Justification and cooperation

Xiao, Erte

Carnegie Mellon University

10 January 2012

Justification and Cooperation

Erte Xiao

Department of Social and Decision Sciences

Carnegie Mellon University

exiao@andrew.cmu.edu

January 10, 2012

Abstract

The need for justification is a widely observed social phenomenon. This paper develops a theoretical framework and reports laboratory evidence to show how pure justification pressure affects cooperative behavior in economic exchange environments. In a one-shot anonymous interaction, compared with the case when the behavior is simply observed by the audience, individuals are more likely to act on what they believe the audience thinks they should do when they also have to explain the decisions to the audience. When it is salient that the audience thinks one should cooperate, justification pressure significantly promotes cooperation even absent negative consequences for non-cooperative behavior. We discuss the implications of our findings for shaping institutional design to promote cooperation.

Keywords: justification, accountability, cooperation, social norms, experimental economics

JEL classification: C91; C72; D63; D03; D83; D84

Acknowledgements. I thank Linda Babcock, Cristina Bicchieri, Daniel Houser, Sera Linardi, John Miller, Justin Rao, Fangfang Tan and participants at a seminar at the University of Pittsburgh and the 2011 ESA meeting for valuable comments. I gratefully acknowledge the National Science Foundation (SES-0961341) for funding that supported this research.

I. Introduction

When people take actions or make judgments, they are often expected to or feel obliged to provide a justification. This is as true for trivial decisions in daily life as it is for critical national policy making. Justification may even be mandatory when an action has negative consequences for others. For example, a manager is often expected to provide explanations when deciding to fire an employee. Recently, the Department of Health and Human Services (HSS) announced that health insurance providers will need to justify rate increases of 10% or more starting September 1, 2011[1]. In the past several decades, research in psychology has argued that an important universal feature of decision-making environments is that people are accountable for their decisions, and provided evidences that the social necessity of this accountability has a significant impact on shaping peoples' thoughts (see Lerner and Tetlock (1999) for a comprehensive review). While the pressure of justification has been discussed in psychology literature on accountability, how it affects behavior in exchange environments has received little attention and has been unjustifiably quiet in economic literature, despite its importance in predicting economic outcomes.[2] For instance, in addition to promoting transparency, we may expect the pure pressure of justification imposed by HSS's new policy to have an impact on health insurance providers' pricing decisions. If the need to provide justification influences a manager's hiring and firing decisions, these conditions can have a significant impact on labor market outcomes.

In this paper, we provide both a theoretical framework and laboratory evidence to explain how the requirement of justification affects cooperative behavior in economic exchange environments. The theoretical framework is built on previous psychology research on accountability and on norm obedience. Tetlock (1985) proposed a social contingency model of judgment and choice to understand how accountability influences behavior, mostly in the domain of judgment. In this model he assumes that people tend to be "cognitive misers," in that they rely on simple heuristics to make judgments quickly. When people believe they will have to justify their views, if they are unconstrained by past commitments they will try to anticipate the possible objections from the audience and adopt the salient, socially acceptable position. The proposed underlying mechanism of the accountability effect is that, if people do not behave in ways for

[1] See http://www.hhs.gov/news/press/2011pres/05/20110519a.html (accessed on January 7, 2012)
[2] The only related economic research papers we are aware of include, Pahlke, Strasser, and Vieider (2011), Vieider (2010), and Brandts and Garofalo (2010). We discuss these papers in Section II.

which they can provide acceptable accounts, they will be evaluated negatively by others and suffer negative reputational consequences. Thus, accountability manipulation in previous empirical research often involves not only pure justification (that is, providing explanations for one's behavior or views) but also other factors such as the presence of others (subjects expect someone will observe their behavior); identifiability (subjects' decision or opinion will be linked to them personally); or evaluation (subjects expect someone will evaluate their performance) (see Lerner and Tetlock, 1999). Thus, the impact of pure justification remains unclear. In addition, most studies on accountability have focused on judgment accuracy or social perception, but no systematic studies have been conducted to investigate how the pure justification necessity influences economic behavior when there is temptation to pursue self-interest at a cost to others.

Applying previous psychology findings on accountability effects, we argue in this paper that the pure pressure of providing explanations can reduce selfish behavior in an economic exchange environment even absent negative consequences for selfishness such as bad reputation. The reason is that the pressure of justification can remind one to think about what the audience thinks, as suggested in the Tetlock (1985) model. Furthermore, previous research on social norms shows that, subjects' behavior is more likely to be consistent with their beliefs regarding what others think they should do when social norms are more salient (see, e.g., Collins and Loftus, 1975; Harvey and Enzle, 1981; Cialdini et al., 1990; Bicchieri, 2006; and Bicchieri and Xiao, 2009). If the expectation of justification promotes the salience of social norms in guiding behavior, it can reduce profit-maximizing behavior in economic exchange environments when it violates social norms even if the decision maker does not bear any monetary cost of bad behavior. Furthermore, we hypothesize that the pressure of justification is more effective in promoting cooperation when it is clearer to the subjects that the audience disapproves of profit-maximizing behavior.

To test these hypotheses, we design an experiment based on a dictator game and a trust game that have been widely used to study prosocial behavior. We revise these two games so that to maximize one's own profit at the cost of others, the subject has to violate multiple norms such as truth telling, efficiency, fairness, and reciprocity. Selfish behavior is thus presumably less acceptable compared with standard dictator games or trust games. We also design the payoff structure of the games such that selfish behavior violates different norms in different conditions. In particular, in some conditions behaving selfishly is less acceptable than in others because it

leads to more severe norm violations. We compare subjects' behaviors between two treatments: Justification and No Justification. The only difference between the two treatments is that the first requires the subject to provide explanations for her behavior to a third party.

We find that when subjects are not required to justify their behavior, most will maximize their own profit at the cost of their counterpart in all the conditions. In contrast, in the Justification treatment, subjects are significantly less likely to choose the profit-maximizing action when such a choice is clearly not acceptable. To further test the hypotheses, we conduct an incentivized survey to elicit subjects' beliefs regarding what the audience thinks they should do. The data are consistent with the hypothesis that when justification is required, subjects' behavior is more likely to be consistent with their expectations of what the audience thinks they should do. The effect of justification on cooperation is thus stronger when it is clearer that the audience thinks the subjects should cooperate.

This study contributes to the understanding of how the pure justification pressure can influence cooperative behavior in an economic exchange environment even when the behavior is anonymous and the interaction is only one-shot. The findings provide important insights into how to design institutions to promote cooperation. Incentive mechanisms, such as penalties or rewards, have been widely used to enhance cooperation. Compared with incentive mechanisms, building institutions to require justification for decisions, such as HSS's new justification requirement policy, can be a less costly alternative to promote cooperation and increase social welfare. In addition, justification manipulation may also avoid the potentially negative effects of incentives. Previous research shows that external incentives can crowd out intrinsic motivations and thus lead to less cooperation (e.g., Gneezy and Rustichini, 2000; Houser, et al., 2008; and Li, et al., 2009). In contrast, as suggested in this paper, the pure justification pressure may enhance the intrinsic motivation of norm conformity by prompting one to think about what others think is the right thing to do when making decisions.

The rest of the paper is organized as follows. Section II reviews related literature. Section III introduces experiment design. Section IV presents theoretical analysis. Section V reports results. Section VI concludes.

II. Literature Review

II.A. Justification and accountability in psychology literature

The effect of justification on judgment and decision making has been widely discussed in psychology literature on accountability. Accountability refers to the implicit or explicit expectations that one may have to provide reasons for his or her beliefs, feelings, or actions to others (Scott and Lyman, 1968; Tetlock, 1992). This expectation can place constraints on virtually everything people do as the failure to provide an acceptable account for one's behavior can lead to punishment and disapproval (Tetlock, 1992).

In his seminal work, Tetlock (1985) proposed and tested a social contingency model of how accountability affects judgment and choices. The model assumes that people tend to rely on simple, low-effort heuristics to make decisions. When people know the views of the audience to whom they are accountable and are unconstrained by past commitments, they tend to adopt views or actions that will be accepted by the audience. When people do not know the views of the audience and are unconstrained by past commitments, they may be motivated to engage in a preemptive self-criticism process to try to anticipate the objections of potential critics. Finally, if people have already committed to a position, they will try hard to generate arguments supporting the position. Because this paper explores how the pure justification necessity can change behavior, we focus on situations where people anticipate having to justify their behavior before they take an action. Tetlock's model may suggest that the effect of justification would be different if people have made a choice in a similar environment in the past.

Psychologists have conducted numerous experimental studies to examine the effect of accountability on judgment and decisions. Many of those studies have focused on the effect of biases in decision-making. For example, when the audience's view is unknown, accountability can reduce the anchoring effect (Kruglanski and Freund, 1983), overconfidence (Siegel-Jacobs and Yates, 1996), sunk cost fallacy, oversensitivity to the order that the information is presented (Webster et al., 1996), and conjunction error (Simonson and Nye, 1992). Accountability also amplifies some biases. For example, Simonson and Nowlis (1998) found that accountability increases preferences for compromise options and loss aversion. Taylor (1995) found accountability increases ambiguity aversion. Accountability has also been found to have no effect on some biases, such as insensitivity to the base rate and preference reversal (Simonson and Nye, 1992; also see Lerner and Tetlock, 1999, for a comprehensive review).

Recent studies have also investigated the effect of accountability on cooperative behavior in social dilemmas. However, in addition to requiring explanations for one's decision, the

manipulation of accountability in these studies often involves the presence of others; identifiability; or evaluation. For example, De Kwaadsteniet, et al. (2007) show justification pressures facilitate coordination in common resource dilemmas when there is no uncertainty about the resource size. As indicated in their paper, the justification manipulation is quite strong because subjects not only have to justify the behavior to the group members but their decisions would also become identifiable. De Cremer and Van Dijk (2009) show that subjects who have great endowments also contribute more in a public goods game when they were told that after making the decisions they would meet up with other group members and explain their contribution decisions. Thus their paper cannot inform pure justification effects on cooperation either.

The need to justify can be made not only explicitly to others, as studied in the accountability literature, but also implicitly to oneself, which can also affect one's behavior. For example, Shalvi, et al. (2011) show that people are more likely to lie if self-justifications for lying are available. This paper focuses on the effect of exogenous justification pressure when it has to be made explicitly to others. Nevertheless, in the theory model discussed below, we include the case when the target group is the subject himself, which reflects the possibility that the individual has internal pressure to make a decision that can be justified to himself or herself.

II.B. Justification and accountability in economic literature

Economists have only recently drawn attention to the importance of accountability. Recent economic research on accountability effects has focused on risk choices. The accountability manipulation in these studies, however, often involves not only pure justification pressure but also identifiability. For example, Vieider (2010) showed when the subjects know they have to explain their choice to an experimenter face-to-face, they increase the effort in solving the decision task and are more likely to choose the normatively superior event. Pahlke, Strasser, and Vieider (2011) studied how individuals make decisions when they take risks that affect themselves and a passive recipient and found less loss aversion when the subjects have to explain their decisions to the recipient face-to-face. Brandts and Garofalo (2010) adopted physiological measurements to study gender difference in accountability effects when individuals are asked to choose between simple and compound prospects. In their accountability manipulation treatments, subjects have to explain decisions in front of an audience. Our study contributes to this

emerging literature in two ways: first, we examine the effect of pure justification pressure on decision making without introducing identifiability; second, we extend the study of justification effects to the domain of prosocial behavior in economic exchange environments.

Some experimental research on communication is related to our study, although these are not designed to study justification directly. For example, Andreoni and Rao (2011) show that allowing a dictator to send a message to a receiver in a dictator game leads to more selfish behavior, but the dictators are more generous when the receivers can send a message to them. Unlike the dictator game, where the right thing to do is unclear (see Bicchieri and Xiao, 2009), in this paper, we investigate the affect of justification in a setting where a selfish act can clearly be viewed as bad because it violates multiple norms including truth-telling, efficiency, reciprocity, and equality. As discussed in more detail below, for justification to promote cooperation decision makers must clearly understand that the audience believes the decision makers should not pursue their own self-interest.

II.C. Social norms

Economic research connecting norms and decisions is only beginning to emerge (see, e.g., Fehr and Fischbacher, 2004). People do not always behave how society thinks they should. In the absence of monetary incentives, even a strong personal commitment to a social norm does not predict norm-obedient behavior unless that norm is a focus of attention (Bicchieri, 2006). This concept has received substantial attention in the law and economics literature (see, e.g. Kahan, 1998; Cooter, 1998; and Sunstein, 1996) and has been heavily researched by psychologists.

For example, drawing from the Collins and Loftus (1975) theory of semantic memory, Harvey and Enzle (1981) proposed a cognitive model of social norms and norm-directed behavior. In their model, cooperation is more likely after observing a transgression, because doing so draws attention to a cooperation norm. Experimental studies have also provided supporting evidence that people are more likely choose what they expect others think they ought to when this normative message is salient (e.g., Cialdini et al., 1990; and Bicchieri and Xiao, 2009).

Building on previous studies on accountability and social norms, we develop a theoretical framework and conduct an experiment to show how pure justification pressure itself can affect cooperative behavior. The theory can help explain why, in some situations, justification pressure

may or may not influence behavior and thus shed light on how to incorporate justification requirements in institution design to promote cooperation. We argue that the justification pressure can prompt one to think about what the audience thinks he or she should do (i.e., what is the norm) and it can promote cooperation in environments where selfish behavior is clearly not acceptable.

III. Experiment Design

The experiment consists of two treatments: No Justification and Justification. In each treatment, subjects play two games with a different randomly paired partner. The two games are designed so that the same decision may be more acceptable in one and less so in the other. In both games to make a selfish decision requires a subject to violate multiple norms.

III.A. No Justification treatment

In this treatment, subjects are randomly assigned to the role of either Person A or Person B and play two games. Each Person A is randomly matched with a different Person B in each of the two games. This is common knowledge. We randomize the order of the two games to control the potential order effect. At the end of the experiment, one of the games is randomly selected and subjects will be paid by the amount they earned in this game.

In Game D, subjects are told that the computer will first pick one of three possible earnings outcomes: ($10, $2), ($7, $7), and ($5, $9). The first numbers in the parentheses are Person A's payoff and the second numbers are Person B's payoff. Person A will see what earnings outcome the computer selected for his pair, but Person B will never receive this information. Person A will then decide what to report to Person B regarding the real computer-selected earnings outcome, and Person A's report will decide each one's final earnings. For example, if the computer selected (7,7) but Person A told Person B that the computer selected (10,2), then Person A receives $10 and Person B receives $2 in this game. Person A is told that he can either tell the truth or tell a lie. All this is common knowledge.

In this game, the profit-maximizing outcome for Person A is (10,2). When the computer selects (7,7) or (5,9) for the group, Person A has to tell a lie and scarify efficiency to seek his own interest (i.e., to report (10,2)). An important feature of the game is that it is reasonable to assume that Person A will believe to report (10,2) when the computer selects (5,9) is relatively

more acceptable than when the computer selects (7,7). The reason is that when the true computer-selected outcome is (5,9), Person A has to accept disadvantageous inequality if he tells the truth. In contrast, in the case when the true computer-selected outcome is (7,7), Person A not only has to lie and scarify efficiency but also has to violate equality to report (10,2) to Person B.

In Game T, Person B first chooses whether to opt "out" or "in." If Person B opts out, Person A's and Person B's final earnings in this game are $4. If Person B opts in, then each one's earnings will be decided by the same procedure as described in Game D. That is, the computer first picks one of the three possible outcomes and then Person A decides what to report to Person B regarding the computer-selected earnings outcome, which will decide each one's final payoff.

Previous studies show that people are more likely to cooperate when others have signaled positive intentions (e.g., McCabe, Rigdon, and Smith, 2003). In view of those findings, we assume that the when computer selects (7,7) or (5,9), to report (10,2) to Person B is less acceptable in Game T than in Game D. The reason is that in Game T, by opting in, Person B has trusted Person A to be honest, and Person B would have received $4 by opting out if he had chosen not to trust Person A, in which case Person A would only receive $4.

Because we are mostly interested in the cases when the computer-selected outcome is either (7,7) or (5,9), to obtain enough data in each case, we design the experiment so that most pairs receive one of these two outcomes. Because we are also interested in whether subjects behave differently in Game D than in Game T, subjects receive the same outcome in both games. Subjects are not told about the probability of receiving each of the three possible outcomes and do not know that the computer will assign the same outcome to their group in both games. They are simply told that the computer will select one of the outcomes for their group and their decision in one game will not affect their payoff in the other game. To avoid a learning effect, subjects are told they will not see the outcomes of each game until the end of the experiment. (See instructions in Appendix A for details.)

To keep this treatment as symmetric as the Justification treatment described below, participants also are told that at the end of the experiment, two Person Bs who didn't play either Game D or Game T with Person A will be randomly selected and each of the two Person Bs will see the true computer-selected earnings outcome and his report in the corresponding game.

III.B. Justification treatment

The only difference between the two treatments is that, in the Justification treatment, subjects are asked to provide explanations for their decisions to the Person B who will observe the report and the truth. To study a pure justification effect without any reputation effect or other extrinsic incentive effect such as punishment or reward, we introduce the weakest justification manipulation in this treatment. Person A is required to write at least two different explanations for his decision when deciding what to report. Note that the subject was not explicitly asked to "justify" his decision but just "to provide at least two different explanations," so as not to suggest to the subjects that they should do what the audience thinks they should do.

In addition, the explanations will not affect his payoff but will be seen by another Person B who did not play either of the two games with the Person A. In particular, the Person B who sees the explanations will also see Person A's report and the true computer-selected earnings outcome. However, the matched Person B involved in each game is not allowed to see Person A's explanation. This assures Person A that his matched Person B in each game will not know if he told the truth or not, just as in the No Justification treatment. This feature also mitigates the potential concern that the process of justification may change the social distance between Person A and his matched Person B. All of this is common knowledge.

III.C. Belief elicitation

We argue that the pure justification requirement makes subjects more likely to behave consistently with what they believe others think they should do because the social norm is more salient in decision making when subjects are required to justify their behavior (see Section IV for more details). Thus, it is important to know about a subject's belief in this regard.

In the experiment, after the subjects finished all the decisions in both games in each treatment, we conducted an incentivized survey (see Appendix B for details). Subjects could earn points for answering some questions. At the end of the experiment, two of the survey questions that Person A can earn points for were randomly selected, and Person A was rewarded $2 for each point he earned. The most relevant question for our purpose was the second question: "Before seeing what you actually reported to your matched Person B, he/she was asked to indicate what he/she thought you should report. Please guess what this Person B's answer is. You will earn one point if your answer is the same as what this Person B answered in his/her

survey."[3] This question is intended to elicit Person A's *normative expectations* about what the audience thinks he should do (see Bicchieri and Xiao, 2010).[4] As illustrated in section IV, the comparison between Person A's behavior and his normative expectation can help explain how the justification requirement influences behavior.

III.D. Procedures

The experiment was conducted at P.E.E.L. lab using z-tree (Fischbacher, 2007). Subjects were randomly and anonymously assigned a role and the role was fixed for the whole experiment. At the end of the experiment, one game was randomly chosen and each subject was paid according to the outcome in that game. Subjects were paid privately. Each subject participated in exactly one treatment.

IV. The Role of Justification

Based on the previous literature on accountability and social norms, we argue that the need to justify can decrease selfish behavior that harms others because it leads people to be more likely to think about what behavior is approved by the audience when deciding what to do, and thus social norms are more salient in the decision-making process. When the norm clearly disapproves of selfish behavior, people are more likely to be cooperative when they are required to justify their behavior. To illustrate how the justification condition influences individual choices, we construct a utility function along the lines of the Bicchieri (2006) norm-based utility function and incorporate justification conditions.

In Bicchieri's (2006) social norm model, an individual's utility function consists of two parts: his own payoff from the strategy he takes and the disutility from norm violations. A norm here is defined as the individual's belief of what others think ought to be done (i.e., normative expectations). The disutility from norm violations depends on (1) the difference between the profit from one's action and the profit if one takes an action based on the norm, and (2) the individual's sensitivity to the relevant norm.

[3] Data for all survey questions are available on request.
[4] The "normative expectation" identified here is a bit different than the normative expectation studied in Bicchieri and Xiao (2009), who asked for subjects' beliefs about what the *majority* thinks one should do.

In this paper, our hypothesis is that the need to justify promotes the salience of the social norm because it leads the individual to think about what behavior is approved by the audience to whom he justifies. We construct an individual *i*'s utility function as follows:

$$U_i(s_i) = \pi_i(s_i) - k_i(J)\,|\pi_i(s_i) - \pi_i(s^t_i)|$$

where s_i is the action individual *i* takes and s^t_i is the strategy that the individual *i* believes the target group thinks he should do (i.e., *normative expectations*). The target group is any group to whom the individual *i* believes he must justify his behavior. It can be a third party as designed in this experiment, or the partner, or even the individual himself. In the equation, $\pi_i(s_i)$ is individual i's profit when he takes action s_i ; $\pi_i(s^t_i)$ is individual *i*'s profit when he takes action s^t_i ; and k_i represents the individual's sensitivity to the normative expectations of the target group. The latter, k_i , is a function of the probability J in [0,1] that the individual believes he needs to justify his behavior to the target group. We assume: 1) $k_i>0$, that is, individual *i* experiences disutility from norm violations; and 2) $\partial k_i/\partial J>0$, that is, the more likely one has to justify his behavior, the more sensitive he is to the normative expectations held by the target group. Note that $k_i(J)\,|\pi_i(s_i) - \pi_i(s^t_i)|$ also captures the ease with which an individual can justify his behavior. When the action taken by the individual is closer to what he believes the target group believes he should do, it is natural to assume that it is also easier for him to provide acceptable reasons for his behavior to the target group. Thus, $k_i(J)\,|\pi_i(s_i) - \pi_i(s^t_i)|$ can also be interpreted as the psychological cost of justifying his behavior to the target group.

This model suggests that the need to justify does not always lead to behavioral differences; particular conditions need be satisfied in order for justification to have behavioral consequences. To see this, consider a simple setting similar to the experiment designed here. In this setting, a subject has two choices: to lie (L) or to be honest (H), $s_i \in (L, H)$.Consider the case when $\pi_i(L)>\pi_i(H)$, as studied in the experiment. Further consider two justification conditions: justification is surely not needed (J=0) and justification is required with probability one (J=1). Without loss of generality, assume that $k_i(0)=0$. It is straightforward to see that when justification is not required the subject will choose to lie. When justification is required:

$$U_i(s_i=L \mid J=1) = \pi_i(L) - k_i(1)\,|\pi_i(L) - \pi_i(s^t_i)|$$

$$U_i(s_i=H \mid J=1) = \pi_i(H) - k_i(1)\,|\pi_i(H) - \pi_i(s^t_i)|.$$

In this case, differences in decisions between Justification and No Justification treatments occur whenever $U_i(s_i=L \mid J=1) < U_i(s_i=H \mid J=1)$. Consider two cases:

Case 1. $s^t_i=H$ (i.e., the subject expects the audience to believe she should be honest) .

In this case when $\pi_i(L) - k_i(1)|\pi_i(L) - \pi_i(H)| < \pi_i(H) - k_i(1)|\pi_i(H) - \pi_i(H)|$, $U_i(s_i=L \mid J=1) < U_i(s_i=H \mid J=1)$ is satisfied. It is straightforward that the justification requirement would lead to more honest behavior when $k_i(1)>1$. That is, more honest behavior occurs under the justification condition when subjects believe the audience believes they should be honest, and when subjects are sufficiently sensitive to this normative expectation.

Case 2. $s^t_i=L$ (i.e., the subject expects the audience to believe she should tell a lie).

In this case, again, when $\pi_i(L) - k_i(1)|\pi_i(L) - \pi_i(L)| < \pi_i(H) - k_i(1)|\pi_i(H) - \pi_i(L)|$, $U_i(s_i=L \mid J=1) < U_i(s_i=H \mid J=1)$ is satisfied. It is straightforward that this condition cannot be satisfied regardless of the value of $k_i(1)$ because $\pi_i(L)>\pi_i(H)$. In other words, the expectation justification requirement does not promote honesty when subjects believe the audience believes they should lie, regardless whether subjects are sensitive to the normative expectation.

Thus, the model suggests that the pure justification effect can significantly reduce lying behavior when there exists a sufficiently large number of subjects who 1) believe the audience disapproves of lying behavior and 2) are sufficiently sensitive to norm violations. We next apply this model to derive several hypotheses relevant to our investigation.

First, as mentioned above, subjects are presumably more likely to expect the audience to think they should be honest when the truth is (7, 7) than when the truth is (5,9) (i.e., $Prob(s^t_i=H|truth=(7,7)) > Prob(s^t_i=H|truth=(5,9))$. The reason is that, in addition to violating efficiency and truth telling that apply to both (7,7) and (5,9) cases, to report (10,2) when the truth is (7,7) also violates equality. Moreover, when the truth is (5,9), subjects may believe the audience believes it is acceptable to lie by reporting (7,7) as in this case lying creates equality. Thus, for each particular game (Game D or Game T), it should be more likely that justification pressure promotes honest behavior when the truth is (7,7) than when the truth is (5,9). Second, in view of previous studies on reciprocity (e.g., McCabe, Rigdon, and Smith, 2003), we expect the probability that subjects believe the audience thinks they should be honest is higher in Game T than in Game D *(i.e.,* $Prob^{GameT}(s^t_i=H) > Prob^{GameD}(s^t_i=H)$). The reason is that in addition to violating truth-telling and equality that apply to both Game D and Game T, Person A in Game T

also fails to reciprocate when reporting (10,2) because Person B has chosen to trust him. Thus, ceteris paribus, pure justification pressure is more likely to promote honest behavior in Game T than in Game D. Therefore, our first hypothesis is:

H1: Pure justification pressure is more likely to reduce profit-maximizing behavior when (1) the truth is (7,7) than when the truth is (5,9), and (2) in Game T than in Game D.

In the experiment, we elicit beliefs regarding what the target group thinks one should do (normative expectations). We test our model by examining the difference between normative expectations and behavior in the two treatments. As discussed above, the model predicts that Person A is more likely to choose what is acceptable to the audience (s^t_i) when Person A is required to explain his decision ($J=1$). Thus, our second hypothesis is:

H2: Compared with the No Justification treatment, people are more likely to choose what they believe the audience thinks they should do in the Justification treatment.

V. Results

We ran 16 sessions in total (8 sessions for each treatment) and obtained observations on 334 subjects: 170 subjects in the Justification treatment, 164 subjects in the No Justification treatment.[5] Since we are interested in the cases when the true computer-selected earnings outcome is (7,7) and (5,9), we designed the experiment so that in each session most pairs receive either (7,7) or (5,9).

As discussed above, it is more likely that subjects expect the audience to think they should not report (10,2) for the (7,7) condition than for the (5,9) condition. Thus, the (7,7) condition has a greater chance to reveal the effects of justification requirements. In view of this, we also design the experiment so that more pairs receive (7,7) than (5,9). In total, we obtain 87 observations for the (7,7) condition (43 in the No Justification treatment and 44 in the

[5] Due to the software problem, in the No Justification treatment, one Person A who was supposed to be assigned to the (5,9) condition in both Game D and Game T did not play Game D and reported (10,2) in Game T. Another Person A received different earnings outcomes from the computer: (7,7) in Game D and (5,9) in Game T and this Person A reported (10,2) in both games. We exclude these two in the data analysis reported here. We also exclude an outlier Person A in the No Justification treatment who seemed to misunderstand the experiment and reported (5,9) when the computer-selected outcome was (7,7) in Game T. The subject wrote in the ex post survey that in the first game (Game T) he assumed in the second game person B would have to choose between "in" or "out," even though it was clearly stated in the instructions that Person A's decision in one game does not affect his payoff in the other game and Person A is randomly matched with a different Person B in the two games. Thus, the data reported here include 85 Person A's in the Justification treatment and 79 Person A's in the No Justification treatment. Including these three Person A's does not change the conclusions.

Justification treatment); 61 observations for the (5,9) condition (28 in the No Justification treatment and 33 in the Justification treatment) and 16 observations for the (10,2) condition (8 in each treatment). This is summarized in Table 1.

When the computer-assigned earnings outcome is (10,2), 7 out of 8 Person As reported the truth in Game D in both the Justification and the No Justification treatments; 6 out of 8 Person As reported the truth in Game T, also in both treatments. Below we focus on the cases when the computer-assigned earnings outcome is (7,7) or (5,9). We first report Person A's decisions to test H1 then, to test H2, we examine how many Person As chose exactly what they believed the audience thought they should do in each condition. All messages are listed in Appendix C.

V.A. Justification and lying

When Person A sees the computer's selected earnings outcome is (5,9), he can either report the truth or lie. There are two types of lies in this condition: to report (7,7) or (10,2). In both case, Person A's earnings are higher than the computer-assigned. Compared with the profit-maximizing decision of reporting (10,2), to report (7,7) can reach equality and maintain efficiency. When the computer-selected earnings outcome is (7,7), there is only one type of lie: to report the profit-maximizing outcome (10,2). Figure 1 plots the proportion of lies in each treatment and each condition.

As shown in Figure 1, consistent with our hypothesis, the rate of lying is always higher in the No Justification treatment than in the Justification treatment. The comparison of lying rates is significant in Game T when the true computer-selected outcome is (7,7) (39% vs. 63%, Z-test, $p=0.02$). We also find that the comparisons in the other five cases are not significant (Z-tests, $p>0.50$). Thus, the finding that the justification requirement significantly reduces the probability of reporting (10,2) when the computer assigns (7,7) in Game T but the effect is not significant when the computer assigns (5,9) or when play in the Game D setting supports our first hypothesis.

Each Person A plays both Game D and Game T and receives the same computer-selected earnings outcome in each game. Again, to avoid an order effect, we randomize the order of the two games. We did not observe a significant order effect in this experiment. .It is interesting that, as shown in Figure 1, there are no significant behavioral differences between Game D and Game

T in the No Justification treatment regardless whether the truth is (7,7) or (5,9) while previous research shows that people are more likely to share with the partner if the partner has signaled trust (see Cox, 2004; McCabe, et al. 2003). However, in the Justification treatment, when the truth is (7,7), Person As are significantly less likely to report (10,2) in Game T than in Game D (39% vs. 55%, Wilcoxon sign rank test, p=0.03). The reporting behavior does not differ significantly between Game D and Game T when the truth is (5,9) (Wilcoxon sign rank test, p>0.10).[6]

One explanation is that, unlike the standard trust game, in this experiment, Person A's partner Person B never knows whether a good (or bad) outcome is generated by a computer or by Person A's positive (or negative) intention. If the reason the trustee reciprocates to the trustor is that the trustee does not want the trustor to feel betrayed (e.g., Bohnet and Zeckhauser, 2004; Aimone and Houser, 2011), this concern does not exist or is present to a lesser degree in the experiment. However, in the Justification treatment, the requirement of justification draws subjects' attention to what the audience thinks. Thus any differences in the normative expectations among these conditions can lead to behavioral differences.

It is worthwhile to note that the belief data elicited by our survey are consistent with this explanation. In the Justification condition, Person As are significantly more likely to believe that the audience thought they should tell the truth when assigned (7,7) in Game T than in Game D (89% vs. 77%; Wilcoxon sign rank test, p=0.03). When the truth is (5,9), in both Game T and Game D, only a small proportion of Person As believed the audience thought they should tell the truth (27% in Game T vs. 24% in Game D, Wilcoxon sign rank test, p=0.57). Thus, even though Person A's matched Person B does not know the truth in the Justification treatment, they are more likely to tell the truth in Game T than Game D when the truth is (7,7) but not when the truth is (5,9). We next examine the belief data obtained from the survey to provide further information on how the justification manipulation affects behavior.

V.B. Justification and beliefs

Recall that our second hypothesis is that Person A is more likely to choose what he believes the audience thinks he should do (normative expectation) when justification is required than when it

[6] The percentage of Person B's who chose "in" is not significantly different between treatments (67% in the No Justification treatment and 66% in the Justification treatment choose "in" Z-test, p=0.87).

is not required. To examine this hypothesis, we calculate the percentage of subjects whose reporting behavior is exactly the same as their normative expectation. We plot the data in Figure 2. As shown in Figure 2, compared with No Justification treatment, more subjects in the Justification treatment report exactly the same as their normative expectations.

We ran an OLS regression to test whether this percentage is higher in Justification than No Justification (pooling across both (5,9) and (7,7) conditions)[7]. Each Person A plays both Game T and Game D. We conduct a regression analysis for Game T and Game D separately. The regression results are reported in Table 2. The dependent variable "consistent" is equal to one if Person A's choice is the same as his normative expectation, and zero otherwise. For independent variables, we first include only the treatment variable "Justify" (Regression 1 and Regression 3 in Table 2). We then separate the (5,9) and (7,7) conditions (Regression 2 and Regression 4). As shown in Table 2, the treatment variable "Justify" is positive and significant in Regression 1 and Regression 3. In Regression 2 and Regression 4, the coefficients for "*Justify*Assigned(5,9)"* and *"Justify*Assigned(7,7)*" are jointly positive (F-test, one tail, p=0.02 for Regression 2 and p=0.04 for Regression 4).

It is also interesting to note that we find the proportion of Person A's who believe the audience thinks they should be honest is significantly higher in the Justification treatment than in the No Justification treatment when assigned (7,7) in Game T (88% vs. 65%, Z-test, $p<0.01$). We did not observe significant differences between the two treatments for the other three cases (assigned (7,7) in Game D and assigned (5,9) in Game D and Game T). We discuss possible explanations in the next section.

VI. Discussion

The need for justification is a widely observed social phenomenon. The role of justification necessity has been discussed in accountability literature with a focus on judgment accuracy or social perception (Lerner and Tetlock,1999). Recently economists have also drawn attention to the accountability effect on risk choices (e.g., Vieider, 2010; Pahlke, Strasser, and Vieider, 2011; and Brandts and Garofalo, 2010). Nevertheless there still is a lack of systematic studies to

[7] Probit regressions generate qualitatively identical results. Here we report OLS regression results because it is easier to interpret the coefficients.

explain whether and how justification influences prosocial behavior in economic exchange environments when there is negative externality of selfish behavior.

In this paper, we develop a theoretical framework of the effect of pure justification requirements. We argue that people are prompted to think about and therefore act on what the audience believes they should do when justification is required, even though the way justification is constructed does not have any payoff consequences. We hypothesize that requiring one to justify their actions can reduce selfish behavior when it is clear that selfish behavior is not acceptable to the audience. Our data support this hypothesis. In one-shot anonymous interactions, subjects are more likely to avoid the profit-maximizing choice and pursue a more efficient outcome that also benefits their partners when they are required to justify their behavior, and when it is clear that selfish choices are not acceptable.

The data also suggest some evidence that justification conditions may change people's expectations regarding what the observers think they should do (represented by s^t_i in our model). One explanation is that the need to justify may reshape people's perceptions because people may engage in self-critical information processes and try to anticipate the objections of potential critics, as discussed in the literature review. In this experiment, compared with other cases, it is most salient that to report (10,2) is wrong when the computer assigned (7,7) in Game T; thus, this is probably the easiest case for people to change their normative expectations, s^t_i, when they have to justify their behavior. This mechanism can potentially enhance the effect of justification on promoting cooperation. The reason is that once the justification necessity leads people to choose *what they expect* the audience thinks they should do, this normative expectation may also be closer to what the audience *actually* thinks they should do under the justification condition.

A few previous studies suggest that when subjects can send a message to their partner, they become more selfish and write excuses for their selfish behavior in the message (e.g., Andreoni and Rao, 2011). In addition to the framing difference regarding the function of messages, in this study, we design the games so that a profit-seeking action clearly violates multiple norms. Thus, the difference between our findings and previous findings might suggest that to achieve desirable outcomes, it is important to make the standard held by the target group transparent. Moreover, the audience of justification in this study is not the partner a subject directly interacts with and the subject knows that his behavior does not have any material impact on the audience. Previous literature on accountability suggests that who the subject is

accountable to matters. We are conducting further studies to compare the effect of different audiences on justification.

This study extends previous research on accountability to economic behavior and shows that pure justification pressure itself can have significant behavioral consequences in economic exchange environments. Although we exclude the effect of identifiability in the design to study pure justification effects, our findings provide an explanation for why cooperation is more likely in environments of high transparency and publicity. In addition to the reputation concern, it is reasonable to argue that people expect it is more likely that they will have to justify their behaviors to others when their decisions are made public (e.g. Linardi and McConnell, 2011).

This paper also contributes to the theoretical literature on accountability and norm obedience, and institution designs. The previous literature has demonstrated the importance of social norms in decision making. Our understanding of how social norms influence behavior, especially in the absence of monetary incentives such as penalties, however, is still limited. This study suggests that the necessity of justification as a universal feature of human interaction may play an important role in facilitating norm obedience. When people expect to provide explanations for their behavior, they are more likely to conform to norms even when there is no extrinsic monetary incentive for the obedience.

Our results highlight the importance of explicit requirement for justification in promoting socially desirable behavior. Indeed, many institutions explicitly require leaders and policy makers to explain why decisions are made such as the HSS's new policy requiring justification for increases in health insurance premiums. Our study suggests that this policy may indeed motivate health insurance companies to set reasonable premiums. Another example is that corporate boards are often required to explain decisions to the shareholders (see Model Business Corporate Act, section 8.30, 2008). In addition to helping people understand and support decisions or policies, when leaders are required to offer justification they are also more likely to design the policy based on their belief of what the groups think is the right thing to do rather than pursing self-interest. We may also conjecture that institutions that enforce competition (such as democratic systems) automatically call for the need to justify and thereby the competitors are more likely to make decisions that increase social welfare rather than promote their own benefit. On the other hand, if there is a lack of competition, it is important to build institutions that

require justifications because these kinds of institutions can promote cooperation, even if the decision makers do not bear any consequences for their selfishness.

References

Aimone, J. and Houser, D. (2011)"Beneficial Betrayal Aversion," with Jason Aimone. PLoS ONE, 6(3): e17725. doi:10.1371/journal.pone.0017725

Andreoni, J. and Rao, J. 2011. "The power of asking: How communication affects selfishness, empathy, and altruism", Journal of Public Economics

Bicchieri,C. The Grammar of Society: The Nature and Dynamics of Social Norms, Cambridge University Press, 2006

Bicchieri, C. and Xiao, E. 2009 "Do the right thing: But only if others do so", Journal of Behavioral Decision Making.22(2), 191-208.

Bohnet, I. and Richard Z. "Trust, Risk and Betrayal." *Journal of Economic Behavior and Organization*, 2004, *55* (4), pp. 467-484.

Brandts, J. and Garofalo, O. 2010. "Gender pairings and accountability effects". Working paper.

Cialdini, R. B.; Kallgren, C. A. and Raymond R.1990,"A Focus Theory of Normative Conduct: A Theoretical Refinement and Reevaluation of the Role of Norms in Human Behavior." Advances in Experimental Social Psychology, 24, pp 201-234.

Cooter, R. D. "Expressive Law and Economics, Journal of Legal Studies 27(2), pp.585-608

Collins, A. M. & Loftus, E. F. "A Spreading-Activation Theory of Semantic Processing." Psychological Review, 1975, 82, pp407-428.

Cox, J. (2004). How to identify trust and reciprocity. Games and Economic Behavior, 46, 260–281.

Fehr, E. and Fischbacher,U. "Social norms and human cooperation." TRENDS in Cognitive Sciences, 2004, 8 (4), pp185-190.

Fischbacher, Urs (2007): z-Tree: Zurich Toolbox for Ready-made Economic Experiments, Experimental Economics 10(2), 171-178.

Gneezy, U., Rustichini, A. 2000a. A Fine Is A Price. Journal of Legal Studies. 29(1), 1-17.

Harvey, M. D. and Enzle, M. E. "A cognitive model of social norms for understanding the transgression-helping effect." Journal of Personality and Social Psychology, 1981, 41, pp866-875.

Houser, D. Xiao, E., McCabe, M. and Smith, M. 2008. "When punishment fails: Research on sanctions, intentions and non-cooperation", Games and Economic Behavior, 62 (2), 509-532.

Kahan, D. M. (1998) "Social Meaning and the Economic Analysis of Crime. Journal of Legal Studies 27(2), pp. 661-672.

Kruglanski, A. W., & Freund, T. (1983). The freezing and unfreezing of lay-inferences: Effects on impressional primacy, ethnic stereotyping and numerical anchoring. Journal of Experimental Social Psychology, 19, 448-468

De Kwaadsteniet, E.W., Van Dijk, E., Wit, A., De Cremer, D., De Rooij, M. (2007). "Justifying Decisions in Social Dilemmas: Justification Pressures and Tacit Coordination Under Environmental Uncertainty". Personality and Social Psychology Bulletin. 33(12), pp. 1648-60

De Cremer and Van Dijk (2009) "Paying for sanctions in social dilemmas: The effects of endowment asymmetry and accountability". Organizational Behavior and Human Decision Processes. 109, 45-55

Lerner, J. S., & Tetlock, P. E. (1999). Accounting for the effects of accountability. Psychological Bulletin, 125(2), 255-275

Li, J., Xiao, E., Houser, D. and Montague, R. 2009, "Neural responses to sanction threats in two-party economic exchange,", PNAS. September 29, vol. 106 no. 39, 16835-16840

Linardi, S. McConnell, M. A. (2011) "No Excuses for Good Behavior: Volunteering and the Social Environment" *Journal of Public Economics*, 95, 5-6, pp 445-454

McCabe, K., Rigdon, M., Smith, V. 2003. Positive reciprocity and intention in trust games. Journal of Economic Behavior and Organizations. 52(2), 267-275.

Model Business Corporate Act (2008) section 8.30, 2008

Pahlke, J., Strasser, S. and Vieider, F. M. (2011). "Risk-Taking for Others under Accountability", working paper

Scott, M. B., & Lyman, S. (1968). Accounts. American Sociological Review, 33(1), 46-62.

Siegel-Jacobs, K., & Yates, J. F. (1996). Effects of procedural and outcome accountability on judgment quality. Organizational Behavior and Human Decision Processes, 66, 1-17.

Simonson, I., & Nowlis, S. (1998). Constructive decision making in a social context: Unconventional choices based on reasons. Working paper, Stanford University.

Simonson, I., & Nye, P. (1992). The effect of accountability on susceptibility to decision errors. Organizational Behavior and Human Decision Processes, 51, 416-446.

Sunstein, C. R. "On the Expressive Function of Law". University of Pennsylvania Law Review, 1996,144. pp2021-2031

Shalvi. S., Dana, J., Handgraaf, M. J.J. De Dreu, C. K.W. 2011. “Justified ethicality: Observing desired counterfactuals modifies ethical perceptions and behavior” Organizational Behavior and Human Decision Processes. 115,181–190

Tetlock, P. E. (1985). Accountability: A social check on the fundamental attribution error. Social Psychology Quarterly, 48(3), 227-236.

Tetlock, P. E. (1992). The impact of accountability on judgment and choice: Toward a social contingency model. Advances in Experimental Social Psychology, 25, 331-376.

Vieider, F.M., 2010. “Separating Real Incentives and Accountability”. Working paper.

Webster, D. M., Richter, L., & Kruglanski, A. W. (1996). On leaping to conclusions when feeling tired: Mental fatigue effects on impressional primacy. Journal of Experimental Social Psychology, 32, 181-195.

Figure 1. Lying behavior by treatments

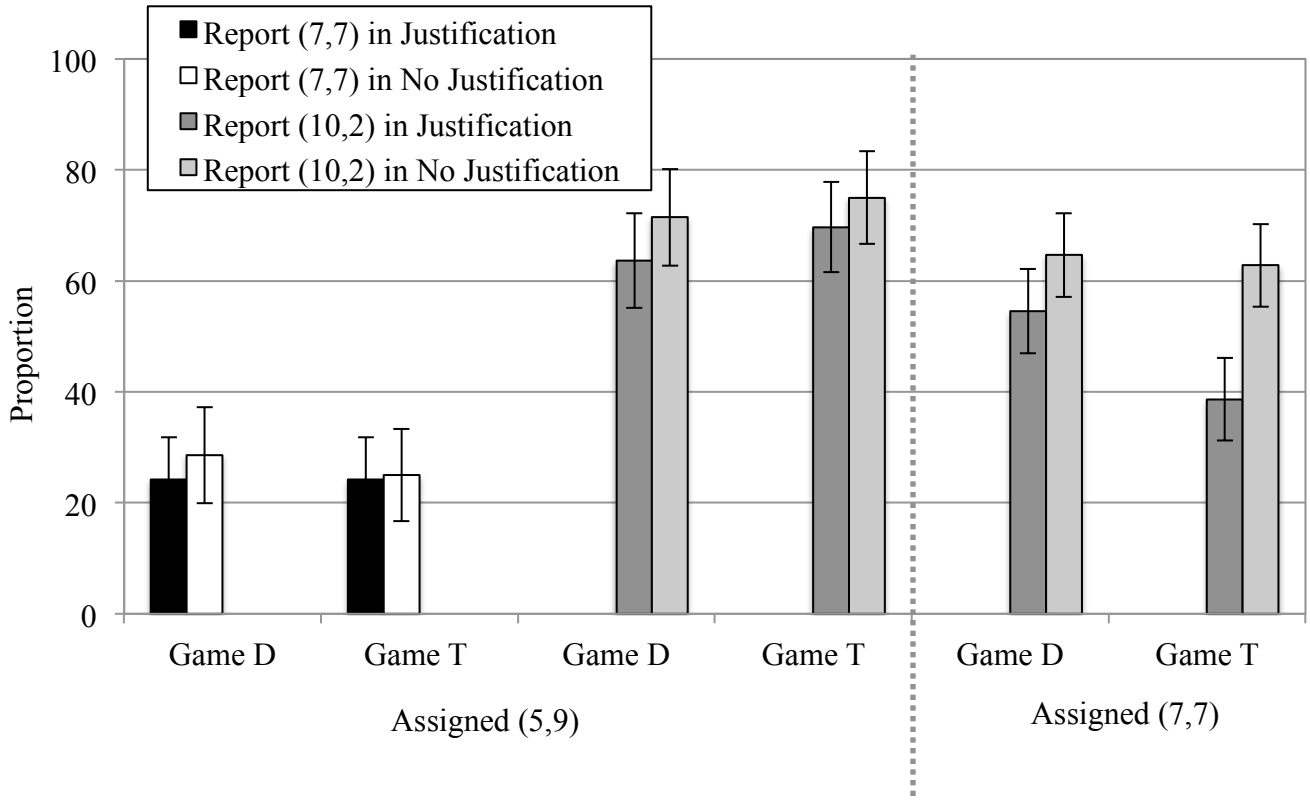

Figure 2. Percentage of Person As whose reporting behavior is the same as the normative expectation by treatments.

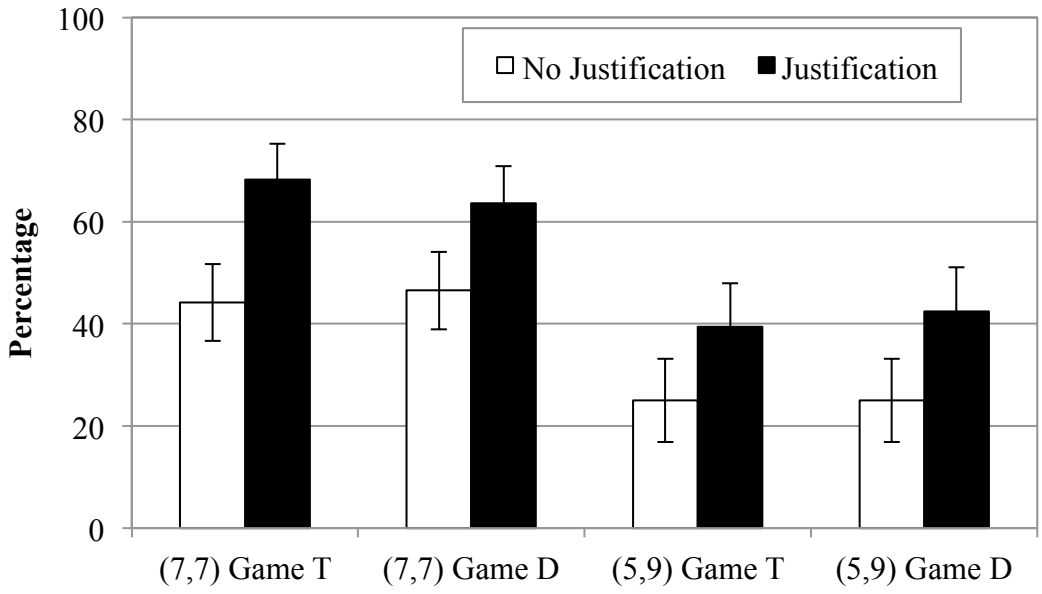

Table 1. Experiment conditions and the number of observations

Computer assigned earnings condition	Treatment	
	Justification	No Justification
(10,2)	8	8
(5,9)	33	28
(7,7)	44	43

Note: The first number in the parentheses is Person A's earnings and the second one is Person B's earnings.

Table 2. OLS regression analysis of Person A's reporting behavior

	Dependent variable: *Consistent* =1 if reporting behavior is the same as the normative expectation; =0, o.w.			
	Game D		**Game T**	
	Regression 1	Regression 2	Regression3	Regression 4
Justify *=1 if Justification Treatment* *=0 o.w.*	0.17** (0.06)		0.19** (0.08)	
*Justify*Assigned(5,9)*		0.17* (0.10)		0.14 (0.11)
Assigned(5,9)		0.25*** (0.05)		0.25*** (0.06)
*Justify*Assigned(7,7)*		0.17 (0.12)		0.24** (0.11)
Assigned(7,7)		0.47*** (0.11)		0.44*** (0.08)
_cons	0.38*** (0.06)		0.37*** (0.07)	

Note: numbers in the parenthesis are the robust standard error.
*** significant at 1% level; **significant at 5% level; *significant at 10% level

Appendix A. Instructions

- **Game D in Justification Treatment**

In this task, you are randomly matched with another participant. One plays as Person A and the other plays as Person B. Person A's and Person B's final earnings are decided by the following steps:

Step 1: For each group, the computer will select one of the following three possible earnings outcomes. Each of the three possible earnings outcomes specifies Person A's and Person B's earnings.

- Person A receives $5 and Person B receives $9
- Person A receives $7 and Person B receives $7
- Person A receives $10 and Person B receives $2
-

Step 2: Person A will see the computer-selected earnings outcome for his/her group. Person B will not see the computer-selected earnings outcome. Neither will B see the real computer-selected earnings outcome throughout today's experiment.

Step 3: Person A decides what to report to Person B regarding the computer-selected earnings outcome. Person A can choose either to tell the truth or tell a lie. A and B will receive earnings based on the earnings outcome A reports to B.

> **For example**, suppose the computer-selected earnings outcome for your group was "A receives $7 and B receives $7." After seeing this outcome,
>
> - If A told the truth and reported to B that "The true computer-selected earnings outcome is A receives $7 and B receives $7", then A's final earnings are $7 and B's final earnings are $7.
> - If A told a lie and reported to B that "The true computer-selected earnings outcome is A receives $5 and B receives $9," then A's final earnings are $5 and B's final earnings are $9.
> - If A told a lie and reported to B that "The true computer-selected earnings outcome is A receives $10 and B receives $2," then A's final earnings are $10 and B's final earnings are $2.

Person B will see Person A's report and therefore each one's earnings in this task at the end of the experiment. Person B will never know what the real computer-selected earnings outcome is throughout the experiment.

When A decides what to report to B, A must also provide at least two different explanations for his/her decision.

At the end of the experiment, one Person B who has never been matched with Person A in the decision tasks will be randomly selected and this Person B will review Person A's message of explanations. In particular, this Person B will see the following information of your group:
1) the real computer-selected earnings outcome in decision task 1
2) Person A's report and explanations of his/her decisions in decision task 1.

Person A should write his/her explanations message in the following format.

"I decide to tell the truth and report to B that "The true computer-selected earnings outcome is A receives $__ and B receives $___" because first...; second…; ……"
Or
"I decide to lie and report to B that "The true computer-selected earnings outcome is A receives $__ and B receives $___" because first...; second…; ……"

Please note: Person A should not identify him/herself by name, ID number, gender, or appearance. Person A should write a message to explain his/her decision using the format described above. Any violation of these requirements will result in Person A forfeiting all earnings and receiving only the $5 show-up bonus.

- **Game T in Justification Treatment**

In this task, you are randomly matched with another participant. One plays as Person A and the other plays as Person B. Person A's and Person B's final earnings are decided by the following steps:

Step 1: Person B decides to either choose "**In**" or "**Out.**"

- If Person B chooses "**Out,**" the final earnings for both Person A and Person B is **$4 each.**

- If Person B chooses "**In,**" then the final earnings for Person A and Person B will be **decided by the three steps described below**.

Step 2: In the case where Person B chooses "**In,**" the computer will select one of the following three possible earnings outcomes. Each of the following three earnings outcomes specifies Person A's and Person B's earnings.

- Person A receives $5 and Person B receives $9
- Person A receives $7 and Person B receives $7
- Person A receives $10 and Person B receives $2

Step 3: Person A will see the computer-selected earnings outcome for his/her group. Person B will not see the computer-selected earnings outcome. Neither will B see the real computer-selected earnings outcome throughout today's experiment.

Step 4: Person A decides what to report to Person B regarding the computer-selected earnings outcome. Person A can choose either to tell the truth or tell a lie.
If "In" is B's actual choice in Step 1, A's report will be carried out and A and B will receive earnings based on the earnings outcome A reports to B.

Note that Person A will not know whether Person B has chosen "In" or "Out" when deciding what earnings outcome to report to B. However, since A's report will only make a difference when B has chosen "In," we ask A to presume that B has chosen "In" for the purpose of making this decision.

For example, suppose B chose "**In**" and the computer-selected earnings outcome for your group was: "A receives $7 and B receives $7." After seeing this outcome:

- If A told the truth and reported to B that "The true computer-selected earnings outcome is A receives $7 and B receives $7," then A's final earnings are $7 and B's final earnings are $7.
- If A told a lie and reported to B that "The true computer-selected earnings outcome is A receives $5 and B receives $9," then A's final earnings are $5 and B's final earnings are $9.

- If A told a lie and reported to B that "The true computer-selected earnings outcome is A receives $10 and B receives $2," then A's final earnings are $10 and B's final earnings are $2.

In the case where B's actual choice in Step 1 is "In," B will see A's report and therefore each one's earnings in this decision task at the end of the experiment. B will never know what the real computer-selected earnings outcome is throughout the experiment. **In the case where B's actual choice in Step 1 is "Out,"** B will not see either A's report or the real computer-selected earnings outcome. In this case, A and B's final earnings will be $4 each.

When A decides what to report to B, A must also provide at least two different explanations for his/her decision.

At the end of the experiment, one Person B who has never been matched with Person A in the decision tasks will be randomly selected and this Person B will review Person A's message of explanations. This Person B will also be different than the Person B who was randomly selected to review Person A's message in decision task 1. In particular, this Person B will see the following information of your group:
1) the real computer-selected earnings outcome in decision task 2
2) Person A's report and explanations of his/her decisions in decision task 2.

Person A should write his/her explanations message in the following format.

"I decide to tell the truth and report to B that "The true computer-selected earnings outcome is A receives $__ and B receives $___" because first...; second…; ……"
Or
"I decide to lie and report to B that "The true computer-selected earnings outcome is A receives $__ and B receives $___" because first...; second…; ……"

Please note: Person A should not identify him/herself by name, ID number, gender, or appearance. Person A should write a message to explain his/her decision using the format described above. Any violation of these requirements will result in Person A forfeiting all earnings and receiving only the $5 show-up bonus.

- **Game D in No Justification Treatment**

In this task, you are randomly matched with another participant. One plays as Person A and the other plays as Person B. Person A's and Person B's final earnings are decided by the following steps:

Step 1: For each group, the computer will select one of the following three possible earnings outcomes. Each of the three possible three earnings outcomes specifies Person A's and Person B's earnings.
- Person A receives $5 and Person B receives $9
- Person A receives $7 and Person B receives $7
- Person A receives $10 and Person B receives $2

Step 2: Person A will see the computer-selected earnings outcome for his/her group. Person B will not see the computer-selected earnings outcome. Neither will B see the real computer-selected earnings outcome throughout today's experiment.

Step 3: Person A decides what to report to Person B regarding the computer-selected earnings outcome. Person A can choose either to tell the truth or tell a lie. A and B will receive earnings based on the earnings outcome A reports to B.

For example, suppose the computer-selected earnings outcome for your group was "A receives $7 and B receives $7." After seeing this outcome,

- If A told the truth and reported to B that "The true computer-selected earnings outcome is A receives $7 and B receives $7," then A's final earnings are $7 and B's final earnings are $7.
- If A told a lie and reported to B that "The true computer-selected earnings outcome is A receives $5 and B receives $9," then A's final earnings are $5 and B's final earnings are $9.
- If A told a lie and reported to B that "The true computer-selected earnings outcome is A receives $10 and B receives $2," then A's final earnings are $10 and B's final earnings are $2.

Person B will see Person A's report and therefore each one's earnings in this task at the end of the experiment. Person B will never know what the real computer-selected earnings outcome is throughout the experiment.

At the end of the experiment, one Person B who has never been matched with Person A in the decision tasks will be randomly selected and this Person B will see the following information of your group:
1) the real computer-selected earnings outcome in decision task 1
2) Person A's report.

- **Game T in No Justification Treatment**

In this task, you are randomly matched with another participant. One plays as Person A and the other plays as Person B. Person A's and Person B's final earnings are decided by the following steps:

Step 1: Person B decides to either choose "**In**" or "**Out.**"

- If Person B chooses "**Out,**" the final earnings for both Person A and Person B is **$4 each.**

- If Person B chooses "**In,**" then the final earnings for Person A and Person B will be **decided by the three steps described below**.

Step 2: In the case where Person B chooses "**In,**" the computer will select one of the following three possible earnings outcomes. Each of the following three earnings outcomes specifies Person A's and Person B's earnings.

- Person A receives $5 and Person B receives $9
- Person A receives $7 and Person B receives $7
- Person A receives $10 and Person B receives $2

Step 3: Person A will see the computer-selected earnings outcome for his/her group. Person B will not see the computer-selected earnings outcome. Neither will B see the real computer-selected earnings outcome throughout today's experiment.

Step 4: Person A decides what to report to Person B regarding the computer-selected earnings outcome. Person A can choose either to tell the truth or tell a lie.
If "In" is B's actual choice in Step 1, A's report will be carried out and A and B will receive earnings based on the earnings outcome A reports to B.

Note that Person A will not know whether Person B has chosen "In" or "Out" when deciding what earnings outcome to report to B. However, since A's report will only make a difference when B has chosen "In," we ask A to presume that B has chosen "In" for the purpose of making this decision.

> **For example**, suppose B chose "**In**" and the computer-selected earnings outcome for your group was: "A receives $7 and B receives $7." After seeing this outcome:
>
> - If A told the truth and reported to B that "The true computer-selected earnings outcome is A receives $7 and B receives $7," then A's final earnings are $7 and B's final earnings are $7.
> - If A told a lie and reported to B that "The true computer-selected earnings outcome is A receives $5 and B receives $9," then A's final earnings are $5 and B's final earnings are $9.
> - If A told a lie and reported to B that "The true computer-selected earnings outcome is A receives $10 and B receives $2," then A's final earnings are $10 and B's final earnings are $2.

In the case where B's actual choice in Step 1 is "In," B will see A's report and therefore each one's earnings in this decision task at the end of the experiment. B will never know what the real computer-selected earnings outcome is throughout the experiment. **In the case where B's actual choice in Step 1 is "Out,"** B will not see either A's report or the real computer-selected earnings outcome. In this case, A and B's final earnings will be $4 each.

At the end of the experiment, one Person B who has never been matched with Person A in the decision tasks will be randomly selected and this Person B will review Person A's report. This Person B will also be different than the Person B who was randomly selected to review Person A's report in decision task 1. In particular, this Person B will see the following information of your group:

3) the real computer-selected earnings outcome in decision task 2
4) Person A's report.

Appendix B. Survey

- **A sample of Person A's survey in Game D**

The experiment is finished. Please answer the following questions. You can earn one point for some of the questions if your answer is correct. We will randomly select two of those questions and you will earn $2 for each point you earned.

In Decision task 1, the computer-selected earnings outcome for your group was: Person A receives $10 and Person B receives $2. You reported to Person B that the computer-selected earnings outcome was: ….

At the end of the experiment, another Person B who has never been matched with you in any of the decision tasks saw the real computer-selected earnings outcome for your group in this task.

1. Before seeing what you actually reported to your matched Person B, he/she was asked to guess what you would report. Please guess what this Person B's answer is. You will earn one point if your answer is the same as what this Person B answered in his/her survey.
I think this Person B guessed that I would report:
   - Person A receives $5 and Person B receives $9;
   - Person A receives $7 and Person B receives $7;
   - Person A receives $10 and Person B receives $2.

2. Before seeing what you actually reported to your matched Person B, he/she was asked to indicate what he/she thought you should report. Please guess what this Person B's answer is. You will earn one point if your answer is the same as what this Person B answered in his/her survey.
I think this Person B believed I should report:
   - Person A receives $5 and Person B receives $9;
   - Person A receives $7 and Person B receives $7;
   - Person A receives $10 and Person B receives $2.

3. After seeing what you actually reported to your matched Person B, he/she was asked to indicate to what extent he/she thought your report and your explanations were acceptable from "1=not acceptable at all" to "5=completely acceptable". Please guess what you think this Person B's answer is. You will earn one point for each answer that is the same as what Person B answered in his/her survey.
I believe this Person B thought my report was:
I believe this Person B thought my explanations were:

4. For each of the following reports you could send to your matched Person B in Decision Task 1, please indicate to what extent you can explain why you think your report is the one you should send make from "1 = not easy at all" to "7 = very easy".
--Report to Person B that the computer-selected earnings outcome is: Person A receives $5 and Person B receives $9
--Report to Person B that the computer-selected earnings outcome is: Person A receives $7 and Person B receives $7
--Report to Person B that the computer-selected earnings outcome is: Person A receives $10 and Person B receives $2

5. We asked your matched Person B in Decision Task 1 how satisfied he/she is regarding the computer-selected earnings outcomes you reported from "1 = not satisfied at all" to "7 = very satisfied". Please guess what you think your matched Person B's answer is. You will earn one point for each answer that is the same as what Person B answered in his/her survey.
I guess Person B's answer is:

6. We asked your matched Person B in Decision Task 1 what the probability is that the computer-selected earnings outcome you reported is the real one selected by the computer. Please guess what you think your matched Person B's answer is. You will earn one point for each answer that is the same as what Person B answered in his/her survey.

I guess Person B's answer is:

- 0;
- less than 50% but greater than 0;
- 50% ;
- greater than 50%;
- 1

- **A sample of Person A's survey in Game T**

In Decision task 2, in the case that B chose "In", the computer-selected earnings outcome for your group was: Person A receives $10 and Person B receives $2. You reported to Person B that the computer-selected earnings outcome was: …

At the end of the experiment, another Person B who has never been matched with you in any of the decision tasks saw the real computer-selected earnings outcome for your group in this task.

(1-4 same as Game D)

5. What do you think Person B chose? You will earn one point if your answer is correct.
6. In the case that your matched Person B in Decision Task 2 chose "In", he/she would see the computer-selected earnings outcome you reported and be asked to indicate how satisfied he/she is with the report from "1 = not satisfied at all" to "7 = very satisfied". Please guess what you think your matched Person B's answer is. You will earn one point for each answer that is the same as what Person B answered in his/her survey.

I guess Person B's answer is:

7. In the case that your matched Person B in Decision Task 2 chose "In", we asked him/her what the probability is that the computer-selected earnings outcome you reported is the real one selected by the computer. Please guess what you think your matched Person B's answer is. You will earn one point for each answer that is the same as what Person B answered in his/her survey.

I guess Person B's answer is:

- 0;
- less than 50% but greater than 0;
- 50% ;
- greater than 50%;
- 1

Appendix C. Messages table

(Note: We tried to enforce the subjects to write a message to explain their decisions and also give them time to practice how to use the chat box in the software to record the messages. It turns out, however, four Person A's only recorded a message for one of the games. Our results do not vary on whether to include these four observations or not.)

Game D	Game T
I decide to tell the truth and report to B that the true computer-selected earnings outcome is A receives $10 and B receives is $2 because telling the truth is fair and these are the true outcomes.	I decide to lie and report to B that the true computer-selected earnings outcome is A receives $7 and B receives $7 because A and B receive even amounts and even amounts would be fair in this case.
I decide to tell the lie and report to B that the true computer-selected earning outcome is A receives 10 and B receives 2 because first I can earn more money; second I can be better off.	I decide to tell the truth and report to B that the true computer-selected earning outcome is A receives 7 and B receives 7 because first we can be both better off; second it's better than A receives 10 and B receives 2.
I decided to tell the truth and report to B that the true computer-selected earnings outcome is A receives $7 and B receives $7 because first it is the truth and it is the fair share of the deals given.	I decided to tell the truth and report to B that the true computer-selected earnings outcome is A receives $7 and B receives $7 because first it was the truth and second it is a fair decision since both A and B will receive the same amount.
I decide to tell the truth and report to B that the true computer-selected earnings outcome is A receives $7 and B receives $7"because first I want Person B to aware of the real situation and second I understand earnings by telling the truth will go a long way.	I decide to tell the truth and report to B that the true computer-selected earnings outcome is A receives $7 and B receives $7 because first I want Person B to be aware of the real situation and second earnings by telling the truth goes a long way.
I decide to lie and report to B that the true computer-selected earnings outcome is A receives $10 and B receives $2 because first I want more money; second B will not know if I lied or not.	I decide to tell the truth and report to B that the true computer-selected earnings outcome is A receives $7 and B receives $7 because first telling the truth is the right thing to do; second we both made equal amounts of money.
I decide to tell the truth and report to B that the true computer-selected earnings outcome is A receives $5 and B receives $9 because first, telling the truth is good; second A has an advantage of choosing the amount each person gets so it should be fair.	I decide to lie and report to B that the true computer-selected earnings outcome is A receives$10 and B receives $2 because first, person A got rigged out of money; second person B had a choice to be OUT.
I decide to lie and report to B that the true computer-selected earnings outcome is A receives $10 and B receives $2 because first lying gives me the most money; second I need $; third I don't see any negative outcomes for me lying to Person B.	I decided to lie and report to B that the true computer-selected earnings outcome is A receives $10 and B receives $2 because first this is the most profitable decision for me; second there are no negative impacts of my myself totally disregarding everyone else's welfare. lying for my gain; third I am looking for the greatest amount of money for...
I decide to lie and report to B that the true computer-selected earnings outcome is A receives $10 and B receives $2 because first I desire to make the most money I can; and second Person B will never know if I lied.	I decide to lie and report to B that the true computer-selected earnings outcome is A receives $10 and B receives $2 because first, I want to make as much money as I can and second, B will never know that I lied.
I decide to tell the truth and report to B that the true computer-selected earnings outcome is A receives $ 5 and B receives $ 9 because first that is what the computer report states; second I'm just being truthful.	I decide to tell the truth and report to B that The true computer-selected earnings outcome is A receives $ 5 and B receives $ 9 because first that is what the computer reports; second I want to be truthful.
I decide to tell the lie and report to B that The true computer-selected earnings outcome is A receives $10 and B received $2 because first, I could earn more money than 5 dollars; second, I totally control the right to choose the level of the payment, so I	I decide to tell the lie and report to B that The true computer-selected earning outcome is A received $10 and B receives $2 because first, it is very possible that B choose out, so it doesn't matter whether I choose to

want to do something best to my benefit.	tell the truth or tell the lie; second, I have chance to earn more money.
I decide to lie and report to B that The true computer-selected earnings outcome is A receives $7 and B receives $7 because I wanted to equally distribute the money and I was responsible for person B's earnings.	I decide to lie and report to B that the true computer earnings outcome is A receives $7 and B receives $7 because it was the fairest distribution of the money, and I imagine that the person B I was matched with is a college student like me who is struggling to make money.
I decide to lie and report to B that The true computer-selected earnings outcome is A receives $10 and B receives $2 because I wanted to receive more money and I will never be paired with this person again.	I decide to lie and report to B that The true computer-selected earnings outcome is A receives $10 and B receives $2 because I wanted the extra money from my choice and I will not be paired with this person again.
I decide to lie and report to B that The true computer-selected earnings outcome is A receives $10 and B receives $2 because first I can earn more second, in order to earn more, i need to lie	I decide to lie and report to B that The true computer-selected earnings outcome is A receives $10 and B receives $2 because first I can earn more money second, the best benefit for me does not match the computer
I decide to tell the truth and report to B that the computer decided to pay us each $7 because I think it's a fair decision, and B should also get the same amount that I'm getting	I decided to tell the truth and give B $7 and retain $7 for myself Because I think it's fair that we both get the same share Irrespective of what the computer says
I decide to tell the truth and report to B that The true computer-selected earnings outcome is A receives $7 and B receives $7 because first, the amount is fairly split between the 2 participants; second, I believe that being honest in such a case is the right thing to do, by my conscience.	I decide to tell the truth and report to B that The true computer-selected earnings outcome is A receives $7 and B receives $7 because first, the earnings have been fairly split between the persons; second, if person B had opted In, both A and B would stand to gain by this decision.
I decided to lie and report to B that The true computer-selected earnings outcome is A receives $10 and B receives $2 because first I wanted to receive the highest payoff from this decision that I could and second because I knew that person B would never know if I was lying or not.	I decided to lie and report to B that The true computer-selected earnings outcome is A receives $10 and B receives $2 because first I wanted to receive the highest payoff that I could from this decision and second because I knew that person B would never know whether or not I was lying.
I decided to lie and report to B that the true computer-selected earnings outcome is A receives 10 and B receives 2 because first I had the choice and second I need money	I decided to lie and report to B that the true computer-selected earnings outcome is A receives 10 and B receives 2 because first I had the choice; second it benefits me more
I decided to lie and report to B that The rue computer-selected earnings outcome is A receives $10 and B receives $2 because the computer chose less money for person A to receive and I want to maximize the amount I earn so I decided to send that message.	I decided to tell a lie and report to B that the true computer-selected earnings outcome is A receives $10 and B receives $2 because the amount that person A receives in the computer's decision is less than the maximum amount and I want to maximize the amount I get so I decided to lie.
i decide to lie and report to B that The true computer-selected earnings outcome is A receives $10 and B receives $2 because first this is the best outcome for me out off all three choices Second, Player B cannot do anything about this choice that I make, nor will he know if it is a truth or lie.	I decide to lie and report to B that The true computer-selected earnings outcome is A receives $10 and B receives $2 because first this the best payoff for me for all three outcomes. Second, if person B chose in, he has no choice to affect my decision nor would he know if it was a truth or a lie, so I have no moral utility taken away for lying.
I decide to tell the truth because first there is only a $4 difference in what B will get versus what I will receive; second I do not like to lie.	I decide to lie and report to B that The true computer-selected earnings outcome is A receives $10 and B receives $2 because first this is a chance I could make $10; and second because I doubt person B will have chosen "out."
	I decide to lie and report to B that The true computer-selected earnings outcome is A receives $10 and B

	receives $2 because first I like lying; second I will earn more money.
I decide to tell the truth and report to B that The true computer-selected earnings outcome is A receives $10 and B receives $2 because I received the maximum amount and because there is no reason to lie since deviating does not improve my position.	I decide to tell the truth and report to B that The true computer-selected earnings outcome is A receives $10 and B receives $2 because in this scenario I would receive the maximum amount of money and there is no reason to lie since I cannot do any better by lying.
I decide to lie and report to B that The true computer-selected earnings outcome is A receives $10 and B receives $2 because first to let B knows i am making more money.	I decided to lie ($10, $2), because first I want to tell that the computer gave me more.
I decided to lie and report to B that the true computer-selected earnings outcome is A receives $7 and B receives $7 because first this gives A and B equal shares which is fair, and second the computer-selected earnings outcome gave me 'A' less than B.	I decided to lie and report to B that the true computer-selected earnings outcome is A receives $7 and B receives $7 because first the true computer-selected earnings gave me 'A' less, and second this gives A and B equal shares.
I decided to lie and report to B that the true computer-selected earnings outcome is A receives $7 and B receives$7 because first it is the option I would choose no matter what because it makes the most sense, second because if I were B this is the option I would want A to choose.	i decide to lie and report to B that the true computer-selected earnings outcome is A receives $7 and B receives $7 because first it seems to be fair to receive the same amount of money and second I would want them to pick the same thing if they were A no matter what.
I decide to lie and report to B that The true computer-selected earnings outcome is A receives $10 and B receives $ because first, this option has the highest earnings for me; second, person B does not have the opportunity to change the outcome of this decision.	I decide to lie and report to B that The true computer-selected earnings outcome is A receives $10 and Person B receives $2 because first, if person B chooses in, I will receive the most amount of money possible; second, if Person B chooses out, I will only receive $1 less than if I told the truth.
I decide to lie and report to B that the computer-selected earning outcome is A receives $10 and B receives $2 because first I want A to make the most money and second because I prefer even numbers.	I decide to lie and report to B that The true computer-selected earnings outcome is A receives $10 and B receives $2 because first I wanted to earn the most money for Person A and second because I thought it would produce better results for the experiment.
I decide to tell the truth and report to B that The true computer-selected earnings outcome is A receives 7 and B receives 7 because first, it is the truth, and second it is fair.	I decide to tell the truth and report to B that The true computer-selected earnings outcome is A receives 7 and B receives 7 because first, it is the truth, and second it is fair.
decided to tell the truth and report to B that The ture computer-selected earnings outcome is A receives $7 and B receives $7 because first any different decision I make would influence B's decision, second if B knew of my decisions, B would build some sort of trust.	I decide to tell the truth and report to B that (7,7) because first I don't want any difference in decisions affect B's decision of either choosing In or Out, second I want B to trust me
I decide to lie and report to B that the true computer-selected earnings outcome is A receives $10 and B receives $2 because first, I am only interested in making as much money as possible and second, I have no idea who the other person is, so I have no problem reducing their earnings	I decide to lie and report to B that The true computer-selected earnings outcome is A receives 10 and B receives 2 because first, I am only interested in getting the most money for myself and second, I do not know who person B is so I have no desire to do something that benefits them.
I decide to tell the truth and report to B that the true computer-selected earnings outcome is A receives $10 and B receives $2 because the voices in my head tell me it is so	I decide to tell the truth and report to B that The true computer-selected earnings outcome is A receives $7 and B receives $7 because that is what has been earned according the computer because I say so
I decide to tell the truth and report to B that The true computer-selected earnings outcome is A receives $7 and B receives $7 because first it is the highest possible reward for for everyone and second because it is the most fair choice	I decide to tell the truth and report to B that. The true computer-selected earnings outcome is A receives $7 and B receives $7 because first it is fair for both participants and second because if I lie I think it would

	be obvious.
I decide to tell the truth and report to B that The true computer-selected earnings outcome is A receives $10 and b receives $2 because it was the true computer-selected outcome and because I came here to make as much money as possible today.	I decide to tell the truth and report to B that The true computer-selected earnings outcome is A receives $10 and b receives $2 because it was the true computer-selected outcome and because I came here to make as much money as possible today.
I decided to tell the truth an report to Person B that The true computer-selected earnings outcome is A receives $5 and B receives $9.First because I do not believe in lying. This activity was completely random so I should not try to cheat the person B out of money that is technically theirs. Second because the scale of money is quite small therefore lying to someone is still completely unjustified. If the scale of money was larger for example one person gets $100 and the other gets $2, I may end up choosing a different selection because I would feel that the selection process was unfair	I decide to tell the truth and report to B that the true computer-selected earnings outcome is A receives $5 and B receives $9. Because first, if person B decided to choose the "in" option, they should be willing to deal with the consequences. Second, I do not believe in lying to someone.
I decide to lie and report to B that the true computer-selected earnings outcome is A receives $7 and B receives $7 because first of all I want to make the most money I can but have regard for others and secondly I feel it is only fair to have it be evenly divided between both participants.	I decide to lie and report to B that the true computer-selected earnings outcome is A receives $7 and B receives $7 because first I want to try and get the most money for me but second i think it is only fair for it to be even.
I decide to lie and report to B that The true computer-selected earnings outcome is A receives $10.00 and B receives $2.00 Because first, I get more money and second person B will never know that I lied or who I am.	I decide to lie and report to person B that the true computer-selected earnings outcome is A receives $10 and B receives $2 because first I get more money and second they will never know who I am or what the actual number was.
I decide to lie and report to B that the true computer-selected earnings outcome is A receives $7 and B receives $7 because first this situation allows both to earn the same amount and second i didn't think it was fair the B earned more than A.	I decided to lie and report to B that the true computer-selected earnings outcome is A receives $7 and B receives $7 because in this scenario we both received the same amount of money.I also felt it was unfair that B would receive more money than A
I decide to lie and report to B that The true computer-selected earnings outcome is A receives $10 and B receives $2 because first, I picked A receives $10 and B receives $2 because the real computer-selected earnings is not the biggest for A, so I should pick the highest probable outcome; second, I don't have to lie when the real computer-selected outcome is greatest for me, I lie just because I can get the highest earnings.	I decide to lie and report B that The try computer-selected earnings outcome is A receives $10 and B receives $2 because first my decision will only matter when B chooses "In," so I should choose the biggest earnings for me to lie to maximize my earnings. me in case B chooses "in"; second B will not see if I lie or not, so it's ok
I decide to lie and report to B that The true computer-selected earnings outcome is A receives $10 and B receives $2 because first B cannot see my decisions, and thus cannot retaliate in any way, and second I am trying to maximize my own profits.	I decided to lie and report to B that The true computer-selected earnings outcome is A receives 10 and B receives $2 because I am trying to maximize my own profits, and because s/he cannot see my decisions or tell that I am lying. In effect, there is no reason not to lie about the outcome unless the outcome is actually A receives 10 and B receives 2.
I decide to lie and report to B that The true computer-selected earnings outcome is A receives $10 and B receives $2 because first I make an additional $3 by lying and second because I do not know Person B so I do not feel bad for lying.	I decide to lie and report to B that The true computer-selected earnings outcome A receives $10 and B receives $2 because first it will give me more money and second because B is anonymous so I do not feel bad not sharing the money.
I decide to lie and report that The true computer-selected earnings outcome is A receives $10 and B receives $2 because first I remembered I am in debt with a friend and need to make as much money as possible; second because I told the truth in decision task 1.	I decide to tell the truth and report to B that The true computer-selected earnings outcome is A receives $7 and B receives $7 because first I am an honest person; second I want Person B to feel rewarded for taking a chance by choosing "In."

I decide to lie and report to B that The true computer-selected earnings outcome is A receives $10 and B receives $2 because First, the earnings are based on what I choose to report to B regardless of what the computer-selected earnings outcome is. Second, I would like to maximize my earnings and receive $10 because I know that it will not harm me in this Decision Task 2 to lie. Third, any other outcome would make me worse off.	I decide to lie and report to B that The true computer-selected earnings outcome is A receives $10 and B receives $2 because...first, knowing that if B chooses in and the earnings result is whatever I decide, I would like Second, I know that there are no consequences if I lie because even if B chooses Out, then I will still receive $4. I hope that B chooses In so that I maximize earnings. to receive the highest earnings for myself which would be $10.
I decide to tell a lie and report to B that The true computer-selected earnings outcome is A receives $10 and B receives $2 because first, it does not seem to matter what the computer actually selects, only what I report; second, you will probably never know who I am; third, if you do, and I end up with ten and you two, I'll buy you something	I decide to lie and report to B that The true computer-selected earnings outcome is Person A receives $10 and Person B receives $2 because first, I have already earned $5 by just being here and have nothing to lose, second, because I have to assume B chose In anyway and might as well earn $10
I decided to tell the truth and report to B that The true computer-selected outcome is A receives $10 and B receives $2. Firstly, because it is always better to tell the truth than lie, and this was random so I am not to blame for the computers selection. Secondly, B has no input on how much money they make, and I want to maximize my profits so telling the truth benefits me.	I decided to tell the truth and report to B that The true computer-selected earnings outcome is A receives $10 and B receives $2. Firstly, I believe it is better to tell the truth than a lie. And secondly, if B chose IN, then I am in control of the earnings, and I realize this benefits only me, and I have the power to make our earnings equal, but I would rather take the computer allotted money than lie.
it feels wrong to take the $10 both times so i just did it once	i just realized that i am out of cigarettes; i want to go to get a five guys; person b's taking a risk;i was nice to the last person b
I decided to tell the truth and report to B that The true computer-selected earnings outcome is A receives $7 and B receives $7 because first, I believe that honesty is always the best policy and lying just makes everything worse; second it is only fair that both A and B receive 7 dollars each	I decide to tell the truth and report to B that The true computer-selected earnings outcome is A receives $7 and B receives $7 because first I believe honesty is the best policy and lying always gets you in trouble; second it was fair.
I decide to lie and report to B that The true computer-selected earnings outcome is A receives 10 and B receives 2 because first they will never know the true computer selection and second this results in my earnings being higher	I decide to lie and report to B that The true computer-selected earnings outcome is A receives $10 and B receives $2 because first I would be earning the most money possible; second I believe that B will choose "Out" and this decision will ultimately not matter.
I decide to tell the truth and report to B that The true computer-selected earnings outcome is A receives $7 and B receives $7, because first i do not want to cheat him; second i think it's fair for us to earn the same amount.	I decide to tell the truth and report to B that The true computer-selected earnings outcome is A receives $7 and B receives $7, because first i want to tell the truth instead of lying to him; second i love the number 7.
I decide to lie and report to B that The true computer-selected earnings outcome is A receives $10 and B receives $2 because first, I want to earn more money by telling person B that the true outcome is different than what it actually was and second, I did not like the true outcome that was selected by the computer.	I decide to lie and report to B that The true computer-selected earnings outcome is A receives $10 and B receives $2 because first, I want to earn more money than the computer-selected answer would have provided me and second, I did not like the computer-selected answer that was chosen.
I decide to lie and report to B that The true computer-selected earnings outcome is A receives $7 and B receives $7 because first both get an equal amount and second I want more money.	I decide to lie and report to B that The true computer-selected earnings outcome is A receives $7 and B receives $7 because first I want B to earn more than $4 for choosing In and second I want more money.
I decide to lie and report to B that The True computer -selected earnings outcome is A receives $10 and B receives $2 because first, this outcome earns more money for person A; second, person B will not see the original outcome.	I decide to lie and report to b that the true computer-selected outcome is A receives $10 and B receives $2 because first, the truth would result in me only receiving $5 and second, person B will never know the true

	computer-selected outcome.
I decide to lie and report to B that The true computer-selected earnings outcome is Person A receives $10 and Person B receives $2 because first, I am person A and will benefit economically from this choice and second, the outcome of the computer has no bearing on what I report, be it true or not.	I decided to lie and report to B that The true computer-selected earnings outcome is Person A receives 10$ and Person B receives 2$ because first, if they have chosen "in" I will make 6$ more and second because, again, I have to power to chose my own outcome without the threat of any consequences.
I decided to tell the truth and report to B that The true computer-selected earnings outcome is A receives 10 dollars and B receives 2 dollars because first, this outcome maximizes my profit; second, I have no reason to lie in a case where I am already earning the most money possible in this situation	I decided to tell the truth and report to B that the true computer-selected earnings outcome is A receives $10 and B received $2 because I wanted to maximize my profit in this situation by creating a circumstance where I could possibly earn 10 dollars and secondly because I have no reason to lie if I am already getting the most money
I decide to lie and report to B that The true computer-selected earnings outcome is A receives $10 and B receives $2 because first I would like more money than less money; second ten dollars will pay for lunch; third I did poorly in the last experiment	I decide to tell the truth and report to B that The true computer-selected earnings outcome is A receives $7 and B receives $7 because first the group makes more money in whole; second two dollars is not very much.I decide to tell the truth and report to B that The true computer-selected earnings outcome is A receives $7 and B receives $7 because first the group makes more money in whole; second two dollars is not very much.I decide to tell the truth and report to B that The true computer-selected earnings outcome is A receives $7 and B receives $7 because first the I chose differently last time; second the difference between seven and ten is not much.
I decide to lie and report to B that the true computer-selected earnings outcome is A receives $10 and B receives $2 because first I have a bunch of laundry to do tonight; second I have no incentive to tell the truth;	I decide to lie and report to B the true computer-selected earnings outcome is A receives $10 and B receives $2 because first I need laundry money tonight; second no consequence for me taking the money
I decide to lie and report to B that T he true computer-selected earnings outcome is A receives $10 and B receives $2 because first if i lied to B I can earn more money than i tell the truth, second I can earn more money than B if i tell the lie	i decide to tell the truth and report to B that The truth computer-selected earnings outcome is A receives $7 and B receives $6 because first the money in the truth is not too little, second if I tell the truth we can both get same money.
I decide to lie and report to B that The true computer-selected earnings outcome is A receives $10 and B receives $2 because first, B will not see the true computer-selected earnings outcome so it will not affect how B will think of A and second, this will benefit me, A, for the final earnings anyway.	I decide to lie and report to B that The true computer-selected earnings outcome is A receives $10 and B receives $2 because first, if B had chosen "In," B knew that there was a chance (1/3) that B would not get more than $4 (as if he had chosen "out"), but that chance is less than the chance (2/3) that B would get more than $4. Therefore, it is a chance that B will have to take, however the final earnings. So if B had chosen "in," A's lie is just that B's loss that B has to bear. Second, Person B that I, person A, is matched with will not see the true computer-selected earnings and yet the final earnings is based on person A's report, therefore, for the final earnings, I chose to lie in order for me to get the most money out of it.
I decided to lie and report to B that The true computer-selected earnings outcome is A receives $10 and B receives $2 because first I would benefit from this decision; second I wanted to lie.	I decided to lie and report to B that The true computer-selected earnings outcome is A receives $10 and B receives $2 because first it benefits me; and second I wanted to lie.
I decide to lie and report to B that The true computer-selected	I decide to lie and report to B that The true computer-

earnings outcome is A receievs$7 and B receives $7 because first, I think it's fair for us to earn the same amount ; second is I consider $7 as a good balance in return as nobody does more work.	selected earning outcomes is A receives$7 and B receives$7 because first I think it's fair to earn the same amount of money as no one does more work; second, $7 is better than $4, as he/she takes the risk to choose "in" regardless that I can choose to give him/her only $2, I think $7 is good in return.
I decide to lie and report to B that The true computer-selected earnings outcome is A receives $10 and B receives $2 because first B will not know who I am; second B will be paired with someone else in a different task.	I decide to lie and report to B that The true computer-selected earnings outcome is A receives $10 and B receives $2 because B is a different person than in decision 1; second because B will not find out who I am.
I decide to lie and report to B that the true computer-selected earnings outcome is A receives $7 and B receives $7 because first I want more money and second this seems more fair.	I decided to lie and report to B that The true computer-selected earnings outcome is A receives $7 and B receives $7 because first this is beneficial for both parties if B has decided to stay in and second it only seems fair that we both receive the same amount.
I decide to lie and report to B that The true computer-selected earnings outcome is A receives $10 and B receives $2 because first I want more money than B; second player B will never know who I am so it makes it easier to be selfish.	I decided to lie and report to B that The true computer-selected earnings outcome is A receives $10 and B receives $2 because first I want the most possible amount of money; second person B will not know who I am so it makes it easier to be selfish.
i decide to lie and report to b that the true computer-selected earnings outcome is a receives $10 and B receives $2 first because it i want to disagree with the computer and second because it gives player a more money	i decide to tell the truth and report to b that the true computer-selected earnings outcome is A receives $10 and B receives $2 because first i was told not to lie and second because that is what the computer told me.
I decide to tell the truth and report to B that The true computer-selected earnings outcome is A receives $10 and B receives $2 because (first) it is the truth and (second) I have a better chance of receiving $10 than if I chose either of the other two options.	I decide to tell the truth and report to B that The true computer-selected earnings outcome is A receives $10 and B receives $2 because (first) this is actually the truth and (second) I know that if B chose "In," I will receive $10 which is the most money that I can earn in this decision.
I decide to lie and report to B that The true computer-based earnings outcome is A receives $10 and B receives $2 because I will make the most money this way; B will not know the true computer-selected earnings	I decide to lie and report to B that The true computer-selected earnings outcome is A receives $10 and B receives $2 because I will earn the most this way; B will never know the computer-selected earnings
I decided to lie and report to B that The true computer-selected earnings outcome is A receives $7 and B receives $7 because first it is equal so we both receive the same thing and second it's more of a fair decision than one person making more than the other.	I decided to lie and report to B that the true computer-selected earnings outcome is A receives $7 and B receives $7 because first we both receive an equal amount of money and second i want more than $5
I decide to tell the truth and report to B that The true computer-selected earnings outcome is A receives $7 and B receives $7 because first, the outcome is fair because we both receive $7 and, second, I have no reason to be greedy and deny another person who might need the money more than I do.	I decide to tell the truth and report to B that The true computer-selected earnings outcome is A receives $7 and B receives $7 because first, I like the outcome so see no reason to lie and, second, is fair for both of us.
I decide to lie and report to B that The true computer-selected earnings outcome is A receives $10 and B receives $2 because first this option will earn me the most money which is my goal for this decision; second person B will not know whether or not I tell the truth and will have to assume that the reported earnings are the truth.	
I decide to tell the truth and report to B that The true computer-selected earnings outcome is A receives $7 and B receives $7 because first it is the most beneficial for both of us and second because if they decided to trust me my saying "in," then i should	I decide to tell the truth and report to B that The true computer-selected earnings outcome is A receives $7 and B receives $7 because first it's the fairest way for us both to get paid an even amount and second because

at least give them their fair cut for playing their part.	if they did their bit and pressed "in" then i'll do mine and split things evenly
I decide to tell the truth and report to B that The true computer-selected earnings outcome is A receives $7 and B receives $7 because both the parties receive equal amount; I don't want to gain at other's expense.	I decided to tell the truth and report to B that The true computer-selected earnings outcome is A receives $7 and B receives $7 because it is fair for both parties; the next person B will choose "IN" as he knows I will choose to be fair.
I decide to lie and report to B that The true computer-selected earnings outcome is A receives $10 and B receives $2 because first, I wanted to maximize my payoffs. Second, I wanted to earn more than $7, the computer-selected earnings outcome for me.	I decide to lie and report to B that The true computer-selected earnings outcome is A receiver $10 and B receives $2 because it would maximize my payoffs. I am assuming B is choosing “In" so I want to receive $10 as opposed to $7.
I decided to lie and report to B that The true computer-selected earnings outcome is A receives $10 and B receives $2 because first it is the optimal choice (biggest benefit) in my position and secondly if Person B does not know I lied than there is no reason for me not to in this situation.	I decided to tell the truth and report to B that The true computer-selected earnings outcome is A receives $7 and B receives $7 because first it is the truth. If Player B leaves it to the computer to choose, than I will respect their wishes and secondly $7 each is the most optimal way ($14 total > $12 and more fair than 9 for me and 5 for player b) to divide the total amount of winnings.
I decide to lie and report to B that The true computer-selected earnings outcome is A receives $10 and B receives $2 because first, as the earnings are determined by what person one reports it is more beneficial to me to report the highest earnings possible, and second, there is no downside for me to tell a fib.	I decide to lie and report to B that The true computer-selected earnings outcome is A receives $10 and B receives $2 because first, As I am person a it is more beneficial from me to receive $10 in earnings rather than $7 and second, If the person in actuality chose out then this is a moot point so there is no reason to not risk it and go for the big bucks.
I decide to tell the truth and report to B that the true computer-selected earnings outcome is A receives $7 and B receives $7 because I really don't see a need to lie here.	I decide to lie and report to B that the true computer-selected earnings outcome is A receives $7 and B receives $7 because this will make it seem fair.
I decide to lie and report to B that the true computer-selected earnings outcome is A receives $10 and B receives $ 2 because first, I can make more money that way, and second I kept it fair the first time.	I decide to tell the truth and report to B that the true computer-selected earnings outcome is A receives $7 and B receives $7 because first, it was the real computer decision and second, it is a fair choice for both of us.
I decide to tell the truth and report to B that The true computer-selected earnings outcome is A receives $10 and B receives $2 because first that statement maximizes my payoff; second I have no reason to state otherwise since I would both be lying and reducing my payoff.	I decide to tell the truth and report to B that The true computer-selected earnings outcome is A receives $10 and B receives $2 because first that report results in the maximum payoff for me; second because I have no reason to report otherwise since I would both be lying and lowering my payoff.
I decide to lie and report to B that The true computer-selected earnings outcome is A receives $10 and B receives $2 because first that gives me the most money; second there are no repercussions to me for this action	
I decide to tell a lie and report to B that the true computer-selected earnings outcome is A receives $10 and B receives $2 because first I wanted to increase my earnings from $5 to $10 and secondly, I wanted to decrease B's earnings from $9 to $2.	I decide to lie and report to person B that the true computer-selected earnings outcome is A receives $10 and B receives $2 because first I wanted to increase my earnings from $5 to $10 and second I wanted to decrease B's earnings from $9 to $2.
I decided to tell the truth and report to B that The true computer-selected earnings outcome is A receives $7 and b receives $7 because first person B gave me the chance to earn more than the original $4 and I do not want to jip them out of money; second it is equal for both participants to earn the same amount of money in this experiment regardless of person B's choice to choose in or out	I decided to tell the truth and report to B that The true computer-selected earnings outcome is A receives $7 and B receives $7 because first the computer has chosen $7 for each person and this is maximizing overall utility; second to make each person get an equal amount $7 is the best way to do so

I Decide to tell the truth and report to Person B that The true computer-selected earnings outcome is A receives $7 and B receives $7 because first I feel like it is a fair outcome to have; second I feel that person B should know the true outcome.	I decided to tell the truth and report to B that The true computer-selected outcome is A receives $7 and B receives $7 because first I feel like it is the most fair outcome; second I feel that it it is important to report the actual outcome.
I decide to tell the truth and report to B that The true computer-selected earnings outcome is A receives $7 and B receives $7 because first it's the truth; Second 3 dollars is not worth telling a lie.	i decide to tell the truth and report to B that The true computer-selected earnings outcome is A receives $7 and B receives $ 7 because first, it's fair; second, 3 dollars difference does not worth to tell a lie.
	I decide to tell the truth and report to B that The true computer-selected earnings outcome is A receives $8 and B receives $8 because firstly this is what I would have chosen anyways. Since it is free money, it should be distributed fairly and no one person deserves more free money than another. Secondly, since the majority of people do not trust people they don't know, I am expecting person B to choose out, so my choice really doesn't matter at all.
I decided to lie and report to B that The true computer-selected earnings outcome is A receives $10 and B receives $2 because first, person B does not know the real outcome of the result; second, there is a greater chance that person B decided to chose the OUT option. This would end up losing me money	I decide to tell the truth and report to B that The true computer-selected earnings outcome is A receives $7 and B receives $7 because:first it is only fair that each person receives the same amount of money; second, no one will be negatively affected by not telling the truth in this case
I decide to tell the truth and report to B that The true computer-selected earnings outcome is A receives $7.00 and B receives $7.00 because this way both participants receive the same amount of money, and it is always good to tell the truth.	I decide to tell the truth and report to B that The true computer-selected earnings outcome is A receives $7.00 and B receives $7.00 because this way both A and B receive $7.00, and the truth is told, which is always a good thing to do.
I decided to tell the truth and report to B that The true computer-selected earnings outcome is A receives $7 and B receives $7 because first, we are both in this study to make money so why not make equal amounts; second I feel that it is fair for both of us to make the same amount.	I decided to tell the truth that The true computer-selected earnings outcome is A receives $7 and B receives $7 because first, we are both in the experiment to make money so why not have us make the same amount; second I feel that it is fair for us both make the same amount.