MONASH BUSINESS SCHOOL

DEPARTMENT OF ECONOMICS

ISSN 1441-5429

DISCUSSION PAPER 13/17

Large Stakes and Little Honesty? Experimental Evidence from a Developing Country

Andreas Leibbrandt, Pushkar Maitra and Ananta Neelim

Abstract:

We experimentally study the extent to which individuals are honest when lying can result in a gain of several months' worth of income. Randomly selected individuals from villages in Bangladesh participated in a sender-receiver cheap talk game. We varied the potential benefits from providing false recommendations. While we find that individuals are more likely to provide false recommendations when stakes are very large, we still observe that almost half of the senders refrain from lying. Receivers are generally suspicious and approximately half of the times do not follow recommendations received. In addition, we observe that one-fifth of the senders do not send any message if they can remain silent and that the option to remain silent crowds out honesty but not dishonesty. These findings provide novel insights on the prevalence, robustness, and motivation of honesty over large stakes from a developing country.

Key words: Artefactual Field Experiment, Honesty, Deception, Stakes, Development
JEL Codes: C93, D64

Andreas Leibbrandt (corresponding author), Department of Economics, Monash University, Clayton Campus, VIC 3800, Australia. Email: Andreas.Leibbrandt@monash.edu Phone: +61 9905 5115.
Pushkar Maitra, Department of Economics, Monash University, Clayton Campus, VIC 3800, Australia. Email: Pushkar.Maitra@monash.edu
Ananta Neelim, RMIT University, Melbourne, VIC 3000, Australia. Email: Ananta.Neelim@rmit.edu.au

1. Introduction

Honesty is a key ingredient for lubricating economic transactions, especially in developing countries where individuals often cannot rely on formal institutions to enforce contracts. However, there is indirect evidence suggesting that honesty is non-pervasive in developing countries. In particular, several studies show that corruption is more common in developing countries than in developed countries (see for example a recent survey by Pande and Olken (2012) and the references cited there). While such evidence based on cross-country comparisons uncovers an important problem for developing countries, it provides fewer insights on the general level of honesty in such environments. In particular, the evidence may stack unfavorably against developing countries, where the incentives to be corrupt and dishonest are possibly greater than in developed countries.[1]

In this paper, we use an artefactual field experiment in a developing country to provide direct insights on the level of honesty under different stake sizes. The participants were randomly chosen individuals from 18 villages in Bangladesh. We study honesty using a sender-receiver cheap talk game (Gneezy (2005)). This is a two-player sequential move game with two distributions of payoffs between the sender and the receiver, which only the sender knows. The sender makes a true (honest) or false (deceptive) recommendation containing information about which distribution is better for the receiver. The receiver then decides whether or not to follow the recommendation. Our treatment variations include (1) varying the stakes in this game from a daily wage (what we call moderate stakes) to several months of income (what we call high stakes); and (2) giving individuals the option of remaining silent, i.e., not sending any message.

Our first main finding is that stakes affect the level of honesty. As expected, honesty is less pronounced when stakes are very large: the likelihood of true recommendations decreases by 30% when we increase stakes by a factor of 100. Using the framework of categorizing true messages in Sutter (2009), we show that 90% of the variation on honesty is due to decreases in benevolent true messages. However, we observe that still almost half of the recommendations are true even when honesty can cost several months of income. Our second main finding relates to the robustness and underlying motivation of honesty. In our 'silent' treatments, we give senders not only the option to send a true or false recommendation but also to not send any recommendation. We find that almost a-fifth of the senders choose to remain silent. Interestingly, the presence of the silence option leads to a

[1] For example, legal institutions tend to function better in developed countries, which can deter dishonesty and corruption more as compared to developing countries.

30% lower likelihood of sending true recommendations but has no impact on the likelihood of sending false recommendations. This finding is consistent with the assumption that honesty is significantly driven by disutility of lying and not a preference for truth telling. In addition, we find that the likelihood of the sender providing a true recommendation decreases when the potential payoff dispersions between the sender and the receiver increases. Finally, we observe that the receivers' trust in the senders' recommendations is quite low with only half of the receivers choosing to follow the recommendations, irrespective of the stakes.

This paper is related to the experimental research on honesty (see Gneezy (2005), Charness and Dufwenberg (2006), Vanberg (2008), Sánchez-Pagés and Vorsatz (2009), Sutter (2009), Fischbacher and Föllmi‐Heusi (2013), López-Pérez and Spiegelman (2013)), social capital in developing countries (see Cardenas and Carpenter (2008)), as well as the research on the relationship between stake size and pro-social behavior (see Slonim and Roth (1998), Cameron (1999), Johansson-Stenman, et al. (2005), List and Cherry (2008), Andersen, et al. (2011), Leibbrandt, et al. (2015)). Our study complements the related literature in at least four important ways. *First*, we study honesty in a developing country. There are many reasons to believe that individuals in developing countries value and apply honesty differently than individuals in developed countries. For example, it could be that the pervasive culture of corruption in many developing countries affects thinking and morals about honesty.[2] *Second*, we study honesty when stakes are very large. While Fishcbacher and Folmi-Heusi (2013) and Kajackaite and Gneezy, (2015) examine the effects of stakes on cheating behavior, the highest stakes they use is a few hours of wages. In our case, the stakes used is equivalent to several months income. Studying honesty when it is very costly is not just important to generate knowledge on how honest individuals are when stakes are very large but it also renders it possible to test models of honesty and investigate whether honesty is a normal good. *Third*, we study how honesty is affected if we give individuals the option to withhold information.[3] Outside the experimental environment, individuals often have the choice to withhold information instead of lying. Withholding information is probably regarded as less condemnable than lying and thus it seems likely that it provides some

[2] Our experimental sessions were conducted in Bangladesh, which is one of the poorest and most populous countries in the world and is characterised by considerable corruption. According to the World Bank's World Development Indicators 31.5 % of the total population lived in poverty determined at 1.9 PPP dollars in 2010. In terms of corruption, according to the Transperency International's corruption perception index, Bangladesh ranked 145 out or 175 countries.

[3] Sánchez-Pagés and Vorsatz (2009) also investigate the silence option and find, like us, that it is frequently used. However, they do not investigate how the introduction of the silence option shifts the likelihood of honest or deceptive messages.

individuals with a middle ground to reduce the costs of honesty and dishonesty. *Fourth*, our participants are a random sample of the population in several locations. Thus, we are able to provide a comprehensive investigation into the individual determinants of honesty and do not have to be concerned about selection into the experiment.

2. Experimental design and field setting

A total of 428 participants residing in 18 villages in Bangladesh participated in the experimental sessions. The villages are located in the outskirts of Dhaka, the capital of Bangladesh, approximately 30–40 kilometers from the city. In each of these villages we randomly selected participants by going to every n^{th} household[4] and invited one household member to one experimental session. They were promised a show-up fee of Tk 100, which is slightly more than the daily income of Tk 76.[5] There was no attrition as one adult member from every invited household showed up for the relevant session. Each session lasted for approximately 90 minutes.

Our experimental procedure was designed to minimize anonymity concerns and susceptibility to village effects. For example, the propensity to send false recommendations might be driven by unobservable village characteristics if participants from the same village were playing with each other. To minimize such concerns, we conducted the experimental sessions simultaneously in two different villages. One of the two villages (randomly chosen) was designated the sender village and all participants in this village were senders; the other village was designated the receiver village and all participants in this village were receivers. Each sender was matched with a receiver and the matched sender-receiver pair was never composed of the residents of the same village. All communication across villages was conducted using mobile phones, which also enabled participants to verify the simultaneous conduct of the session.

The cheap talk sender-receiver game that we use here is a two-player sequential move game, the sender makes the first move and chooses between two messages where she recommends one of two options to the receiver:

> Message 1: "I recommend Option 1 for you. It will earn you more money than Option 2"
>
> Message 2: "I recommend Option 2 for you. It will earn you more money than Option 1"

[4] This n was calculated by dividing the total number of households in the village by the total number of participants required from that village. The average number of households in the villages was 538.

[5] Taka (Tk) is the currency of Bangladesh. Tk 100 = USD 1.22 at the time the experimental sessions were conducted.

Each option describes the payoffs for her and the receiver. More precisely, the payoffs for the sender and the receiver in the two options are:

Option 1	Sender gets X	Receiver gets X
Option 2	Sender gets Y_1	Receiver gets Y_2

where $Y_1 > X > Y_2$.[6] Thus, in option 1 the receiver has the highest payoff whereas the sender maximizes her payoff with option 2. The sender, but not the receiver, knows the payoffs in each option. The receiver then decides whether or not to follow the sender's recommendation and her choice determines the final payoffs for both players. Thus, the recommendation of the sender can either be true (Message 1) or false (Message 2). If it is true, we define the behavior of the sender as honest, it is false, we define it is dishonest or deceptive.[7]

The receivers are informed (i) about the basic structure of the game, (ii) that the senders have full information about the actual payoffs from both options (iii) that the senders will choose to make a recommendation, which may or may not be true and (iv) the stakes over which the decisions were being made. After the receivers make their choice and payoffs for both players are determined, they are only informed about their payoff from the chosen option but not the sender's payoff and the payoffs in the other option. Thus, receivers cannot infer whether the recommendation that they received from the sender was true or false. The senders were also informed as to what information will be provided to the receivers, with the exception of the stakes over which decisions were to be made. The senders' choices therefore cannot depend on treatment dependent expectations of the receivers' choices.

2.1 Treatments

Table 1 summarizes our experimental design, which contains eight treatments. We have six treatments with moderate stakes and two treatments with high stakes. The treatments with moderate stakes vary in regard to whether they have a "silence" option and the payoff distributions of option 2. The two high stakes treatments also vary with regard to the payoff distributions of option 2.

Our experiment varies the size of stakes and there are two kinds of stakes: moderate and high. Within the moderate stake treatments there was variation in the options available to

[6] $Y_1 > X > Y_2$ was used in all our treatments. Erat and Gneezy (2012) provide a review of honesty across various modifications of these payoffs.

[7] While this categorization is standard in the literature, it may underestimate deception. For example, Sutter (2009) finds that some individuals engagie in sophisticated deception by sending a true message because they believe that the receiver will not follow their recommendation. We address this concern by taking into account the sender's belief about her receiver's behavior.

the senders: in three of the treatments the senders had the option of remaining silent and not send any message. These treatments are categorized as SI(LENT) treatments. The remaining moderate stake treatments with no silent option are categorized as MO(DERATE) treatments. In the MO and SI treatments, senders always had to allocate Tk 100: *X* was Tk 50 and Y_1 had three possible values, Tk 90, 100, 60. The corresponding values for Y_2 were Tk 10, 0, 40. The treatments are termed MO_1, MO_2 and MO_3 and SI_1, SI_2 and SI_3 respectively. In the two HI(GH) stake treatments senders had to allocate Tk 10000: X was Tk 5000; Y_1 had two possible values, Tk 9000, or Tk 10000. The corresponding values for Y_2 were Tk 1000 and Tk 0. There are characterized as HI_1 and HI_2. Table 1 summarizes the treatments.[8]

The stakes in the HI treatment typically amounted to several months of income for our participants. The reported average monthly household income in our participant pool was Tk 7760, the average household size was 4.7, and the resulting average per capita income equals Tk 1663.80 per month. Thus, the stake size of Tk 100 in the MO treatments and 10000 in the HI treatments translate to a good one-day and six month's income, respectively.[9]

While receivers did not know the exact payoffs in options 1 and 2, they roughly knew the stake size. More precisely, the instructions for the receivers differed between MO and HI with regard to the examples used to describe the decision task (the English version of the instructions is presented in the Appendix). In the MO treatments, the examples used low payoffs, while in the HI treatments they used the same payoffs multiplied by 100. Our experimental design therefore allows us to examine the effect of stakes on the behavior of both senders and receivers: whether senders are more likely to send false messages and whether or not receivers are more likely to trust the sender.[10]

Finally, we elicited information on beliefs about the choices made by the senders and the receivers. After senders had made their choice they were asked to guess how many out of the matched receivers (in their session in the other room) they expected to follow sender recommendations.[11] In addition, after receivers had made their choice they were asked to guess how many out of eight senders (in their session in the other room) they believed had sent true recommendations. We provided monetary incentives for accurate guessing. A guess was considered accurate if the respondant guessed within a margin of error of one. For example, if the actual number was 6, then participants received an additional payment if they

[8] While the MO and SI treatments are symmetric, the MO and HI treatments are not. There is no high stake counterpart for the MO_3 treatment. Also, there are no SI counterparts in the high stakes treatments.
[9] We assume that over a month an average person works 22 days. This yields a daily income of Tk 76.
[10] The senders did not know that the receivers were aware of the stakes over which decisions were being made.
[11] Out of the 28 sessions, 18 had 8 participants, while the remaining 10 sessions, had 7 participants each.

guessed either 5, 6, or 7. Participants could earn an additional Tk 20 if they guessed correctly. 39% of the senders and 37% of the receivers guessed correctly.

2.2 Predictions

The standard predictions for senders and receivers assuming common knowledge of self-interest are straightforward. The sender's recommendation is essentially cheap-talk and as such should contain no information that affects receiver behavior. Consequently, receivers randomize between choosing option 1 and 2. Anticipating the receiver behavior, senders are indifferent between recommending option 1, 2, or sending no recommendation.

However, existing evidence shows that many individuals refrain from sending false recommendations and this behavior has been incorporated in recent theoretical models (Koford and Penno (1992), Ellingsen and Johannesson (2004), Kartik (2009) and Gibson, et al. (2013)). Koford and Penno (1992), for example, assume that individuals are of two types: the economic type and the ethical type. In their model, the ethical type incurs infinite psychological costs of lying (and thus never lies), whereas the economic type has no such costs (and always lies). Gibson, et al. (2013) build on this model but relax the extreme type assumptions. In their model, honesty is regarded as a normal good and is more common when the costs are low. If honesty is indeed a normal good we should observe that the likelihood of true messages is lower when the stakes are high. Moreover, we conjecture that some individuals who dislike lying make use of the silent option as it provides them with an opportunity to increase their expected payoffs if they believe majority of the receivers follow sender recommendations.

3. Experimental results

Table 2 presents a summary of the 428 participants in this experimental study. The average age is 35 years, 36% are male, and 75% are married. They have, on average, completed 5.2 years of schooling and the average household size is 4.7. The average monthly household income is Tk. 7760. 52% pray at least once per day, and 46% report that they generally trust individuals in their village. Table 2 also reports a randomization check by reporting the means for these variables separately for senders and receivers, and across the MO, HI, and SI treatments. A Kruskal-Wallis (KW) test with the null hypothesis of identical means shows that with the exception of gender (which is significant at $p < 0.1$) none of the other variables are significantly different across the three treatments. Our regressions control for these demographic and socio-economic characteristics

Column 1 of Table 3 reports the behavior in the experiment across our main treatments MO, HI, and SI. Overall and across all treatments we find that 55% of the messages are true, 37% are false, and in 8% of cases the sender chose to remain silent (and did not send a message). The honesty rates (captured by the likelihood of sending a true message) that we find are similar to those reported in other studies: 48–83% by Gneezy (2005), 47% by Dreber and Johannesson (2008), 41–56% by Sutter (2009), 43% by Childs (2012) and 56% by Gylfason, et al. (2013). Senders are rather optimistic that receivers will follow their recommendation: they believe that on average 67% follow recommendations. In fact, they are significantly over-optimistic as only 54% of the receivers actually follow the recommendation ($p < 0.01$, Wilcoxon Signed-rank, two-tailed). Receivers are on the other hand quite pessimistic, as they believe that only 48% of the recommendations are true although 55% of messages were actually true ($p < 0.01$, Wilcoxon Signed-rank, two-tailed).

3.1 Honesty depending on stakes

Consistent with the conjecture that honesty is a normal good we observe that larger stakes decrease the likelihood of true messages. While 66% of the participants ($n = 91$) send true messages in MO (column 2 in Table 3), only 47% ($n = 30$) do so in HI (column 6 in Table 3), a difference of 19.3 percentage points that is significant at the 5%-level ($p = 0.03$; Wilcoxon-Mann-Whitney, one-tailed)[12]. Figure 1 shows that holding the distribution constant, *i.e.*, comparing stakes across the (MO_1, HI_1) and the (MO_2, HI_2) treatments, the effect of stake on truth telling: relative to that in the MO_1 and MO_2 treatments, the likelihood of sending a true message decreases by 20 ($p = 0.08$; WMW, one-tailed) and 13.3 ($p = 0.2$; WMW, one-tailed) percentage points in the HI_1 and HI_2 treatments, respectively. Importantly, the decrease in honesty appears to be not driven by the senders' beliefs: there are no significant differences in senders' beliefs about receivers' following their recommendation (belief in MO: 65.3% of receivers follow; HI: 71.7%, $p = 0.10$; WMW, one-tailed).

To better categorize honesty, we also apply the Sutter (2009) framework to classify recommendations in sender-receiver games. More precisely, we categorise individuals who send true messages as *benevolent* if they believe that more than 50% of the receivers follow sender recommendations or as *sophisticated* if they believe that at most 50% of the receivers follow sender recommendations (and thus send a true message to maxmize their payoffs).

[12] Treatment MO_3 does not have a comparable counterpart in the HI sample. When we exclude MO_3 from the MO sample and compare it to the HI sample, we observe 16.7% decrease in honesty ($p = 0.07$; WMW, one-tailed)

Based on these definitions we find that overall 43% of the senders are defined as *benevolent* and 18% as *sophisticated.* These contrast with Sutter (2009) who finds both types to be roughly equally likely in his student subject sample. Interestingly, we observe individuals characterized as benevolent consititute a marginally larger fraction in the MO (47%) than in the HI (30%) treatments (p- = 0.049; WMW, one-tailed), while that there are no differences in individuals characterized as sophisticated (p = 0.4; WMW, one-tailed). This implies that 90 % in the decrease in truth telling is due to decreases in benevolent truth-telling.

Columns 1–3 in Table 4 report the results on the effect of stake on honesty in a multivariate regression framework. The dependent variable in all the regressions is whether, or not, the sender sent a true message and all the regressions utilize village fixed effects, which ensures that the results are not driven by any unobserved village level differences. Column 1 presents estimates that do not control for individual characteristics; the results presented in column 2 include individual characteristics.[13] Column 3 reports the results from a regression that excludes participants in the MO_3 treatment. The variable HI is always significantly negative at the 1% level of significance in all three models and the coefficient estimate imply that higher stakes result in a 33 percentage point reduction in the likelihood of sending a true message. This corresponds to a 50% drop in honesty given that on average in the MO treatments 66% of messages are true.

With regards to observable characteristics, we observe that men and the rich are less likely to send true messages ($p < 0.05$). None of the other individual characteristics have a statistically significant effect on the likelihood of sending a honest message.

3.2 Honesty depending on option to remain silent

In three of our treatments, participants could not only send a true or false recommendation but also remain silent. Figure 2 illustrates the likelihood to remain silent and its impact on true and false recommendations.[14] We find that 18% of our participants chose to not send any message. Interestingly, the availability of the no recommendation or silence option crowds out the likelihood of sending true messages: We observe that the likelihood of true messages drops from 66% in the MO-treatments to 48% in the SI-treatments ($p < 0.01$; WMW, one-tailed). At the same time, the likelihood of false messages is not affected by the silent option (34% in MO-treatments vs. 35% in SI-treatments, ($p = 0.54$; WMW, one-tailed). We also find

[13] The individual controls include marital status, household size, education, income, religiosity, self-reported trust and beliefs about receiver behavior.

[14] Here the sample is restricted to the MO and SI treatments that are directly comparable.

that most of the decrease (69%) is due to decrease in *benevolent* truth-telling, which decreases by 12.8 percentage points in the SI-treatments ($p < 0.04$; WMW, one-tailed). However, we do not fine a statistically significant decrease in sophisticated truth-telling ($p = 0.14$; WMW, one-tailed)

The negative impact of the option to remain silent on the likelihood of sending true messages is robust to the inclusion of village fixed effects (to capture village level unobserved heterogeneity) and also individual level controls: see regression results presented in columns 4–5 of Table 4. The sample here is restricted to those in the MO and SI treatments. Having the silence option reduces the likelihood of sending a true message by 18 percentage points, statistically significant at the 1%-level. Columns 6 and 7 corroborate that the silent option has no impact on the likelihood of sending false messages. This provides evidence of the robustness of the finding that silent option crowds out honesty but not lying. None of the individual controls have a statistically significant effect on the likelihood of sending a true or a false message.

3.3 Honesty depending on payoff constellations

There is evidence that the distributions of payoffs can play an important role for the senders' choices. Interestingly, across both our treatments, which do not provide an option to remain silent, we observe that honesty rates dramatically drop as the payoff distribution becomes most unequal (Table 3, Figure 1 and Figure 3). In the MO treatments, honesty rates falls from 80% in MO_1 to 46.6% in MO_2 ($p < 0.01$; WMW, one-tailed). Similarly, in the HI treatments, honesty falls from 60% in HI_1 to 33.3% in HI_2 treatment, ($p = 0.08$; WMW, one-tailed). There is no statistically significant change in honesty rates as we move from MO_1 to MO_3 ($p = 0.21$; WMW, one-tailed). These results are corroborated using multivariate regressions that control for village fixed effects and also individual level controls (Table 5, columns 1-3). As before in column 3 we exclude the MO_3 sample. Of particular interest are the difference estimates: $MO_1 - HI_1$, and $MO_2 - HI_2$ presented in Panel B. Honesty rates are significantly higher in both the MO_1 and MO_2 treatments, compared to their high stake counterparts (HI_1 and HI_2, $p < 0.01$). Perhaps most importantly, this provides evidence that our main result with regards to effect of high stakes in reducing honest behavior is robust to changes in pay-off distributions.

In contrast, when participants had the option of remaining silent, the payoff distribution appears to no longer have an impact on the likelihood of sending a true message or lying ($p > 0.31$, for all comparison of means: $SI_1 - SI_2$, $SI_1 - SI_3$ and $SI_2 - SI_3$). Honesty

rates decrease between MO_1 and SI_1 ($p < 0.01$; WMW, one-tailed) and MO_3 and SI_3 ($p = 0.04$; WMW, one-tailed). Between $M0_2$ and SI_2 there is no difference in honesty ($p = 0.44$, FE, two-tailed). This is perhaps not surprising as the honesty rates in MO_2 is significantly lower than in MO_1 and MO_3 treatments. It is also important to note that across all the six moderate stakes treatments (MO and SI), honesty rates do not drop much below 50 percent.

These results are corroborated using multivariate regressions that control for village level unobserved heterogeneity and individual controls (Table 5: columns 4 and 5 for honesty; columns 6 and 7 for lying). Once again of particular interest are the difference estimates presented in Panel B. The difference $MO_1 - SI_1$ is statistically significant indicating that in this case option of not sending a message reduces the likelihood of sending a true message in the MO_1 treatment. The difference estimates $MO_2 - SI_2$ and $MO_3 - SI_3$ are not statistically significant. Consistent with the results presented in Table 4 (columns 6 and 7), the option of remaining silent does not have any systematic effect on the likelihood of lying.

It is also worth examining who chooses to remain silent when they have the option. Table 6 presents the multivariate regression results for choosing to remain silent. These regressions control for village level unobserved heterogeneity and also individual characteristics and are only run on the SI treatments. With the exception of the age (older participants are significantly more likely to choose to remain silent), neither the individual observables nor the payoff constellations have a statistically significant effect on the likelihood of choosing to remain silent. .

3.4 Receiver trust and expectation

The last two rows of Table 3 summarize the receiver trust and expectations. We observe that the likelihood with which receivers follow the senders' recommendations is relatively low.[15] Only 56% follow the recommendation in both the MO and SI treatments and 43% in the HI treatment, a non-significant treatment difference ($p = 0.23$, WMW, two tailed).[16] In fact, these two likelihoods to follow recommendations are not statistically different from the receivers randomizing their choices ($p > 0.24$; Wilcoxon Signed-rank, two-tailed). These choices are partly consistent with the receivers' beliefs on truthful recommendations: only 48% expect that recommendations are true. Interestingly, however, participants seem more

[15] Related studies using a strategic context report following rates which are larger than the ones we report. For example following rates are 78% in Gneezy (2005), 76 % in Dreber and Johannesson (2008), 73 % in Childs (2012) and 78 % in Gylfason, et al. (2013). This could be due to our choice to present information to the Receivers that made them aware that they

[16] Note that the receivers had to report whether or not they would follow the sender prior to knowing whether the sender had chosen to remain silent or not in the SI treatments.

optimistic in the HI treatments where they believe that 64.5% of the messages are true, as compared to 45% in both the MO and the SI treatments ($p < 0.01$, WMW, two-tailed).

While expectations about receiving truthful recommendations were modest, they are correlated with choice of following. Panel B of Figure 4 shows that 61% of individuals who had high (>50%) expectation of receiving truthful messages were likely to follow, compared to 49% of individuals with low (≤ 50%) expectation of receiving truthful messages. This difference is statistically significant ($p = 0.06$; WMW, two-tailed). In Table 7 we report results from OLS regressions where the dependent variable is the receivers' decision to follow the senders' recommendation. The regressions in columns 1 and 2 restrict the sample to the MO and HI treatments and allow us to examine the effect of stakes on receiver trust, after controlling for village level unobserved heterogeneity and individual characteristics (column 2). Correspondingly the regressions in columns 3 and 4 restrict the sample to the MO and SI treatments also allow us to examine the effect of the ability of the sender to remain silent on receivers' decision to follow the senders' recommendation.[17] Interestingly, while none of the treatment dummies have a statistically significant effect on the receivers' likelihood of choosing to follow, we find in columns 2 and 4 that higher beliefs about receiving true messages lead to greater following rates ($p < 0.085$).

4. Conclusions

Few would argue that humans do not care about honesty. Thus, perhaps it is not a big surprise that many individuals are willing to forego a few of dollars to avoid deceiving others. However, how honest are we if deception buys us a six-months sabbatical or a luxury holiday? One main goal of our study was to provide novel insights into the robustness of honesty when stakes can amount to several months of income. To not break the bank, we went to Bangladesh, and this provided us the opportunity to provide participants with very large monetary incentives. It also allowed us to examine honesty in an environment where it is not *a priori* clear how stakes would affect honesty. We started with the conjecture that honesty is a normal good, and like all normal goods, becomes less desirable when it becomes more costly.

Perhaps not surprisingly, we indeed find that individuals are more willing to deceive when stakes amount to several months of income as compared to a day's wages. Honesty,

[17] Recall that while the receivers in the SI treatments did not know whether the sender had chosen to send a message or not before makiing their choices, they were aware that the senders had the option of remaining silent.

just like many other goods, appears to be a normal good. More surprisingly however, we find that honesty is still common when stakes are very large. Approximately half of the senders in our cheap-talk experiment send true recommendations and can be considered as benevolent. Moreover, our treatments on giving participants the choice to remain silent suggest that more individuals are unwilling to send wrong recommendations because they want to avoid lying than want to be honest. Interestingly, at the same time the trust in truthful recommendations is low. Only approximately half of the participants follow recommendations, which confirms the standard economic prediction of cheap talk being uninformative. Future research could investigate whether this finding also holds using high stakes in other places than Bangladesh.

Reference

ANDERSEN, S., S. ERTAC, U. GNEEZY, M. HOFFMAN, AND J. A. LIST (2011): "Stakes Matter in Ultimatum Games.," *The American Economic Review*, 101, 3427-3439.

CAMERON, L. A. (1999): "Raising the Stakes in the Ultimatum Game: Experimental Evidence from Indonesia.," *Economic Inquiry*, 37, 47-59.

CARDENAS, J. C., AND J. CARPENTER (2008): "Behavioural Development Economics: Lessons from Field Labs in the Developing World.," *The Journal of Development Studies*, 44, 311-338.

CHARNESS, G., AND M. DUFWENBERG (2006): "Promises and Partnership.," *Econometrica*, 74, 1579-1601.

CHILDS, J. (2012): "Gender Differences in Lying.," *Economics Letters*, 114, 147-149.

DREBER, A., AND M. JOHANNESSON (2008): "Gender Differences in Deception.," *Economics Letters*, 99, 197-199.

ELLINGSEN, T., AND M. JOHANNESSON (2004): "Promises, Threats and Fairness.," *The Economic Journal*, 114, 397-420.

ERAT, S., AND U. GNEEZY (2012): "White Lies.," *Management Science*, 58, 723-733.

FISCHBACHER, U., AND F. FÖLLMI‐HEUSI (2013): "Lies in Disguise—an Experimental Study on Cheating.," *Journal of the European Economic Association*, 11, 525-547.

GIBSON, R., C. TANNER, AND A. F. WAGNER (2013): "Preferences for Truthfulness: Heterogeneity among and within Individuals.," *The American Economic Review* 103, 532-548.

GNEEZY, U. (2005): "Deception: The Role of Consequences.," *The American Economic Review* 95, 384-394.

GYLFASON, H. F., A. A. AUDUR, AND K. KARI (2013): "More on Gender Differences in Lying.," *Economics Letters*, 119, 94-96.

JOHANSSON-STENMAN, O., M. MAHMUD, AND P. MARTINSSON (2005): "Does Stake Size Matter in Trust Games?," *Economics Letters*, 88, 365-369.

KARTIK, N. (2009): "Strategic Communication with Lying Costs.," *The Review of Economic Studies*, 76, 1359-1395.

KOFORD, K., AND M. PENNO (1992): "Accounting, Principal-Agent Theory, and Self-Interested Behavior.," *The Ruffin Series in Business Ethics*.

LEIBBRANDT, A., P. MAITRA, AND A. NEELIM (2015): "On the Redistribution of Wealth in a Developing Country: Experimental Evidence on Stake and Framing Effects.," *Journal of Economic Behavior & Organization*, 188, 360 - 371.

LIST, J. A., AND T. L. CHERRY (2008): "Examining the Role of Fairness in High Stakes Allocation Decisions.," *Journal of Economic Behavior & Organization*, 65, 1-8.

LÓPEZ-PÉREZ, R., AND E. SPIEGELMAN (2013): "Why Do People Tell the Truth? Experimental Evidence for Pure Lie Aversion.," *Experimental Economics*, 16, 223-247.

PANDE, R., AND B. OLKEN (2012): "Corruption in Developing Countries.," *Annual Review of Economics*, 4, 479-509.

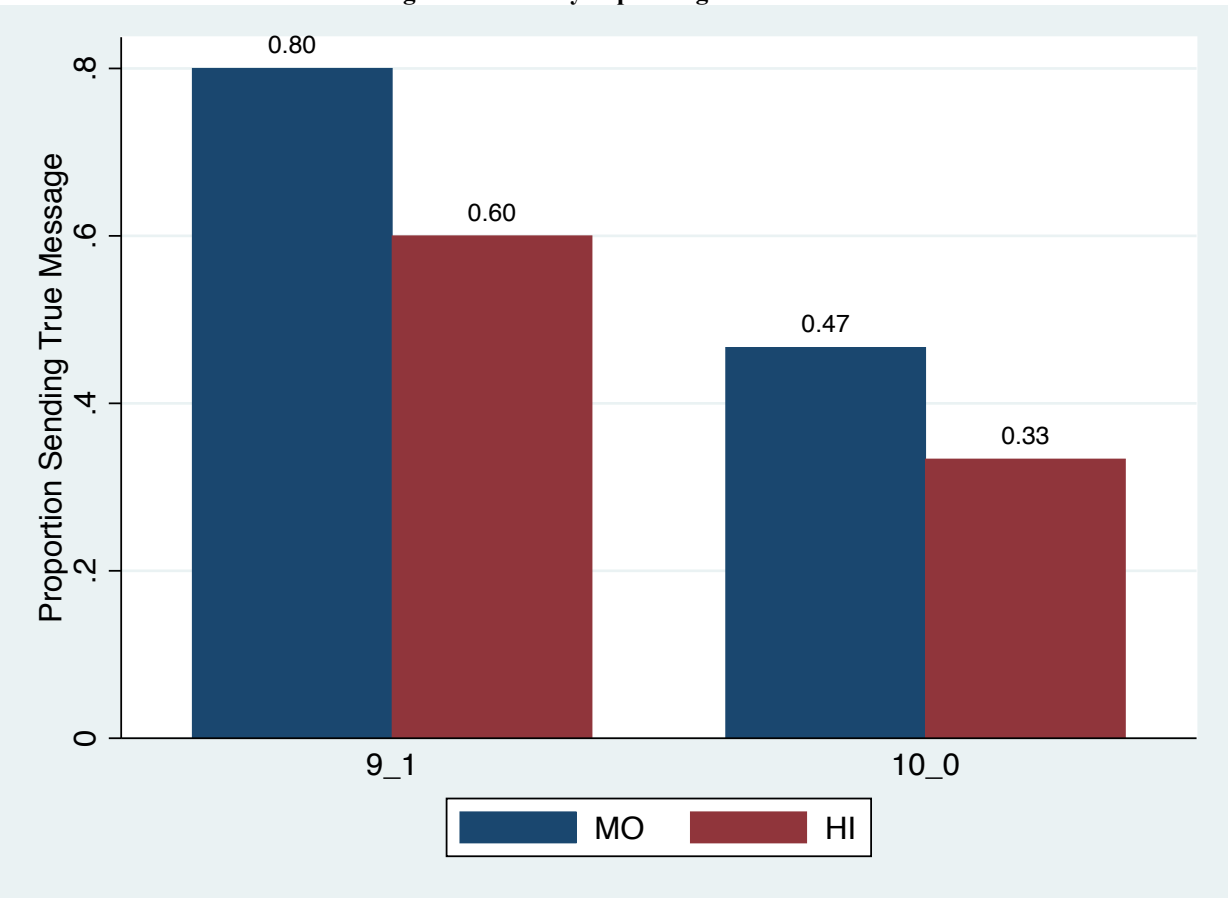
SÁNCHEZ-PAGÉS, S., AND M. VORSATZ (2009): "Enjoy the Silence: An Experiment on Truth-Telling," *Experimental Economics*, 12, 220-241.

SLONIM, R., AND A. E. ROTH (1998): "Learning in High Stakes Ultimatum Games: An Experiment in the Slovak Republic," *Econometrica*, 569-596.

SUTTER, M. (2009): "Deception through Telling the Truth?! Experimental Evidence from Individuals and Teams.," *The Economic Journal*, 119, 47-60..

VANBERG, C. (2008): "Why Do People Keep Their Promises? An Experimental Test of Two Explanations.," *Econometrica*, 76, 1467-1480.

Figure 1: Honesty depending on Stakes



Notes: Along the horizontal axis 9_1 and 10_0 refer to pay-off distributions in option 2: 9_1 corresponds to option 2 being (90, 10) and (9000,1000) i.e., MO_1 and HI_1. 10_0 corresponds to option 2 being (100, 0) and (10000,0) i.e., MO_2 and HI_2.

Figure 2: Message content with and without the No Recommendation option

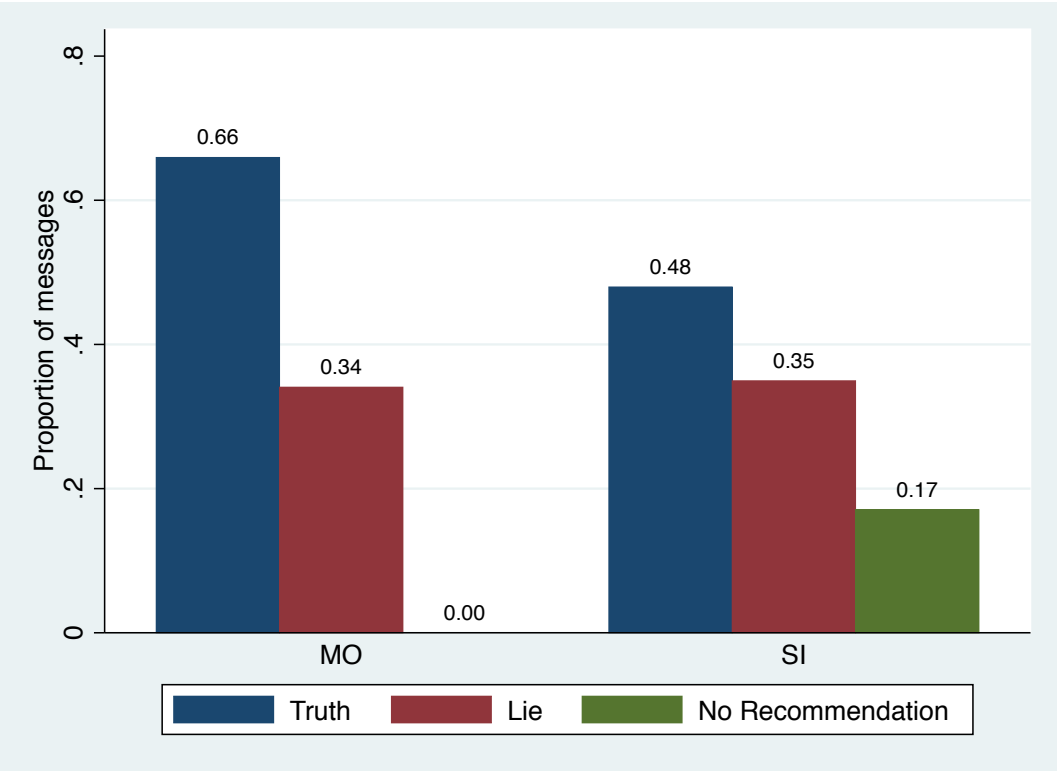
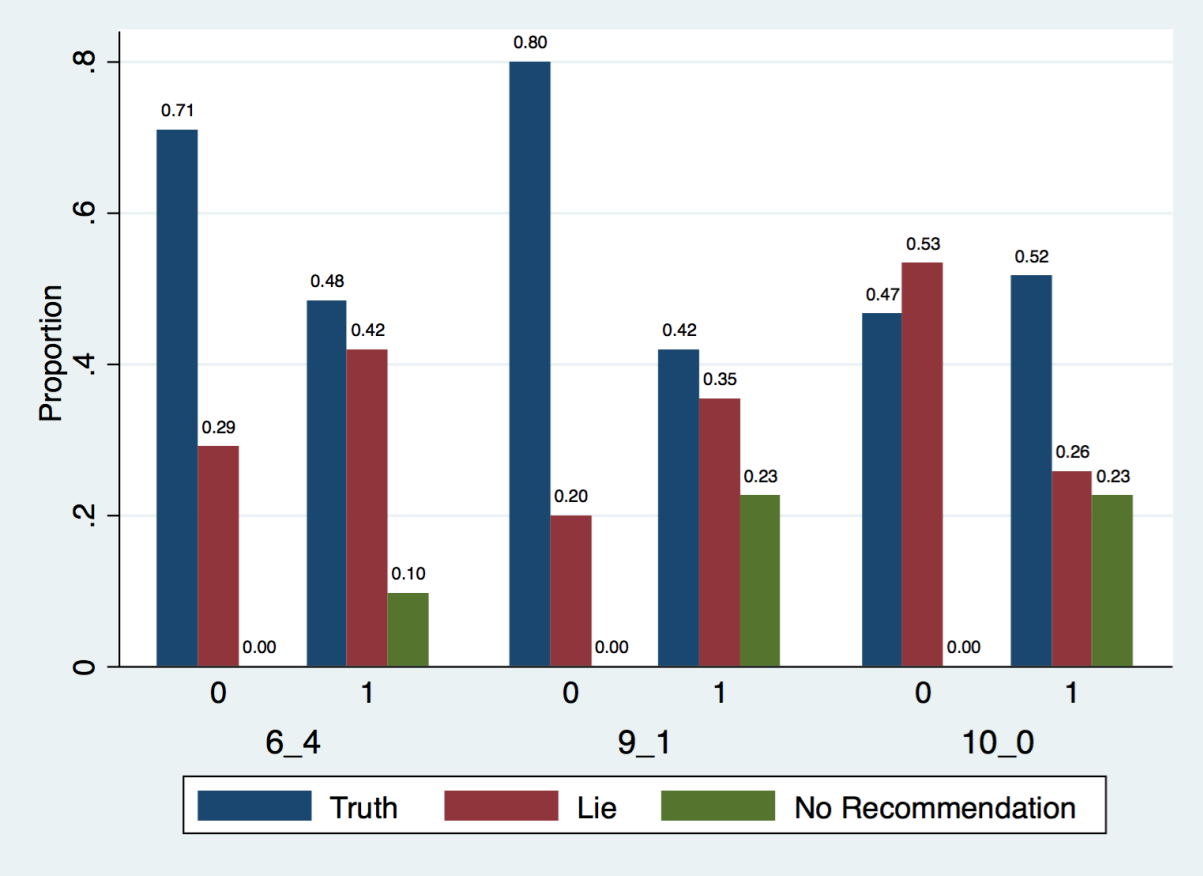
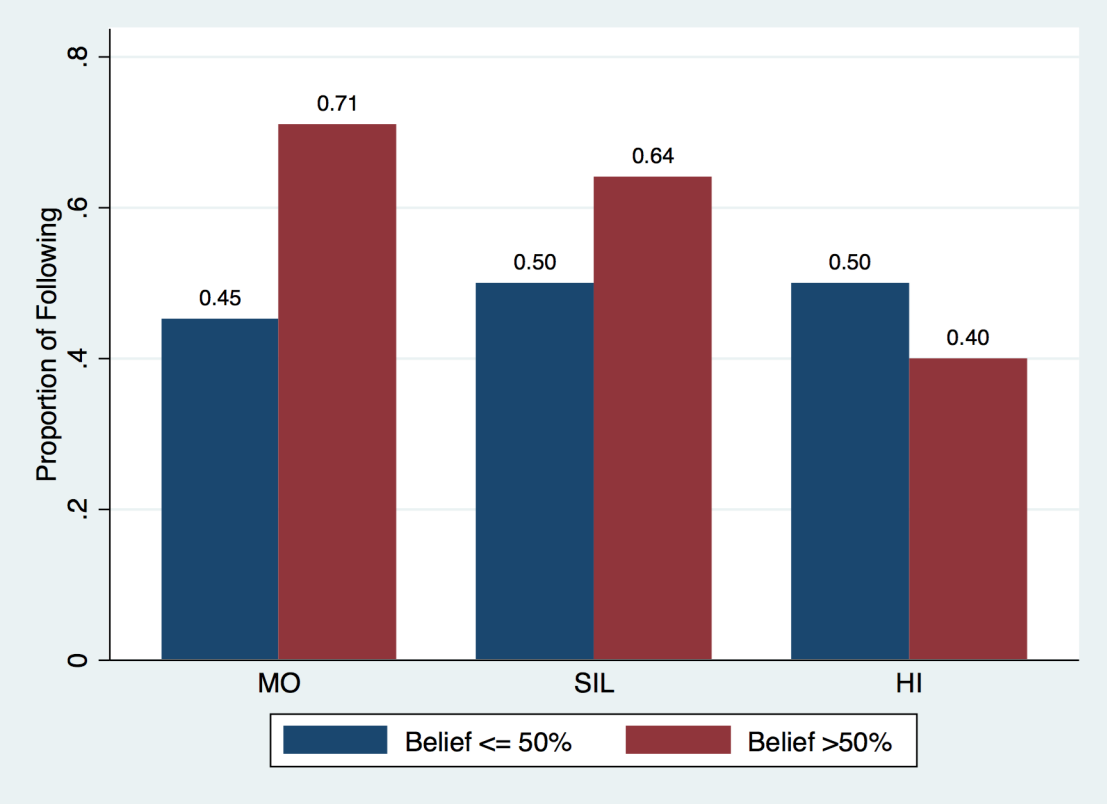


Figure 3: Message Type by Treatment (Moderate Stakes only)



Notes: Along the horizontal axis 6_4, 9_1 and 10_0 refer to pay-off distributions in option 2: 6_4 corresponds to option 2 being (60, 40), i.e., MO_3 and SI_3. 9_1 corresponds to option 2 being (90, 10) i.e., MO_1 and SI_1. 10_0 corresponds to option 2 being (100, 0) i.e., MO_2 and SI_2. 0 implies decision in MO treatment and 1 implies decision in the SI treatment.

Figure 4: Receiver following across treatments



Notes: Beliefs refer to beliefs by receivers about the content of the message sent by the senders.

Table 1: Summary of Treatments

Treatment	Option A		Option B		Sample Size	# of Sessions
	Sender	Receiver	Sender	Receiver		
Sender						
MO_1	50	50	90	10	30	4
MO_2	50	50	100	0	30	4
MO_3	50	50	60	40	31	4
SI_1	50	50	90	10	31	4
SI_2	50	50	100	0	31	4
SI_3	50	50	60	40	31	4
HI_1	5000	5000	9000	1000	15	2
HI_2	5000	5000	10000	0	15	2
Receiver						
MO					91	12
SI					93	12
HI					30	4

Table 2: Mean observable characteristics of sample participants across treatments

Variable		Sender			Receiver			
	Full Sample	**MO**	**HI**	**SI**	**MO**	**HI**	**SI**	***p-value***
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	***(8)***
Age	35.07	34.31	34.6	37.23	35.98	33.69	33.32	0.41
	(0.73)	(1.55)	(2.46)	(1.56)	(1.65)	(2.20)	(1.64)	
Education (years of schooling)	5.19	5.42	7.20	4.07	5.44	4.93	5.30	0.11
	(0.24)	(0.51)	(0.98)	(0.46)	(0.51)	(0.92)	(0.52)	
Income ('000s)	7.76	8.42	8.52	7.24	7.58	6.00	8.13	0.41
	(0.29)	(0.72)	(1.06)	(0.54)	(0.41)	(0.43)	(0.86)	
Marriage Dummy	0.75	0.70	0.70	0.73	0.81	0.76	0.74	0.61
	(0.02)	(0.05)	(0.09)	(0.05)	(0.04)	(0.08)	(0.05)	
Proportion of Male	0.37	0.33	0.53	0.28	0.41	0.50	0.34	0.07
	(0.02)	(0.05)	(0.09)	(.05)	(0.05)	(0.09)	(0.09)	
Household Size	4.69	4.70	4.30	4.56	4.81	4.67	4.85	0.56
	(0.08)	(0.22)	(0.22)	(0.17)	(0.19)	(0.28)	(0.16)	
Trust in fellow villagers	0.46	0.44	0.55	0.57	0.39	0.42	0.47	0.16
	(0.02)	(0.05)	(0.05)	(0.09)	(0.05)	(0.05)	(0.09)	
Religious	0.52	0.51	0.56	0.37	0.53	0.54	0.46	0.48
	(0.02)	(0.05)	(0.05)	(0.09)	(0.05)	(0.05)	(0.09)	

Notes: Standard Errors are presented in parenthesis Income denotes average income of the household in a month in thousands of Taka. Religious denotes individuals who report performing *namaaz*/praying at least once a day. Trust in fellow villagers is a dummy, which takes a value of 1 if the respondent agreed to the statement that they generally trusted villages from their village. In column 8, *p-values* based on a Kruskall-Wallis H-test for the null hypothesis that the means are identical across the six treatments and role combinations.

Table 3: Summary of Behavior in Treatments

	Full Sample (1)	**MO-Pooled (2)**	**MO_1 (3)**	**MO_2 (4)**	**MO_3 (5)**	**HI-Pooled (6)**	**HI_1 (7)**	**HI_2 (8)**	**SI-Pooled (9)**	**SI_1 (10)**	**SI_2 (11)**	**SI_3 (12)**	**MO-HI (13)**	**MO-SI (14)**
True Messages (% of total messages)	55.1	65.9	80	46.7	70.9	46.7	60	33.3	47.3	41.9	51.6	48.3	19.3**	18.6***
False Messages (% of total messages)	36.9	34.1	20	53.3	29	53.3	40	66.7	34.4	35.5	25.8	41.9	na	-0.3
No Recommendation (% of total messages)	7.9	-	-	-	-	-	-	-	18.3	22.5	22.5	9.7	na	na
Belief about Receiver following of Sender Messages (%)	66.7	65.3	58.9	63.5	73.3	71.8	70.5	73.1	66.3	65.4	62.4	71.1	-6.4	-1.0
Follow (% of total action)	54.2	56	-	-	-	43.3	-	-	55.9	-	-	-	12.7	0.1
Beliefs about receiving True messages (%)	47.7	45.4	-	-	-	64.5	-	-	44.5	-	-	-	19.1***	0.9

Notes: *** p <0.01, ** p <0.05, * p <0.1 (one-tailed), based on Wilcoxon-Mann-Whitney test for player choices and Wilcoxon-Signed rank for player beliefs.

Table 4: Results of Regressions for Senders

	True Message					False Message	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
HI	-0.342***	-0.334***	-0.361***				
	(0.041)	(0.063)	(0.078)				
SIL				-0.179***	-0.187***	-0.009	0.003
				(0.059)	(0.066)	(0.070)	(0.062)
Male		-0.240**	-0.229**		-0.110		0.157*
		(0.090)	(0.091)		(0.084)		(0.084)
Married		0.155	0.182		0.069		-0.050
		(0.141)	(0.180)		(0.089)		(0.094)
Age		-0.002	-0.001		-0.001		-0.005*
		(0.004)	(0.004)		(0.003)		(0.003)
Household size		0.013	0.039		-0.010		0.022
		(0.026)	(0.026)		(0.020)		(0.024)
Years of schooling		0.018	0.018		0.003		-0.010
		(0.015)	(0.017)		(0.012)		(0.013)
Income		-0.009**	-0.009***		-0.006		0.004
		(0.004)	(0.003)		(0.004)		(0.004)
Religious		0.129	0.108		0.059		-0.010
		(0.151)	(0.074)		(0.098)		(0.100)
Trust in villagers		0.138	-0.095		-0.031		0.019
		(0.080)	(0.106)		(0.102)		(0.099)
High Belief about Receiver Following		-0.101	0.235		0.004		0.033
		(0.117)	(0.185)		(0.090)		(0.089)
Constant	0.696***	0.616**	0.403	0.656***	0.750***	0.347***	0.394*
	(0.030)	(0.281)	(0.256)	(0.049)	(0.201)	(0.052)	(0.201)
Sample Size	121	121	90	184	184	184	184

Notes: OLS regressions presented. The dependent variable is the choice of sending a true message in columns 1–5 and the choice of sending a false message in columns 6 and 7. All regressions include village fixed effects. Columns 1–3 use sample from the MO and HI treatments. Column 3 excludes participants in the MO3 treatment. Columns 4–7 use sample from the MO and SI treatments. Standard errors clustered at the session level. *** p <0.01, ** p <0.05, * p <0.1.

Table 5: Effect of pay-off distribution on honesty across MO and HI treatments

	True Message					False Message	
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**
MO_1	0.146***	0.333***		0.100	0.131	-0.110	-0.147
	(0.020)	(0.072)		(0.110)	(0.137)	(0.093)	(0.101)
MO_2	-0.159***	-0.037	-0.366***	-0.104	-0.070	0.135	0.083
	(0.043)	(0.068)	(0.027)	(0.118)	(0.139)	(0.111)	(0.107)
HI_1	-0.333***	-0.265***	-0.579***				
	(0.024)	(0.081)	(0.082)				
HI_2	-0.384***	-0.223**	-0.545***				
	(0.066)	(0.086)	(0.043)				
SI_1				-0.205*	-0.183	-0.031	-0.053
				(0.115)	(0.142)	(0.108)	(0.109)
SI_2				-0.143	-0.144	-0.043	-0.039
				(0.132)	(0.149)	(0.120)	(0.120)
SI_3				-0.214	-0.196	0.118	0.083
				(0.136)	(0.157)	(0.117)	(0.113)
Male		-0.329***	-0.306**		-0.122		0.171*
		(0.088)	(0.102)		(0.094)		(0.091)
Married		0.166	0.190		0.067		-0.048
		(0.132)	(0.172)		(0.091)		(0.095)
Age		-0.002	-0.001		-0.001		-0.005*
		(0.004)	(0.004)		(0.003)		(0.003)
Household size		0.019	0.044		-0.009		0.023
		(0.027)	(0.029)		(0.020)		(0.025)
Years of schooling		0.021	0.024		0.003		-0.010
		(0.015)	(0.017)		(0.012)		(0.013)
Income		-0.007	-0.006		-0.005		0.003
		(0.004)	(0.004)		(0.004)		(0.004)

Trust in villagers		0.136*	0.105		-0.033		0.025
		(0.077)	(0.068)		(0.101)		(0.099)
High Belief about Receiver Following Dummy		-0.126	-0.139		0.008		0.024
		(0.115)	(0.097)		(0.092)		(0.092)
Religious		0.119	0.228		0.060		-0.004
		(0.152)	(0.185)		(0.101)		(0.100)
Constant	0.704***	0.479*	0.545**	0.661***	0.733***	0.331***	0.401*
	(0.023)	(0.266)	(0.208)	(0.106)	(0.231)	(0.091)	(0.218)
Sample Size	121	121	90	184	184	184	184
Difference Estimates							
MO_3-MO_1	-0.146***	-0.333***		-0.10	-0.13	0.11	0.15
MO_3–MO_2	0.159***	0.037		0.10	0.07	-0.14	-0.08
MO_1–MO_2	-0.305***	-0.369***	-0.366***	0.20***	0.20***	-0.25***	-0.23***
HI_1–HI_2	0.05	-0.04	-0.034				
MO_1–HI_1	0.479***	0.597***	0.579***				
MO_2–HI_2	0.225***	0.186***	0.178***				
SI_3–SI_1				-0.009	-0.012	0.15	0.14
SI_3–SI_2				-0.07	-0.05	0.16*	0.12
SI_1–SI_2				-0.06	-0.04	0.01	0.01
MO_3–SI_3				0.24	0.19	-0.12	-0.08
MO_1–SI_1				0.31***	0.31***	-0.08	-0.09
MO_2–SI_2				0.39	0.07	0.18*	0.12

Notes: OLS regressions presented. The dependent variable is the choice of sending a true message in columns 1–5 and the choice of sending a false message in columns 6 and 7. All regressions include village fixed effects. Columns 1–3 use sample from the MO and HI treatments. Column 3 excludes participants in the MO3 treatment. Columns 4–7 use sample from the MO and SI treatments. Standard errors clustered at the session level. *** p <0.01, ** p <0.05, * p <0.1.

Table 6: Choosing to Remain Silent

	(1)	(2)
SI1	0.125	0.145
	(.)	(0.088)
SI2	0.067	0.037
	(0.039)	(0.056)
Male		0.033
		(0.132)
Married		0.007
		(0.105)
Age		0.009*
		(0.004)
Household size		-0.030
		(0.027)
Years of schooling		-0.002
		(0.009)
Income		0.005
		(0.006)
Trust in villagers		0.015
		(0.131)
Belief about Receiver Following (%)		-0.031
		(0.110)
Religious		-0.085
		(0.139)
Constant	0.119***	-0.056
	(0.015)	(0.258)
Sample Size	93	93

Notes: OLS regressions presented. The dependent variable is the choice of remaining silent. All regressions include village fixed effects. Sample restricted the SI treatment. Standard errors clustered at the session level. *** p <0.01, ** p <0.05, * p <0.1.

Table 7: Regression estimates for Receivers

	(1)	(2)	(3)	(4)
HI	-0.15	-0.18		
	(0.126)	(0.112)		
SI			0.02	0.02
			(0.099)	(0.092)
Male		-0.04		-0.13
		(0.125)		(0.100)
Married		0.20*		0.09
		(0.112)		(0.095)
Age		0.01*		0.01**
		(0.004)		(0.003)
Household size		0.02		0.01
		(0.028)		(0.020)
Years of schooling		0.01		-0.00
		(0.012)		(0.008)
Income		-0.01		0.00
		(0.015)		(0.005)
Trust in villagers		0.05		-0.10
		(0.115)		(0.079)
High Belief about Receiver True Message		0.13**		0.11*
		(0.057)		(0.060)
Religious		0.04		0.09
		(0.129)		(0.083)
Constant	0.57***	0.00	0.55***	0.17
	(0.054)	(0.213)	(0.064)	(0.144)
Sample Size	121	119	184	181

Notes: OLS regressions presented. The dependent variable all columns is the choice of following sender message. Columns (1) and (2) exclude SI treatments and columns (3) and (4) exclude HI treatments, to test the effects of increasing stake size and the option to remain silent respectively. All regressions include village fixed effects. Standard errors clustered at the village level. *** p <0.01, ** p <0.05, * p <0.1.

Appendix 1: Pairwise tests across treatments

Details	Difference	*p*-value
True Message		
MO1 - MO2	33.3	0.003
MO1 - MO3	9	0.21
MO2 - MO3	-24.3	0.03
HI1 - HI2	26.7	0.08
MO1 - HI1	20	0.08
MO2 - HI2	13.3	0.2
MO1 - SI1	38.6	0.001
MO2 - SI2	-4.9	0.35
MO3 - SI3	22.6	0.04
SI1 - SI2	-9.7	0.23
SI1 - SI3	-6.5	0.31
SI2 - SI3	3.2	0.4
False Message		
MO1 - SI1	-15.4	0.09
MO2 - SI2	27.5	0.03
MO3 - SI3	-12.9	0.15
SI1 - SI2	9.7	0.21
SI1 - SI3	-6.5	0.3
SI2 - SI3	16.1	0.09

Notes: *p*-values based on one-tailed Wilcoxon-Mann-Whitney test.

Appendix 2: Instructions

Instruction for Player 1

Thank you for coming today and participating in our meeting. Our research is about how villagers in Bangladesh interact with each other in money related matters. In that regard, today all of you will be asked to make a decision with which you will have the possibility to earn a significant amount of money. So please pay close attention and ask if you do not understand something. This money will be in addition to the 100 taka which you will receive for participation.

The amount of money you will earn will depend on you and one other person.

Who is this other person?

In short, you will never find out. Let me explain to you how we selected the other person. Notice, that there are 8 people in this room. All 8 of you have been given a pink card. In that pink card there is a number written (between 1-8). Every one of you received a unique number. This number is your ID number for today's session. Just like in this room, there are other people with IDs in another room in another village. One of the participants in the other villages will be the other person matched with you. To repeat, under no circumstance will you be matched with someone from this room and you will never know from which village this other person is. Thus, you will never know the identity of this other person and this other person will never know your identity.
(Ask questions to make sure everyone understands this)

Your Decision

Notice there is a banner in front of you with two income distributions for you and the other person

Option 1[18] You will get Taka 50 The other person will get Taka 50

Option 2[19] You will get Taka 90 The other person will get Taka 10

Before we tell you what choice you have to make let us first tell you what the choice of the other person is. The other person decides whether Option A or B is chosen. Based on what option s/he chooses both of you will get actual money. So if your partner chooses option A then you will get 50 taka (real money) and your partner will get 50 taka (real money). If your partner chooses option B then you will get 90 taka (real money) and your partner will get 10 taka (real money).

However, the other person does not know the allocations in Options A and B. More precisely, the other person only knows that there are two Options but nothing about the allocations in these options. That is, only you have information how much you and the other person can get in either allocation.

So what is your choice?

You can send the other person the following recommendations before s/he makes her/his choice:
i) I recommend Option A for you. It will earn you more money than Option B.
ii) I recommend Option B for you. It will earn you more money than Option A

[18] The values are stake dependent. In LOW stakes these values were 50, 50 and in the HIGH stakes these values were 5000, 5000

[19] The values are treatment dependent. The values utilised were (60,40), (90, 10), (100, 0) (9000,1000) and (10000,0)

Thus, you can send a *true* recommendation (in this example that option A is better for the other person). Or, you can send an *false* recommendation (in this example that option B is better for the other person).

After you have chosen which message you want to send we are going to give your recommendation to an assistant in another room, in another village. Based on your and the other persons decision one of the two allocations will be chosen.

The other person will never know who you are, and you will never know who the other person is. Moreover, the other person will never know whether your recommendation was true or false. The other person is free to follow your recommendation but can also not follow your recommendation

You have been given a piece of paper (response sheet), and there are two letters written on in: 1 and 2. To make your decision you will have to go to the booth located at the corner of the room. If you want to recommend to the other person option 1, then you will circle 1. If you want to recommend to the other person option 2, then you will circle 2. One of our research assistants will be there to help you if you need assistance. However, he will not see or observe your choices. Once you have made your decision please drop your response sheet in the sealed box present in the booth. Once you have made your decision, you will go back to your seat and remain quiet until further instruction is given. Remember, no discussions of any sort are allowed. Once all the decisions have been finished we will make a phone call to the other village and let them know.

Additional chance to earn money

You have another chance to make money. We would like to know about your beliefs. How many out of 8 participants will actually choose to follow a recommendation? We will check how many did and if your guess is correct, you will earn an additional 20 taka.

An example: Suppose you believe that 5 out of 8 people will follow the recommendation. In that case if in reality 5 out of 8 people do follow the recommendation then you will get 20 taka. If any other number is true, suppose 4 people or 7 people, then you will not receive any money.

Keep in mind that if your guess is correct you will get an additional 20 taka.

Like before all of you have been given another piece of paper. In this paper you will have to write down how many people in the other room will follow recommendations. If you believe three people will follow the recommendation then you will write the number 3 in the blank space. If you believe six people will then you will write six. Just as before, you will have to make your decision at the booth and once you have made the decision place your response sheet in the sealed box and come back to your seats.

This concludes our decision making phase. Now you are going to fill out a small questionnaire.

Instruction for Player 2

Thank you for coming today and participating in our meeting. Our research is about how villagers in Bangladesh interact with each other in money related matters. In that regard, today all of you will be asked to make a decision with which you will have the possibility to earn a significant amount of money. So please pay close attention and ask if you do not understand something. This money will be in addition to the 100 taka which you will receive for participation.

The amount of money you will earn will depend on you and one other person.

Who is this other person?

In short, you will never find out. Let me explain to you how we selected the other person. Notice, that there are 8 people in this room. All 8 of you have been given a pink card. In that pink card there is a number written (between 1-8). Every one of you received a unique number. This number is your ID number for today's session. Just like in this room, there are other people with IDs in another room in another village. One of the participants in the other villages will be the other person matched with you. To repeat, under no circumstance will you be matched with someone from this room and you will never know from which village this other person is. Thus, you will never know the identity of this other person and this other person will never know your identity.
(Ask questions to make sure everyone understands this)

Your Decision

Notice there is a banner in front of you with two income distributions for you and the other person. From both of these options you and the other person will earn some money. However, the exact of money you and the other person will earn will not be told to you. Only the other person will be told this information.

However, for the purposes of explaining the decision process we are going to use an example. Suppose

Option 1[20] You will get Taka 90 The other person will get Taka 50

Option 2 You will get Taka 20 The other person will get Taka 80

Once the other person has seen the real options he or she will be asked you to send one of the two recommendations.

i) I recommend Option 1 for you. It will earn you more money than Option 2.
or
ii) I recommend Option 2 for you. It will earn you more money than Option 1

The other person knows that you cannot see the two options.

S/he can send you a *true* recommendation (in this example that option 1 is better for you because it gives you 90 Taka, which is more than in Option B where you would only get 20 Taka).

Or, s/he can send you a *false* recommendation (in this example that option 1 is better for you).

What is your decision?

Either, you follow the other person's recommendation *or* you do not follow his/her recommendation.

This choice will affect your and other person's earnings because it selects the option that will be paid to you and the other person.

[20] The values in Option 1 and 2 are stake dependent and randomly chosen. In the LOW stakes all values were between 10 to 100 and in the HIGH stakes all values were between 1000 to 10000. This was to ensure that Receivers aware fully aware of the stake size over which Senders and Receivers were making decisions.

For instance, in the previous example, if the other person recommends option B (which is a false recommendation) and you follow her/his advice, then you will only get 20 Taka and the other person 80 Taka. If the other person recommends option A and you do not follow her/his advice, then option B will be paid out (you will get 20 Taka, and the other person 80 Taka).

However, if the other person recommends option A (which is a true recommendation) and you follow her/his advice, then you will get 90 Taka and s/he 50 Taka. If the other person recommends option B and you do not follow her/his advice, then option A will be paid out (you will get 90 Taka, and the other person 50 Taka).

To put it simply: If you believe the other person sent a true recommendation you should follow it but if you believe s/he sent an false recommendation, you should not follow it.

The actual allocations in the options will be different than in the previous example. We just used these options as an example.

Importantly, you will never know for sure whether the other person's recommendation was true or false.

However, we can tell you that the potential earnings for you and the other person are about 50 Taka.

Let me repeat, you and the other person could earn in this experiment about 70[21] Taka.

How are you going to decide?

We will let you know of which recommendation the other person sent in a private booth at the corner of the room after which you will have to make your decision. Your decision is whether you want to follow your game partner's recommendation or not. Remember this recommendation maybe true or maybe false.

You have been given a piece of paper (response sheet), there are two letters written on it: Y and N.

Y means that you follow the other person's recommendation,

N means that you do not follow the other person's recommendation.

Please circle either Y or N. You will make your decision at the booth located at the corner of the room. One of our research assistants will be there to help you if you want him to. He will never look at what decision you have made i.e. he will face away from you while you are making the decision. Once you have made the decision put your response sheet in the box present in the booth and return to your seat and remain quiet until further instruction is given. Remember, no discussions of any sort are allowed. Once all the responses have been finished we will make a phone call to the other village and wait for the decisions of the persons in the other village.

Additional chance to earn money

You have another chance to make money. We would like to know about your beliefs about what recommendation the other person has sent. How many out of 8 participants will send a true

[21] This value was 5000 taka in the High Stake treatment

recommendation? We will check how many did and if your guess is correct, you will earn an additional 20 taka.

To give you an example, suppose you believe that 5 out of 8 people will send a true recommendation. In that case if in reality 5 out of 8 people send a true recommendation then you will get 20 taka. If any other number people is true , for example 4 people or 7 people, then you will not receive any money.

Keep in mind that if your guess is correct you will get an additional 20 taka.

Like before all of you have been given another piece of paper with a blank space on it (show the response sheet). In the paper you have to write down how many people in the other room are going to send true recommendations. If you believe 3 people will send true recommendations then you will write 3. If you believe 6 people will send true recommendations then write down 6. One of our research assistants will be there help you if you need him to. Once you have made the decision put your response sheet in the box present in the booth and return to your seat and remain quiet until further instruction is given. Remember, no discussions of any sort are allowed. Once all the responses have been finished we will make a phone call to the other village and wait for the decisions of the persons in the other village.

This concludes our decision making phase. Now you are going to fill out a small questionnaire