck than income from skill. This finding is consistent with other, non-experimental studies such as Alesina and Glaeser (2004) and Alesina and Angeletos (2005).

We advance this literature by more carefully distinguishing between various types of “luck” and “skill”. Skill is in fact two separate, easily conflated concepts: innate ability (what we call *aptitude*) and how hard one works (what we call *effort*). Any skill has both an aptitude component and an effort component, and we are interested to know which component differentiates people's perceptions of skill from their perceptions of luck. We also decompose luck into two different categories: there exists a distinction between scenarios in which a person opts into a risky activity with a known payoff distribution (what we call *risk*) and scenarios in which an individual suffers an economic shock without any previous knowledge or agency (what we call *chance*). For example, say a young professional decides to quit a steady job in order to work for a risky, though potentially lucrative, start up. We should think of any luck that this

individual eventually experiences when the start-up succeeds (fails) as categorically different from the good fortune of being born into a royal family (the bad fortune of being born a slave). One involves a conscious decision to participate in a lottery; the other is either an accident or an act of God. Our experiment has separate treatments to invoke each of these four causes of inequality.

We run the experiment in China, Paraguay, and Uruguay in order to make comparisons between subjects with different social norms. While experiments have shown that some social preferences can vary among people of different cultures (Henrich 2001), it is an open question whether the preference for redistribution is one of them. Our design allows us to determine what about these attitudes toward inequality is universal and what depends on socioeconomic context. This comparison is relevant to our specific hypothesis. Because effort involves almost exclusively human agency and chance involves relatively none, we hypothesize that redistribution will be least for the former and greatest for the latter. Yet *risk* and *aptitude* are harder to classify. It could be the case that a subject sees IQ as an inborn trait over which a person has little control, in which case she may redistribute more income in the *aptitude* task than in the *risk* task. Conversely, a different subject could see IQ as a trait worth rewarding, perhaps because people have to study hard to perfect their cognitive abilities, and thus redistribute more income in the *risk* task. We test the hypothesis that a country's locus-of-control beliefs can *a priori* predict its citizens' redistribution decisions. In particular, we test whether an external locus of control leads to a greater redistribution of wealth based on risk than wealth based on aptitude, and vice versa. This explains why we chose China, Paraguay and Uganda for our study. The World Values Survey rates countries' citizens' average locus of control on a scale from 0 to 10 (0 for totally external, 10 for totally internal), and Uganda, China and Paraguay have scores of 6.98, 7.13 and 8.03, respectively². This means that Ugandans have a relatively external locus and Paraguay a relatively internal locus, with China in between.

We feel that our investigation is necessary if we are to arrive at a more complete economic theory of social preferences and to a more sophisticated understanding of tax policy. Citizens have preferred tax rates, and governments theoretically respond to these preferred levels of redistribution by designing policies that would most closely match the views of their constituents. This study adds to our basic understanding of what determines that preferred level of redistribution. Citizens may favor a certain level of taxation because they feel that inequality is caused primarily by one of the four sources of inequality in our experiment; hence if perceptions about force causing inequality were to change, preferred levels of redistribution would also probably change.

Experiment Design

We ran this experiment at the Finance and Economics Experimental Lab at Xiamen University (China) in July 2014, at the Faculty of Economic Sciences at the Universidad Nacional de Asuncion (Paraguay) in August 2014, and at the School of Statistics and Applied Economics at Kampala International University (Uganda) in September 2014. In each experiment site, we ran 12 sessions with 16 participants in each, for a total of 192 subjects. Half were male, and half female. We recruited these participants by using lab email listserves (China) or oral announcements in classrooms of undergraduate economic, business, statistics, and science majors (Paraguay and Uganda). The sessions were held in university computer labs, where

² <http://www.worldvaluessurvey.org/WVSDocumentationWV6.jsp>

subjects took part in the experiment via the zTree interface. Once all subjects arrived for a given session, subjects were randomly assigned to anonymous groups of four, with two women and two men in each group, and group assignment determined which games they played. Subjects were seated at computer terminals with dividers separating them from the view of other subjects. Research assistants explained the rules of the experiment and walked subjects through the beginning of the experiment on the computer terminal.

There were four types of games involved in our procedure. In the *chance* game, subjects receive a payoff based on the day of the month they were born or on the last digit of their telephone number. Under *risk*, subjects choose either to roll a die or to flip a coin, with the die roll having a lower expected value but also lower variance. Under *aptitude*, subjects take a timed IQ test with ten questions. Under *effort*, the subjects have to use their mouse to draw a “Z” connecting four different dots on the computer screen. At the very beginning of the each session (before they played or learning the rules of any game), we ask subjects to connect four sets of dots as a test of their computer mouse. During these practice rounds, the computer measures their natural aptitude for drawing straight lines on a computer screen by recording an average straightness score. During the actual game, subjects are informed that they will receive a point for every set of lines they draw straighter than their average from the test phase. In other words, the computer controls for aptitude by assigning *effort* winnings based on the improvement from their individual baseline performance. This type of activity where idiosyncratic measures of non-incentivized performance are used to separate ability from effort are now commonly used in Information Technology research, but this is the first time it has been used in experimental economics. Every experiment subject plays one of the luck games and one of the skill games. We randomly assign the order of the games.

At the beginning of the experiment subjects play their first game. When complete, they are shown how much each member in their group of four earned in this first game and are allowed to reallocate the earnings of the other three subjects if they so desire. Their reallocation decision does not allow them to shift money to or from themselves, only among the other three group members. After making this reallocation decision, they are informed that they are going to play the same game they had just played under an investment treatment³. After the second reallocation decision, subjects are randomly reassigned to new groups of four, and the process repeats with each subject playing a second game without investment and then again under the same investment treatment as before. After the fourth game is complete, all subjects play a public goods game in a new group of four. They then complete a biological/psychological

³ We included an investment dimension to consider whether the inherent fairness of these investment decisions might interact with the perceived deservedness of the underlying income-generating tasks. However, we did not find a treatment effect. Statistical tests (explained in the Results section) show that we can pool our data from all four rounds and merely account for the investment treatments through a number of control variables in our regressions. For the sake of transparency, here is a brief explanation of the investment regimes: Under the *neutral* regime, subjects are told that the investor wanted to invest equally in all four players in the group, so that in the second game, each player would earn 125 percent of what they would have earned without the investor, and the investor would earn 25 percent of what each player in the group earned. Under the *meritocracy* regime, subjects are told that the investor wanted to invest in the two players in the group who earned the most money in the first game. In the second game, these two players would earn 150 percent of what they would have earned without the investor, the investor would earn 50 percent of what they earned, and the other two subjects would earn simply what they would have earned with no investor. Under the *discrimination* regime, subjects are told that the investor wanted to invest in the two male players in the group. In the second game, the two male players would earn 150 percent of what they would have earned without the investor, the investor would earn 50 percent of what they earned, and the two female subjects would earn simply what they would have earned with no investor.

survey, learn which of the five games was randomly selected for their payment, and if they so desire, donate a portion of their winnings to a local charity. This concludes the experiment.

This experiment was designed to isolate subjects' view about deservedness from the other relevant factors through *ex post*, disinterested redistribution with independent winnings. When people express preferences for redistributive policies through voting or other political action in non-lab settings, social preferences are not the only parameter that matter. *Ex post* redistribution differs from *ex ante* redistribution in that it removes risk from the equation. Most people have some degree of risk aversion, and they therefore tend to favor some form of tax-and-transfer regime (i.e. a social safety net) to hedge against poverty. By having subjects make their redistribution decisions after outcomes are known, risk preferences cease to play a role.

This experiment also uses disinterested redistribution—subjects cannot redistribute money to or from themselves. We want to isolate a preference for deservedness in this experiment. Disinterested redistribution serves this goal in two ways. It removes self-interest and the desire to maximize one's own payoff as a possible explanation for redistribution behavior. It also eliminates concern for status that can skew reallocation decisions in a way similar to payoff maximization. Imagine a player who performs poorly in the *effort* game and is faced with the prospect of augmenting his or her own winnings. In general, he or she sees income from effort as deserved, so he or she is generally disinclined to redistribute money from the high performers to him or herself. Yet as Vostroknutov et al. (2011) note, skill-based winnings send a signal that luck-based winnings do not. If I lose a lottery, it says nothing about my worth as a person; but if I lose a game of skill, then I send a signal to the world that I lack the aptitude or effort to succeed. When subjects can redistribute their own winnings, they have this status-based motivation to erase evidence of their loss, which can confound their preference for deservedness.

Finally, the amount of money earned by each subject is independent of the winnings of the other group members. This experiment is not a tournament. If the experiment were run as a tournament, sometimes a subject would perform only slightly worse than her opponent, but still earn significantly less. That could trigger a desire in a member of her group to make earnings more equal—not because the group member thinks outcomes should be equal out of principle, but because the second place group member deserved to earn only marginally less money than the group winner.

Model and Hypotheses

We use a reduced-form analysis in this paper and do not attempt to estimate the parameters of a structural model. However, we do write a simple model in order to give precision to our hypotheses and make explicit the intuition underlying those hypotheses.

Ours is a modified version of the Charness-Rabin (2002) social preference model, which we choose over other alternatives for two reasons. First, while our experiment bears many similarities with that of Cappelen et al. (2007), their structural model applies only to a two-person dictator game and does not have a clear group analogue. Second, as long as their relative standing in the income hierarchy remains constant, the Fehr-Schmidt (1999) model assumes that individuals have the same utility over income distributions with different levels of inequality. Charness-Rabin, on the other hand, contains a “Rawlsian” parameter that assigns utility to the group's lowest payoff, which in a three-person group is suitable for modeling preferences over disparate income distributions. We modify this parameter by making it conditional on the

deservedness of the minimum payoff and the degree of human agency involved in acquiring it. The model is as follows.

Let $\{x_1, x_2, x_3\}$ be payoffs belonging to the three group members over whom the redistributor has authority. Let x_{\min} be the minimum of this set ($\min\{x_1, x_2, x_3\}$) and let X be the sum of the members of this set ($\sum_{i=1}^3 x_i$). Let k be the locus-of-control norm within a country. Let m be the process that determines the individual's income X , such that:

$$m \in \{\text{Effort, Aptitude, Risk, Chance}\}$$

Let $A(X, s, m)$ be a function on the interval $[0, 1]$ that reports the degree of agency (i.e. control) the redistributor perceives as having been required to acquire income X , such that:

$$A(X, k, m) = \begin{cases} 1 & \text{if Effort} \\ p & \text{if Aptitude} \\ q & \text{if Risk} \\ 0 & \text{if Chance} \end{cases}$$

$$p, q \in [0, 1]$$

Let x_{\min}^A be the payoff deserved by the group member who earned the lowest payoff, such that:

$$x_{\min}^A(X, s, m) = \begin{cases} r & \text{if } A = 1 \\ s & \text{if } A = p \\ t & \text{if } A = q \\ u & \text{if } A = 0 \end{cases}$$

Let $\delta \in [0, 1]$ be the weight that the redistributor places on Rawlsian considerations over social-surplus considerations. Then W is the redistributor's perception of her group's social welfare, such that:

$$W = \delta[x_{\min} - x_{\min}^A] + (1 - \delta)X$$

And she maximizes W by redistributing her group's payoffs to ensure that:

$$x_{\min} = x_{\min}^A$$

With this formalization, we can precisely state our hypotheses.

Hypothesis #1: In all cases. $r \leq s, t \leq u$.

Hypothesis #2: If $k > \theta$, where θ is an unobservable threshold in the self-actualization norm, then $s \leq t$. Otherwise $t \leq s$.

Results

In our analysis, we use the following simple algorithm to measure group inequality:

$$Y = \sum_{i=1}^3 \left| t_i - \frac{T}{3} \right|$$

The variable Y is a function of an individual's winnings (t_i) and the total winnings (T) of the three relevant group members, and it allows us to calculate how far the initial distribution of earning is from perfect equality. We have two inequality scores that we calculate. *Ineq* measures the redistribution that exists among players' final winnings after redistribution (y_i), and it serves as the dependent variables in all of our regressions below:

$$Ineq = \sum_{i=1}^3 \left| y_i - \frac{T}{3} \right|$$

PreIneq measures the redistribution that exists among players' initial winnings before redistribution (z_i), and it serves as a control variable in our regressions:

$$PreIneq = \sum_{i=1}^3 \left| z_i - \frac{T}{3} \right|$$

We use OLS regression models and regress *Ineq* on dummies for the game types $\{Chance, Risk, Aptitude\}$, where effort serves as our baseline, and include a number of controls: *PreIneq*, the presence of an investment treatment, dummies for the type of investment treatment, total winnings, the level of inequality experienced by the redistributor (simply *PreIneq* computed for each subject), age, gender $\{Male\}$, self-reported income decile, an altruism score determined from PGG allocations, and a score for a preference for governmental redistribution policies measured by our biographical survey. Here our variables of interest are *Chance*, *Risk* and *Aptitude*. Observe that, since our dependent variable measures post-redistribution inequality and since we control for pre-distribution inequality, the coefficients on these three variables tell us the relative preference for redistribution that exists among the four games. If *Chance* has a negative coefficient, for example, then holding pre-redistribution inequality constant, post-redistribution inequality under *Chance* is less than under *Effort*. This implies that subjects have a greater preference for redistributing income from *Chance*.

We first ran a regression with each round input separately, and the resulting coefficients confirmed there were no order effects; we therefore pooled data from Games 1-4. We ran OLS regressions for all three countries separately, with post-redistribution levels of inequality as the dependent variable and relevant explanatory and control variables. We report the estimated coefficients in Table 1. We see similar patterns across all three countries. Post-redistribution inequality is lower in chance, risk, and aptitude games than in effort games, and this is significant for chance and risk across all three countries (aptitude is significantly different than effort in Uganda, but only marginally significant in China and Paraguay). This provides strong

support for our hypothesis that chance-game outcomes would have less post-redistribution inequality than effort-game outcomes.

Table 2 shows the results of F-tests of the equality of estimated coefficients across games in the three experiment locations. In Paraguay, chance and risk are significantly different than effort (which we knew from Table 1), and chance and risk are significantly different than aptitude. We do not see a significant difference between chance and risk or between aptitude and effort in Paraguay, but the average levels of inequality do match our hypothesis that effort would have the most post-redistribution inequality, followed by aptitude, risk, and chance in that order. This is the pattern we would expect to see among subjects from a society where the rewards for aptitude are seen as deserved in the same way as the rewards for effort are deserved. The same pattern in average post-redistribution inequality across the four games as in Paraguay holds in China, but the only significant difference between estimated coefficients in China is between effort and chance and effort and risk.

In Uganda, post-redistribution inequality in the aptitude game is on average similar to post-redistribution inequality in the chance game, not the effort game; risk lies somewhere in the middle. The estimated coefficient for chance is not statistically different than the coefficient on aptitude (see Table 2), while the differences between risk and chance and between risk and aptitude are almost statistically significant at conventional levels. These results indicate that in Uganda aptitude may be viewed more as a lucky draw than the deserved result of personal agency. This is what we would expect in a more fatalistic society such as Uganda.

Conclusion

With this paper, we expand the literature on earnings effects in social-preference games by examining how preferences for income redistribution depend on the cause of the income inequality. In particular, ours is the first experimental study to have two different types of luck-based games and two different types of skill-based games. Specifically, subjects play games of chance (exogenous luck), risk (endogenous luck), aptitude (one component of skill), and effort (the other component).

Our prior hypothesis is that redistribution preferences are a function of how much control people have over their income; the more control they have, the more deserving they are of their wealth, and the weaker their preference for redistributing that wealth. Hence, we predicted that subjects would choose the greatest degree of redistribution after the effort game and the least degree after the chance game. We also predicted that their attitudes toward aptitude and risk would depend on their locus of control, with those having an internal locus likely to see aptitude as more like effort than chance, and those with an external locus likely to see aptitude as more akin to chance than effort.

Though some of our results are only marginally statistically significant, we find that we can cautiously confirm our hypotheses while leaving the door open to future experimental studies on the subject – particularly studies that disaggregate “luck” and “skill.” Overall, there are two major takeaways from our research. First, people believe that they deserve their wealth if they feel responsible for the actions and decisions that went into acquiring it. Second, these feelings of responsibility can differ both based on the fundamentals of a particular income-generating task and based on an individual’s locus of control.

Appendix

Table 1: OLS results for all three countries, pooled across all four game rounds

	China	Paraguay	Uganda
VARIABLES	Ineq.	Ineq.	Ineq.
Chance	-0.171***	-0.0850**	-0.208***
	(0.0543)	(0.0365)	(0.0697)
Risk	-0.143**	-0.0800**	-0.130**
	(0.0586)	(0.0364)	(0.0656)
Aptitude	-0.111	-0.0241	-0.202**
	(0.0770)	(0.0395)	(0.0861)
Pre-Redist. Ineq.	0.387***	0.426***	0.268***
	(0.0705)	(0.0424)	(0.0684)
Personal Ineq.	0.101*	-0.221***	-0.0522
	(0.0596)	(0.0565)	(0.0669)
Total Earnings	0.0527	0.0458	0.117***
	(0.0390)	(0.0312)	(0.0356)
Age	-0.0216**	-0.00625	-0.00336
	(0.0102)	(0.00719)	(0.00966)
Male	0.0237	0.0241	0.0511
	(0.0442)	(0.0328)	(0.0596)
Income	0.00592	0.00128	-0.0110
	(0.0148)	(0.0109)	(0.0100)
Altruism	-0.00459*	-2.72e-06	-6.02e-07
	(0.00235)	(3.57e-06)	(4.44e-06)
Preference Redist.	-0.0311	-0.00285	-0.0231
	(0.0240)	(0.0116)	(0.0158)
Constant	0.629**	0.216	0.413*
	(0.259)	(0.176)	(0.238)
Observations	768	1,152	704
R-squared	0.150	0.176	0.152
Robust, clustered standard errors in parentheses			
*** p<0.01, ** p<0.05, * p<0.1			

Table 2: F-test of the equality of estimated coefficients across games, by country

	Chance	Risk	Aptitude
China	-0.171***	-0.143**	-0.111
Paraguay	-0.0850**	-0.0800**	-0.0241
Uganda	-0.208***	-0.130**	-0.202**
	F-test p-values		
	Diff (Chance - Risk)	Diff (Chance - Aptitude)	Diff (Risk - Aptitude)
China	0.5516	0.2415	0.6103
Paraguay	0.8871	0.0500	0.0938
Uganda	0.1239	0.8911	0.1412

Works Cited

- Cappelen, Alexander W, Astri Drange Hole, Erik Ø Sørensen, and Bertil Tungodden. "The Pluralism of Fairness Ideals: An Experimental Approach." *American Economic Review*, 2007, 818-27.
- Cappelen, Alexander W, James Konow, Erik Ø Sørensen, and Bertil Tungodden. "Just Luck: An Experimental Study of Risk-Taking and Fairness." *American Economic Review*, 2013, 1398-413.
- Cappelen, Alexander W., and Bertil Tungodden. "Rewarding Effort." *Economic Theory*, 2009, 425-41.
- Charness, G., and M. Rabin. "Understanding Social Preferences with Simple Tests." *The Quarterly Journal of Economics*, 2002, 817-69.
- Cherry, Todd L, Peter Frykblom, and Jason F Shogren. "Hardnose the Dictator." *American Economic Review*, 2002, 1218-221.
- Cherry, Todd L. "Mental Accounting and Other-regarding Behavior: Evidence from the Lab." *Journal of Economic Psychology*, 2001, 605-15.
- Cherry, Todd L., Stephan Kroll, and Jason F. Shogren. "The Impact of Endowment Heterogeneity and Origin on Public Good Contributions: Evidence from the Lab." *Journal of Economic Behavior & Organization*, 2005, 357-65.
- Durante R., and L. Putterman. "Preferences for Redistribution and Perception of Fairness: An Experimental Study." Working Paper. 2013.
- Fahr, René, and Bernd Irlenbusch. "Fairness as a Constraint on Trust in Reciprocity: Earned Property Rights in a Reciprocal Exchange Experiment." *Economics Letters*, 2000, 275-82.
- Fehr, E., and K. M. Schmidt. "A Theory Of Fairness, Competition, And Cooperation." *The Quarterly Journal of Economics*, 1999, 817-68.
- Henrich, Joseph, Robert Boyd, Samuel Bowles, Colin Camerer, Ernst Fehr, Herbert Gintis, and Richard McElreath. "In Search of Homo Economicus: Behavioral Experiments in 15 Small-Scale Societies." *American Economic Review*, 2001, 73-78.
- Hoffman, Elizabeth, Kevin McCabe, Keith Shachat, and Vernon Smith. "Preferences, Property Rights, and Anonymity in Bargaining Games." *Games and Economic Behavior*, 1994, 346-80.
- Jakiela, P., E. Miguel, and V.L. te Velde. "You've Earned It: Combined Field and Lab Experiments to Estimate the Impact of Human Capital on Social Preferences." NBER Working Paper No. 16449. 2010.
- ACKERT, L. F., J. MARTINEZ-VAZQUEZ, AND M. RIDER (2007): "Tax Policy Design in the Presence of Social Preferences: Some Experimental Evidence," *Economic Inquiry*, 45(3), 487–501.
- Krawczyk, Michał. "A Glimpse through the Veil of Ignorance: Equality of Opportunity and Support for Redistribution." *Journal of Public Economics*, 2010, 131-41.

Kroll, Stephan, Todd L. Cherry, and Jason F. Shogren. "The Impact of Endowment Heterogeneity and Origin on Contributions in Best-shot Public Good Games." *Experimental Economics*, 2007, 411-28.

Lefgren, L.J., D.P. Sims, and O. Stoddard. "Did You Build That? Effort, Luck, and Voting for Redistribution." Working Paper. 2014.

List, John A., and Todd L. Cherry. "Examining the Role of Fairness in High Stakes Allocation Decisions." *Journal of Economic Behavior & Organization*, 2008, 1-8.

Vostroknutov, A., P. N. Tobler, and A. Rustichini. "Causes of Social Reward Differences Encoded in Human Brain." *Journal of Neurophysiology*, 2012, 1403-412.