

Shared Experience and Third-Party Decisions: A Laboratory Result

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Abstract

Using a three-player dictator game, the experiment presented here shows that a shared experience with a stakeholder does not necessarily influence third-party redistribution. The design generates a shared experience by varying whether a third-party decision maker and a stakeholder acquire stakes through an effortful activity or through random selection of a ticket. Our results are relevant to the analysis of what may or may not bias judges, juries, arbitrators or other third-party decision makers.

The 2009 nomination process of now Supreme Court Justice Sonia Sotomayor sparked much debate over the role that personal experiences should – and do – affect the decisions of judges. Speaking in 2002 about this specific issue, Sotomayor professed that, “Our experiences as women and people of color affect our decisions. The aspiration to impartiality is just that – it’s an aspiration because it denies the fact that we are by our experiences making different choices than others” (Sotomayor, 2002, 91). During the recent confirmation hearings, when interrogated by legislators as to whether this viewpoint leads to biased judgments, Sotomayor clarified her stance: “What I was talking about was the obligation of judges to examine what they're feeling as they're adjudicating a case and to ensure that that's not influencing the outcome. Life experiences have to influence you. We're not robots... We have to recognize those feelings and put them aside” (New York Times Online, July 14, 2009).

Sotomayor’s comments, and the arguments that they sparked both at the hearing and in the media, show that the potential connections between experience and judgment

raise two fundamental questions. First, is it legally appropriate for judges to allow experience to shape judgment? Second, regardless of appropriateness, is the inability to ignore one's experiences when passing judgment an inherent part of human nature? While the first question can only be analyzed through legal philosophy and jurisprudence, the second question can and, given the relevance, should be examined empirically. Laboratory studies, with the ability to isolate a specific experience and identify its behavioral consequences, are ideally suited to address the extent to which individuals may be predisposed to have their behavior shaped by experience.

This paper presents the results of an experiment that explores the extent to which third parties' redistributive behavior is influenced by their experience. Given that judges often serve as third parties charged with redistributing money across two disputants, a decision task that possesses these core properties is an effective means to study the relationship between experience and judgment. Using a third-party dictator game, we compare redistributive decisions across treatments that vary whether the third-party decision maker has an experience that is similar to, or different from, the experience of one of the stakeholders. Our results show that redistributive behavior is not significantly affected by whether the decision makers acquire money in the same manner as one of the stakeholders. Admittedly preliminary, they suggest that shared experience in earning money may not, on its own, bias redistribution.

I. Design

Treatments

Our design asks a decision maker to specify an amount of money that a sender has to send to a receiver. Like earlier experiments conducted by Konow (2000) and Dickinson and Tiefenthaler (2002), our design allows third parties to determine the monetary outcomes for two stakeholders under different conditions of relative desert.¹ Like Konow (2000), we vary whether the allocative stakes are earned (through effort) or are given (through a random process).² Our design breaks from these earlier studies, however, in two ways. First, prior to the third party's decision, we give only one of the two stakeholders the opportunity to make money; we then assign the entirety of the stakes to that one party. Konow (2000), in contrast, gives both stakeholders the opportunity to earn money; he then presents the stakes as a jointly-owned surplus to be divided between the two claimants.³ In this sense, the third party's task in our experiment is characterized by *redistribution with prior possession* rather than by the division of a jointly-owned surplus. Second, rather than paying the third-party decision makers a flat fee, we make the process by which they acquire money a treatment variable. This manipulation allows us to vary the respective experiences of both decision makers and senders so that the effect of a shared experience can be measured.

¹ These experiments provide evidence that third parties act in accordance with the predictions of equity theory (Adams, 1965). For experiments that show support for equity theory in bargaining, see Hoffman and Spitzer (1985) and Gantner et al (2001). See Hoffman et al. (1994), Ruffle (1998), Cherry et al. (2002), Frohlich et al. (2004) and Oxoby and Spraggon (2008) for dictator games in which the behavior of dictators is consistent with equity theory.

² The experiment conducted by Dickinson and Tiefenthaler (2002) is slightly different. They use a similar third-party decision task, but vary whether advantageous production functions (token-to-payoff ratios) are earned or given. They show that third parties reward an advantageous token-to-payoff ratio when it is earned, but not when it is given.

³ Dickinson and Tiefenthaler (2002) assign the advantageous roles either randomly or according to performance on a quiz. The third party is then asked to divide an exogenously provided sixty-token surplus between the two of them.

In line with Konow (2000), experience in the experiment takes one of two forms – earned income or given income. In treatments where decision makers or senders earn income, they work for seven minutes on a difficult word search, earning \$2 for every word that is found.⁴ In treatments where decision makers or senders are given income, they receive an amount of money that is written on a randomly drawn ticket. The distribution of amounts in treatments with tickets mimics a distribution from a treatment with earned money.

With both decision makers and senders either earning or being given their wealth, the design can be characterized by a 2 x 2 matrix with the following four treatments: givenDM-givenS, givenDM-earnedS, earnedDM-givenS and earnedDM-earnedS, where DM denotes decision maker and S denotes sender.⁵ For notational convenience, earnedDM-* (givenDM-*) treatments will refer to the two treatments where decision makers earn (are given) their wealth; likewise, *-earnedS (*-givenS) will refer to the two treatments where senders earn (are given) their wealth.

Events and Procedures

All subjects were recruited via an online database made up of undergraduate and graduate students at George Mason University. Sessions required fourteen subjects. All participants signed a consent form, received a show-up fee of \$7.50 and drew a letter

⁴ The word-search grid contains 342 letters and includes thirty medical words (e.g. apf, myasthenia, kinesiologia, glossodynia and phago).

⁵ In a separate paper (Chavanne, McCabe and Paganelli, 2010), the data from earnedDM-givenS and earnedDM-earnedS treatments are used in conjunction with additional treatments that vary whether the role of sender is earned or given.

from a container. Instructions explained that the selected letter determined their roles in the experiment: four subjects would be senders, four would be receivers, four would be decision makers and two would be monitors.

We achieved a double-blind procedure similar to Hoffman et al. (1994) with the intermediation of monitors. All materials were coded with an identification letter and silently passed out and collected by one of the monitors. The monitors knew the mapping from subject to ID, while the experimenters knew the mapping from ID to decisions. Nobody, however, knew the mapping from subjects to decisions. All subjects were also told that the monitors were responsible for ensuring that experimenters followed the instructions.

Subjects read the instructions silently, while an experimenter then read them aloud. (The instructions – denoting sections specific to *-givenS, *-earnedS, givenDM-* and earnedDM-* treatments – are included in the appendix.) Following the instructions, senders and receivers were asked to leave the lab simultaneously to guarantee that decision makers could not differentiate them according to their role. All subjects were told that senders and receivers would not be returning to the lab. An experimenter remained in the lab (hereafter, DM-room) with the decision makers and a monitor. Two other experimenters brought the senders and receivers to different rooms (hereafter, S-room and R-room). The second monitor went to the S-room.

Table 1 indicates the flow of events in the different rooms. In period t_1 , subjects in the DM-room first filled out questionnaires to test their understanding of the instructions. Questionnaires, in table form, stated the initial earnings of four hypothetical senders and the hypothetical decisions of each paired decision maker; respondents were

required to record the final payoffs of each sender, receiver and decision maker.⁶ Following administration of the questionnaires, the decision makers determined their payments by either drawing tickets with a monetary amount in the givenDM-* treatments, or by working on the word search in the earnedDM-* treatments. At the same time, in the S-room, senders determined their stakes by either drawing tickets in the *-givenS treatments or by doing a word search in the *-earnedS treatments. Senders then took a questionnaire to test their understanding of the instructions. The last line of the questionnaire asked senders to report what they expected their decision maker to have them send to their designated receiver, conditional on their stakes.⁷ In this period, receivers did nothing.

[Insert Table 1 about here.]

In period t_2 , each decision maker was told how much money his paired sender had either earned or been given and decided what portion to have senders send to receivers. Decision makers were then paid and left the experiment. In the R-room, receivers filled out a questionnaire to test their understanding of the instructions. The last line of the questionnaire asked receivers to report what they expected their decision maker to have

⁶ Decision makes were given an initial sheet with two sets of four hypothetical situations. Upon completion, the monitor collected these sheets and gave them to the experimenter, who corrected any errors. The corrected forms were then returned with another form that listed four more hypothetical situations and required the decision makers to provide the final earnings of each sender, receiver and decision maker. Any decision maker who made a mistake on this second questionnaire would have been excluded from the analysis. All decision makers, however, answered the second questionnaire correctly.

⁷ Senders and receivers were given a questionnaire that provided one set of four hypothetical situations and required them to record the final earnings of each sender, receiver and decision maker. If mistakes were made in the table, then the expectation was excluded from the analysis.

their sender send to them, conditional on the sender's amount. In this period, senders did nothing.

In period t_3 , receivers were paid and left the experiment, while senders continued to wait. Finally, in period t_4 , senders were paid and left the experiment.

Decision forms provided the following information in the *-givenS treatments:

Sender X was given \$xx.

The receiver with whom s/he is randomly paired was given \$0.

I choose to have sender X send \$_____ to the receiver with whom s/he is randomly paired.

In the *-earnedS treatments, "Sender X has earned \$xx" replaced the first line from above.

The experimental procedures in each room were as follows. In the S-room, after the amount of the senders' money was determined, the monitor collected that information and gave it to the experimenter. The experimenter recorded each sender's amount of money on the matched decision maker's decision form and on the questionnaires of the matched sender and receiver. The experimenter also filled ID-coded envelopes with the money of each sender and gave them to the monitor to distribute to the senders. Senders were asked to examine the amount and put it into a basket that the monitor passed

around. At the end of the experiment, the monitor returned an ID-coded envelope containing the final payoff to each of the senders.

In the DM-room, after the amount of the decision makers' money was determined, decision makers received an envelope from the monitor that contained their decision forms. The monitor collected the forms after the decisions were made. An experimenter put the decision makers' payoffs, which were independent of their decisions, into envelopes. The monitor passed out the envelopes and the decision makers were dismissed.

In the R-room, after the necessary steps were taken in the other two rooms, the monitor distributed the envelopes to the receivers. After getting their envelopes, receivers were dismissed.

II. Hypotheses

Preliminary H0: Earned and Given Experiences

Based on the results from Konow (2000) and Dickinson and Tiefenthaler (2002), we hypothesize that decision makers will allocate more money to individuals who earn their income compared to individuals who are given their income. This preliminary hypothesis therefore tests whether earning money through a word search and being given money through the drawing of a ticket are indeed viewed as two different experiences. If our null hypothesis of equivalent experiences is falsified, we can use the different

processes that govern the acquisition of money to generate a different or a shared experience between the stakeholder and the decision maker.

Our hypothesis is tested by varying the senders' experience while holding the decision makers' experience constant. Letting $F(\cdot)$ denote the population distribution of amounts sent to receivers, the null hypothesis of equal redistribution can be tested against the one-sided alternative of higher redistribution to receivers in the *-givenS treatments:

- H_{0_0} : $F(\text{givenDM-givenS}) = F(\text{givenDM-earnedS})$ and $F(\text{earnedDM-givenS}) = F(\text{earnedDM-earnedS})$
- H_{0_1} : $F(\text{givenDM-givenS}) > F(\text{givenDM-earnedS})$ and $F(\text{earnedDM-givenS}) > F(\text{earnedDM-earnedS})$

A rejection of H_{0_0} suggests that there is a salient difference between the acts of earning money (through the word search) and being given money (through the drawing of a ticket) in the experiment.

Main H1: Shared Experience and Third-Party Redistribution

If decision makers recognize a difference between earning and non-earning senders, we can then examine if the decision makers' own experience influences their redistributive behavior. Specifically, if shared experience with a sender affects a decision maker's redistributive behavior, we would expect, *ceteris paribus*, that amounts sent to receivers would be lower (higher) when decision makers' and senders' experiences match (do not

match). Again letting $F(\cdot)$ denote the population distribution of percentages of senders' money sent to receivers, we test the null hypothesis of the irrelevance of decision-makers' experience against the alternative hypothesis that their experience matters.

- H_{10} : $F(\text{earnedDM-givenS}) = F(\text{givenDM-givenS})$ and $F(\text{givenDM-earnedS}) = F(\text{earnedDM-earnedS})$
- H_{11} : $F(\text{earnedDM-givenS}) > F(\text{givenDM-givenS})$ or $F(\text{givenDM-earnedS}) > F(\text{earnedDM-earnedS})$.

If $F(\text{earnedDM-givenS})$ exceeds $F(\text{givenDM-givenS})$, such an outcome would suggest that earning decision makers, relative to non-earning decision makers, are biased against non-earning senders. If $F(\text{givenDM-earnedS})$ exceeds $F(\text{earnedDM-earnedS})$, it would suggest that earning decision makers, relative to non-earning decision makers, are biased in favor of earning senders.

III. Results

We collected 24 observations in each of the four treatments. Descriptive statistics are listed in Table 2. Figure 1 displays the cumulative distribution functions of percentages sent. Table 3 presents the results of pairwise Wilcoxon rank-sum tests.

[Insert Table 2 about here.]

[Insert Figure 1 about here.]

[Insert Table 3 about here.]

We can examine if decision makers redistribute more (less) money to senders who earn (are given) money by comparing the like-weighted cumulative distribution functions in Figure 1. The gap between the two boldly (lightly) drawn functions shows the effect of senders' experience when decision makers earn (are given) money. In Table 3, the two underlined pairwise Wilcoxon tests⁸ quantify these effects; the difference between the earnedDM-earnedS and earnedDM-givenS distributions ($W = 3.46$, $p = 0.0005$) and the difference between the givenDM-earnedS and givenDM-givenS distributions ($W = 3.16$, $p = 0.0016$) are both highly significant and in the direction that is consistent with the findings of Konow (2000) and Dickinson and Tiefenthaler (2002).

The effect of decision makers' experience can be seen by comparing the like-marked cumulative distribution functions in Figure 1. The gap between the two functions marked with squares (triangles) shows the effect of shared experience when senders earn (are given) money. In Table 3, the two pairwise Wilcoxon tests that are presented in italics quantify these effects; the difference between the givenDM-earnedS and earnedDM-earnedS distributions ($W = 1.08$, $p = 0.28$) and the difference between the earnedDM-givenS and givenS-givenS distributions ($W = 0.77$, $p = 0.44$) are both insignificant. We cannot reject H_{10} and must conclude that the experience of decision makers does not significantly affect their redistributive behavior.

In addition to collecting decisions from decision makers, the experiment also elicited ex ante expectations – conditional on the senders' stakes – from senders and

⁸ The results from these (and all additional) comparisons of distributions are robust to Kolmogorov-Smirnov and Epps-Singleton tests.

receivers. Table 4 shows descriptive statistics for expectations across the four treatments; senders and receivers who made mistakes on their questionnaires were excluded from the analysis.⁹

[Insert Table 4 about here.]

[Insert Figure 2 about here.]

Figure 2 displays the cumulative distribution functions of percentages sent and expected across the four treatments. Receivers' expectations are nearly perfectly aligned with the actual decisions in the two treatments in which senders are given their money; senders' expectations closely align with the actual decisions in the two treatments in which senders earn their money. The last column in Table 4 displays results from pairwise Wilcoxon tests that quantify this result: in *-givenS treatments, senders' expectations significantly deviate from decisions while receivers' expectations do not; in *-earnedS treatments, receivers' expectations significantly deviate from decisions while senders' expectations do not. Table 5 uses the results of Wilcoxon tests to show that the extent to which the receivers' expectations exceed those of the senders is significant in three of the treatments (and approaches significance in the fourth).

[Insert Table 5 about here.]

[Insert Table 6 about here.]

⁹ Results do not substantively change when these expectations are included.

Table 6 replicates the hypothesis tests conducted in Table 3, using the expectations data of senders and receivers (6a and 6b, respectively) rather than the actual decisions of decision makers. Expectations are accurate in the sense that they are not influenced by whether decision makers and senders share an experience. But expectations are also inaccurate because they fail to predict that earning senders would be allowed to keep significantly more money than non-earning senders.

IV. Conclusion

Our experiment isolates a potential source of real-world bias in a controlled laboratory setting. Our main finding is that the redistributive behavior of a third-party dictator is not biased by a shared experience with a stakeholder. It suggests that, if shared experience is to affect judgment, the experience must be more salient than simple commonality in earning income.

It is an open question as to how the lab can be used to address this issue of saliency in experience. Economics experiments have demonstrated the ability to induce in-group cohesiveness (Eckel and Grossman, 2005; Charness, Rigotti and Rustichini, 2007)¹⁰, and a natural next step is to use these techniques to simulate a shared experience prior to the administration of a redistributive decision task. Alternatively, designs can attempt to elicit natural feelings of cohesiveness by taking advantage of variation in demographics. Such an approach would directly address the questions posed in the

¹⁰ Also see the multitude of studies in the social psychology literature that use the minimal group paradigm of Tajfel (1970).

debate surrounding Justice Sotomayor – those involving race, gender and common upbringing – at the expense of control and anonymity.

Although our simplified approach to eliciting a shared experience may lack saliency, it generates a finding that is relevant to experimentalists in a general methodological sense. Any experiment with payoff-independent decision making needs to compensate its decision makers by some means. The standard approach involves payment of a lump-sum amount; but our result suggests that outcomes may not be significantly affected if the task that generates decision makers' payments resembles a task that occurs within the experiment. In the laboratory, favoritism does not seem to arise solely due to a common experience.

Table 1: Timeline of Events

	t ₁	t ₂	t ₃	t ₄
Events in DM-Room	Questionnaire and Determination of Payment	Decision and Payment/Exit	*	*
Events in S-Room	Stakes and Questionnaire/Expectation	Nothing	Nothing	Payment/Exit
Events in R-Room	Nothing	Questionnaire/Expectation	Payment/Exit	*

Table 2: Descriptive Statistics

	Mean Proportion Sent to Receiver	Median Proportion Sent to Receiver	Proportion of Even Splits	Proportion of Zero Amounts Sent
givenDM-givenS (n = 24)	.496	.500	.583	.042
earnedDM-givenS (n = 24)	.489	.500	.750	.000
givenDM-earnedS (n = 24)	.382	.417	.208	.042
earnedDM-earnedS (n = 24)	.324	.354	.250	.167

Figure 1: Cumulative Distribution Functions

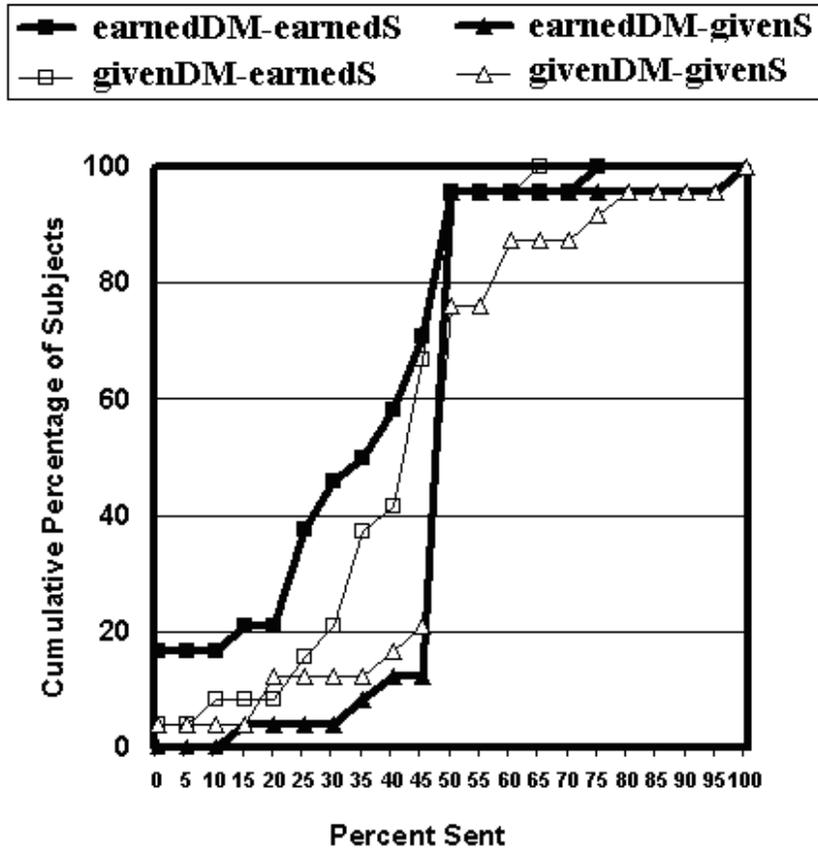


Table 3: Pairwise Wilcoxon Rank-Sum Tests

W Statistic (Probability significance level)	givenDM-givenS	givenDM-earnedS	earnedDM-earnedS
earnedDM-givenS	<i>0.77</i> <i>(0.44)</i>	3.42 <i>(0.0006)</i>	<u>3.46</u> <u>(0.0005)</u>
givenDM-givenS	*	<u>3.16</u> <u>(0.0016)</u>	3.31 <i>(0.0009)</i>
givenDM-earnedS	*	*	<i>1.08</i> <i>(0.28)</i>

Note: Italics denotes a test of H1 (shared experience), while underlined text denotes a test of H0 (earned and given experiences).

Table 4: Descriptive Statistics for Expectations

	Mean	Median	Standard Deviation	Pairwise Wilcoxon w/Percentage Redistributed
earnedDM-earnedS				
Sender Percentage Expected (n = 23)	0.343	0.375	0.195	W = 0.486 (0.627)
Receiver Percentage Expected (n = 18)	0.484	0.500	0.246	W = 2.294 (0.022)
givenDM-earnedS				
Sender Percentage Expected (n = 24)	0.311	0.348	0.187	W = 1.009 (0.313)
Receiver Percentage Expected (n = 23)	0.537	0.500	0.213	W = 3.010 (0.003)
earnedDM-givenS				
Sender Percentage Expected (n = 22)	0.345	0.380	0.165	W = 2.967 (0.003)
Receiver Percentage Expected (n = 19)	0.551	0.500	0.230	W = 1.351 (0.177)
givenDM-givenS				
Sender Percentage Expected (n = 23)	0.356	0.385	0.187	W = 2.545 (0.011)
Receiver Percentage Expected (n = 23)	0.498	0.500	0.236	W = 0.709 (0.478)

Figure 2: Cumulative Distributive Functions of Decisions, Sender Expectations and Receiver Expectations in each Treatment

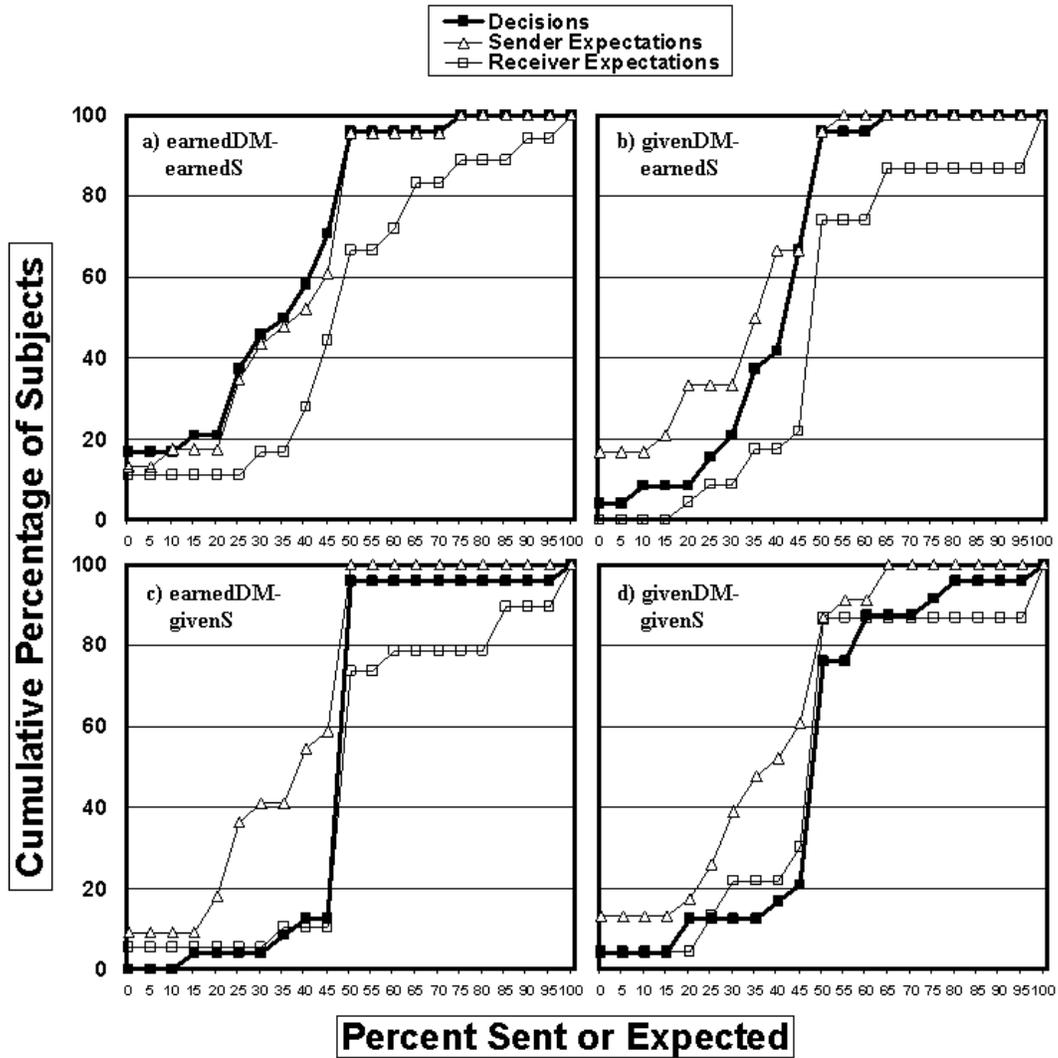


Table 5: Pairwise Wilcoxon Comparisons of Senders' and Receivers' Expected Percentages Sent in each Treatment

	W Statistic (Probability significance level)
givenDM-givenS	1.961 (0.049)
givenDM-earnedS	3.277 (0.001)
earnedDM-givenS	3.241 (0.001)
earnedDM-earnedS	1.905 (0.057)

Table 6: Expectations and Hypotheses Tests

a) Senders' Expectations

W Statistic (Probability significance level)	givenDM- givenS	givenDM- earnedS	earnedDM- earnedS
earnedDM-givenS	<i>0.14</i> (0.88)	0.94 (0.35)	<u>0.42</u> (0.68)
givenDM-givenS	*	<u>0.71</u> (0.48)	<u>0.21</u> (0.83)
givenDM-earnedS	*	*	<i>0.34</i> (0.74)

b) Receivers' Expectations

W Statistic (Probability significance level)	givenDM- givenS	givenDM- earnedS	earnedDM- earnedS
earnedDM-givenS	<i>1.05</i> (0.29)	0.15 (0.88)	<u>0.44</u> (0.66)
givenDM-givenS	*	<u>0.81</u> (0.42)	0.29 (0.77)
givenDM-earnedS	*	*	<i>0.34</i> (0.74)

Note: Italics denotes a test of expectations of H1 (shared experience), while underlined text denotes a test of expectations of H0 (earned and given experiences).

Appendix: Instructions

Welcome to today's experiment. Now that we have started it is important that you do not talk or look around at other peoples' desks. Your decisions are private and we respect that privacy. If at any time you have a clarifying question, raise your hand and someone will come over to help you. However, we cannot give advice on what decisions you should make. That's up to you. You're the one making the money.

Read the instructions carefully. At the end of the instructions you will be given a questionnaire to test your understanding of them.

You have drawn an ID letter. For privacy, you will only be known by this ID letter during the experiment.

In this experiment, there are three roles: Sender, Decision Maker and Receiver. Four of you have been randomly selected to be Senders, four have been randomly selected to be Decision Makers and four have been randomly selected to be Receivers. Each Decision Maker will be randomly matched with a Sender and each Sender will be randomly matched with a Receiver. Senders, Decision Makers and Receivers will not know with whom they are paired. To preserve privacy, Senders, Decision Makers and Receivers will be sitting in different rooms.

If you have drawn the letter A, B, C, or D, you will be a Sender.

If you have drawn the letter E, F, G, or H, you will be a Decision Maker.

If you have drawn the letter I, K, L, or N, you will be a Receiver.

Please keep your ticket as you will need to show it to get your payoff.

If you have drawn the letter M, you will be the Monitor for today's experiment. The monitor's role is to insure the instructions are followed as stated.

Sender's Task

[***earnedS**: If you are a Sender, you will be given a word-search task. Please make sure that you write your ID letter on the appropriate line. You will have 7 minutes to find as many words as you can. You will earn \$2 for every word that you find. At the end of the 7 minutes, someone will collect the word-search sheets and bring your money back to you in an envelope. The money will be given to you in \$1 bills. Once you get the envelope and examine its contents, you will then put all of the \$1 bills in a basket.]

[***-givenS**: If you are a Sender, you will draw a ticket from a basket. Please make sure that you write your ID letter on the appropriate line. Each ticket will have an amount, in dollars, written on it. You will be given the amount of money that is written on your ticket. After everyone makes their draws, someone will collect the tickets and bring your money back to you in an envelope. The money will be given to you in \$1 bills. Once you get the envelope and examine its contents, you will then put all of the \$1 bills in a basket.]

Decision Maker's Decision Task

If you are a Decision Maker, you will be asked to make only one decision: to choose how many of the \$1 bills, if any, you want the Sender to send to the Receiver with whom she/he is randomly paired. You will make this decision by filling out a form that will be given to you in an envelope. After you make your decision, you will put the form back in the envelope. Once all decisions are made, the envelopes will be collected.

Decision Maker's Payoff

[**earnedDM**-*: If you are a Decision Maker, you will be given a word-search task prior to making your decision. Please make sure that you write your ID letter on the appropriate line. You will have 7 minutes to find as many words as you can. You will earn \$2 for every word that you find.

Your payoff = $\$2 * (\text{number of words you find})$

At the end of the 7 minutes, someone will collect the word-search sheets. Your payoff will be paid to you at the conclusion of the experiment; it will not be affected by the decision that you make.]

[**givenDM**-*: If you are a Decision Maker, you will draw a ticket from a basket prior to making your decision. Please make sure that you write your ID letter on the appropriate line. Each ticket has an amount, in dollars, written on it. You will be given the amount of money that is written on your ticket.

Your payoff = amount written on the randomly chosen ticket

After you draw your ticket, someone will collect it. Your payoff will be paid to you at the conclusion of the experiment; it will not be affected by the decision that you make.]

Receiver's Payoff

If you are a Receiver, you will receive an envelope containing the amount of money that the Decision Maker had the Sender send to you.

Your payoff = amount sent

For example, if the Decision Maker has the Sender send \$4, then you will receive an envelope containing \$4.

Your payoff = \$4

Or if the Decision Maker has the Sender send \$16, then you will receive an envelope containing \$16.

Your payoff = \$16

Sender's Payoff

If you are a Sender, you will be given back the money that is left over after your paired Receiver receives her/his payoff.

[***-earnedS**: Your payoff = $2 * (\text{number of words you find}) - \text{amount sent}$

For example, if you find 10 words and earn $2 * 10 = \$20$, and if the Decision Maker has you send \$4, you will have \$16 left over. Your total payoff will equal the \$16 left over.

Your payoff = \$16

Or, if you find 10 words and earn $2 * 10 = \$20$, and if the Decision Maker has you send \$16, you will have \$4 left over. Your total payoff will equal the \$4 left over.

Your payoff = \$4]

[***givenS**: Your payoff = amount on the ticket – amount sent

For example, if your ticket says that you are to be given \$20, and if the Decision Maker has you send \$4, you will have \$16 left over. Your total payoff will equal the \$16 left over.

Your payoff = \$16

Or, if your ticket says that you are to be given \$20, and if the Decision Maker has you send \$16, you will have \$4 left over. Your total payoff will equal the \$4 left over.

Your payoff = \$4]

Your payoff in this experiment will be completely private. The person who collects the envelopes from the Decision Makers will not see the decisions written on the forms. The envelopes will be given to another experimenter. Using the rules above, this experimenter will put the payoff of each Sender and Receiver into envelopes and return the envelopes to the monitor. The monitor will then ask you for your ID letter. When you present your ticket with your ID letter, you will receive the envelope with your payoff.

This process guarantees that all envelopes will be opened and all money will be handled by someone who sees an ID letter, but not a name, so that nobody is able to match a decision with the identity of either the Senders, Decision Makers or Receivers.

You should not talk to anyone about how much money you, or they, get. Note that these procedures guarantee that no other person will be aware of your payoff.

If you have questions at any time during the experiment, please quietly raise your hand and someone will come over to assist you. Please do not talk with any other participants during the experiment.

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