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Abstract

Remote work arrangements and increased virtual communication are commonplace. Particularly in organizations, virtual communication has become an essential tool for collaboration and exchanging information. Virtual communication channels, such as text or video messages, provide different levels of human presence compared to face-to-face communication. Given that human presence is known to impact moral behavior, this raises the question if different communication channels are used when being dishonest. To investigate this question, we conducted a controlled experiment using a sender-receiver deception game where the senders could choose between a text or a video message. In the baseline condition, the senders had to be honest and were not allowed to lie. In the treatment condition, the senders had the option of sending an honest or a dishonest message to the receivers. Even though we observe no differences in channel choice if we compare the two treatments, our results, however, show that in the treatment condition, the senders chose the text communication channel significantly more often when being dishonest compared to being honest. We discuss different potential mechanisms, such as differences in perceived human presence between text and video communication, for our findings. Our findings have important implications for various contexts and for strategies to prevent dishonest behavior.

JEL-Codes: C910, D830, M500.

Keywords: digitization, virtual communication, communication channel, honesty, human presence.

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1 Introduction

Does virtual communication facilitate dishonest behavior? The emergence of fake news and misinformation suggests that the possibility of communicating anonymously online provokes these types of immoral behavior. In addition, employees and companies are concerned that remote work arrangements reduce social ties and opportunities for small talk among workers, impeding social relationships. Given that working from home and remote work arrangements are commonplace (Barrero et al., 2021), employees have to rely on virtual communication within organizations. Therefore, it is vital to understand if and how the choice of communication channels impacts information exchange and honest communication. In this paper, we investigate the relationship between the choice of the communication channel and dishonest behavior in a controlled experiment. The results provide a first insight into this complex topic.

Although virtual communication channels simplify the interaction between employees, they replace face-to-face interaction to some extent and, thus, diminish human presence in daily communications. This issue depends on the communication channel used, as they differ in their degree of allowing human presence¹ (see, e.g., Short et al., 1976, for social presence theory), but also in their degree of allowing non-verbal communication cues (see, e.g., Daft and Lengel, 1986, for media richness theory). In this paper, we concentrate on two common communication channels, text and video messages, and investigate if and how the chosen channel relates to the communicated content. Previous research indicates that human presence can impact moral behavior in general (Abeler et al., 2014; Conrads and Lotz, 2015; Cohn et al., 2022), and in particular dishonest, which has already been extensively studied (Gneezy et al., 2018; Abeler et al., 2019; Khalmetski and Sliwka, 2019).

Our primary focus is to shed light on the question of whether people prefer text or video messages when being dishonest. We are also interested if the option to send dishonest messages impacts the choice of the communication channel compared to a situation where the message has to be honest. Third, we investigate the signaling value of the chosen communication channels.

To answer these questions, we conducted a controlled experiment using a modified sender-receiver

¹We follow the definition of Cohn et al. (2022), who define “human presence” as the “feeling of closeness in terms of socially interacting with another person.” In terms of communication channels, we interpret this definition closely to the concept of social presence (see, e.g., Short et al., 1976, for social presence theory)

deception game (Gneezy et al., 2013) consisting of two parts. In Part 1, the senders privately observed a random integer $1 \leq s \leq 6$ and had to send a pre-written message, “The assigned number is r ”, with $1 \leq r \leq 6$, to the receivers. In contrast to the classic deception game, the senders had the choice between sending a text or video message to the receivers. Afterward, the receivers decided whether to follow the message or not. The sender’s payoff increased linearly with the reported number r and did not depend on the receiver’s reaction. This payment structure reduced strategic concerns for the senders when choosing a channel. In our two treatments, we varied whether or not the senders were allowed to lie to the receivers. In the *NoChoice* treatment, the senders had no choice to be dishonest and revealed the true observed integer. This treatment serves as a baseline to control for differences in the channel choice irrespective of dishonest behavior. In the *Choice* treatment, the senders could choose to send an honest or a dishonest message to the receivers, and our payment structure incentivized the senders to lie. To rule out gender effects, we formed pairs of senders and receivers with the same self-chosen gender. Given that the focus of the paper is not on gender differences, we opted for a pure male sample and discuss potential limitations in Section 5.

Our results reveal no significant differences regarding the channel choice between our two treatments. However, we observe that the senders in the *Choice* treatment significantly more often chose text messages when being dishonest. A potential mechanism for this result is that the senders perceived less human presence in text messages compared to video messages which might have reduced lying costs. In addition, some senders preferred the video message in the *Choice* treatment to signal honesty. Since the receivers’ follow decisions did not significantly vary between text and video messages in the *Choice* treatment, the senders’ signals were not crucial for the receivers.

Our paper relates to two strands of literature: (i) Literature studying moral behavior in economic decision-making and (ii) literature on virtual communication.

Our findings contribute to the literature studying moral behavior in economic decision-making and will help to understand the cognitive and behavioral factors that drive dishonest behavior better (e.g., see Lundquist et al., 2009; Pascual-Ezama et al., 2015; Dufwenberg and Dufwenberg, 2018; Gneezy et al., 2018; Abeler et al., 2019; Khalmetski and Sliwka, 2019). Particularly relevant to our paper is that human presence is crucial in reducing dishonesty because individuals are more likely to behave dishonestly when interacting with a machine rather than with a human being (Cohn

et al., 2022). We contribute to a better understanding how different levels of human presence arise in virtual settings without face-to-face interaction. Our results suggest that human presence increases when people unveil their faces and voice in video messages compared to text messages. This difference in human presence between the different communication channels may allow people to self-select into the channel with less human presence to decrease their cost of lying.

Furthermore, our paper broadly links to an extensive body of research that studies the effect of communication on economic behavior (e.g., Isaac and Walker (1988); Cooper et al. (1992); Crawford (1998); Charness and Dufwenberg (2006); Bicchieri and Lev-On (2007); Lundquist et al. (2009); He et al. (2017)). We contribute to the literature on virtual communication that examines how different communication channels affect economic behavior, including but not limited to cooperation and coordination (Brosig and Weimann (2003); Bochet et al. (2006)), charisma and performance (Nieken, 2022), creativity (Grözingler et al., 2020), trust and trustworthiness (Zylbersztejn et al., 2020; Babutsidze et al., 2021; Zylbersztejn et al., 2021) or bargaining (Valley et al., 2002). This research is of great importance because it demonstrates that using more appropriate communication channels in certain situations can increase, among other things, efficiency or effectiveness in several day-to-day situations. Even more connected to our research Abeler et al. (2014), Conrads and Lotz (2015), and Cohn et al. (2022) studied the effect of different communication channels on dishonest behavior and revealed, among other things, that there are no significant differences between text and audio communication channels. However, Conrads and Lotz (2015) showed that there are differences in dishonesty between text and face-to-face communication. The impact of video communication channels, which are the closest to face-to-face communication, is still unknown in the current state of research, and our paper aims to close this research gap. Moreover, most studies in this field focused on subjects' behavior when they were preselected into specific communication channels. People in everyday situations, however, often have the choice to choose their preferred communication channel and, therefore, could choose communication channels that simplify lying. Our study is intended to be a starting point in this relatively new area of research to investigate people's preferences for different communication channels.

Our study provides some important implications since our results suggest that there is a connection between dishonest behavior and the chosen communication channel. Institutions, organizations, but also individuals should be aware of this and prioritize video communication channels in situations

where honest behavior is decisive. More generally, it is important to understand that human presence is higher when communicating via video communication channels, and human presence is an essential factor for moral behavior, such as dishonest behavior (Cohn et al., 2022). Furthermore, our results suggest that, especially in situations where higher information asymmetries exist, the communication channel is not just a tool to transmit information, but also the choice of the communication channel might be used as a signal. Some people perceive video communication channels as more credible, trustworthy, or honest and try to signal their honest intentions by choosing this channel. Hence, decision-makers and organizations should be aware that the selection of a communication channel could convey information about their intentions.

The remaining paper is structured as follows: In Section 2, we describe the experimental design, the procedures and derive our hypotheses. In Section 3, we explain our main variables of interest, sample selection, and empirical strategy. We present our results in Section 4 and discuss them in light of a series of behavioral mechanisms that may drive them in Section 5. Section 6 concludes our paper.

2 Experimental Design and Hypotheses

In the following, we first describe our general experimental setup, including the modified sender-receiver deception game (Gneezy et al., 2013). Then we provide details on our two treatments and the procedures before explaining our hypotheses.²

2.1 Design Overview

We conducted a controlled experiment and used a modified two-player sender-receiver deception game (Gneezy et al., 2013) consisting of six rounds. Each round had two parts. In both parts, two players were randomly matched to form a pair in each round. One player was in the role of the sender, and one player was in the role of the receiver. In Part 1, each pair was randomly assigned an integer $1 \leq s \leq 6$. Each integer was equally likely. We will refer to s as the “assigned number.” Only the sender was informed about the assigned number. Afterward, the sender was asked to record a pre-written message, “The assigned number is r ” with $1 \leq r \leq 6$. We will refer

²We preregistered our study before data collection at https://aspredicted.org/blind.php?x=7R5_71C

to the message content as the “reported number.” The sender could use either a text or video communication channel to record the message. Note that the sender had to spend at least 40 seconds on this page, irrespective of the chosen channel. This ensured that choosing a text message did not allow the sender to save time. The sender could only choose between pre-written messages for the text communication channel. When the sender chose the video communication channel, he³ was only allowed to record the sentence, “The assigned number is r ”, to keep the verbal content identical between both channels. In Part 2, the receiver received the text or video message from the sender. He then had to decide whether or not to trust the message and follow it.

The sender’s payoff increased linearly with the reported number r and neither depended on the assigned number s , the chosen communication channel, nor the receiver’s reaction. The sender’s payoff π_s in experimental currency units (ECU) was:

$$\pi_s = 10 + 3 \cdot r$$

The receiver had two options. He could follow the sender’s message, or he could not follow the message. If the receiver followed the message and it contained the assigned number ($r = s$), he received 10 ECUs. If he followed and the message did not contain the assigned number ($r \neq s$), he received 0 ECU. If he did not follow the message, his payoff was 3 ECU. Hence, the sender’s decision to lie affected the receiver’s payoff. The receiver’s payoff was:

$$\pi_r = \begin{cases} 10 & \text{if the receiver followed and } r = s \\ 0 & \text{if the receiver followed and } r \neq s \\ 3 & \text{if the receiver did not follow} \end{cases}$$

Both payoff structures and the sequence of events were common knowledge. In total, subjects played six rounds, and sender-receiver pairs changed every round following a perfect-stranger matching to avoid moral balancing (Ploner and Regner, 2013). In the first round, subjects played the standard deception game using text messages. The purpose of the first round was to better understand the sender’s general honesty behavior. We used the strategy method (Selten, 1967) to elicit the senders’ behavior. Payoffs in this round depended on the assigned number s and the respective decisions from the senders and the receivers. Afterward, the senders and the receivers played five

³We use the masculine form because we only hired male subjects.

consecutive rounds (Rounds 2 to 6) of our modified deception game with the channel choice. A computer randomly selected two payoff-relevant rounds with equal probability to mute potential income effects. No subject received any information about the game outcomes, the other subjects' actions, the assigned number in Round 1, or the payoff-relevant rounds in Rounds 2 to 6 until the end of the experiment. Next, subjects had to answer a brief questionnaire containing questions on perceived human presence and social image concerns for both communication channels (Cohn et al., 2022), on experience and usage of text and video communication channels, on the competence self-concept related to the use of information and communication technology (ICT), on online and mobile communication, and personality and general interpersonal trust. We also collected demographic information, including the subjects' age, field of study, education, past participation in experiments, and self-reported attention. Lastly, we included an optional text field in which we asked if subjects had any comments on the experiment. See Section 3.1 and Appendix A for further details.

2.2 Treatments

We conducted two treatments, that varied only with regard to the Rounds 2 to 6 in which the senders and the receivers played our modified deception game. In the *NoChoice* treatment, the sender had no choice about the communication content because they had to send an honest message to the receiver. It was common knowledge for both subjects that the message had to be honest. In the *Choice* treatment, the sender had the choice of whether to send an honest or a dishonest message. The sender knew that the receiver had no information about whether the message was honest or dishonest. Hence, compared to the *NoChoice* treatment, information asymmetries existed between the sender and the receiver only in the *Choice* treatment. In the *NoChoice* treatment, the messages in Rounds 2 to 6, from the senders to the receivers, were only an information transmission. Therefore, the *NoChoice* treatment serves as a baseline for the senders' channel preferences compared to the *Choice* treatment where the senders could lie and information asymmetries exist.

2.3 Procedures

We first describe the general procedures before addressing the specific procedures for the senders and the receivers.

Recall that our experiment consisted of two parts, Part 1 and Part 2. To minimize the potential confound that the senders and the receivers knew each other, we conducted Part 1 and Part 2 using different subject pools. Part 1 elicited the behavior of the senders and was conducted in the Karlsruhe Decision and Design Lab (KD²Lab).⁴ We used hroot (Bock et al., 2014) to recruit the senders. The game in Part 1 was programmed in oTree (Chen et al., 2016) and the online questionnaire to elicit personal data, such as demographics, was generated using SoSci Survey. In Part 2, we elicited the behavior of the receivers. Part 2 was conducted online via Prolific (www.prolific.co), and we used SoSci Survey to generate the online questionnaire. We hired Prolific subjects located in Germany, Austria, or Switzerland. We only hired male subjects for both parts to exclude gender effects (see Section 5). We only hired German-speaking subjects to mitigate confounds due to a lack of language proficiency. We first collected all observations from the senders in Part 1, and a few weeks thereafter, we conducted Part 2 with all the receivers. The general procedures were identical for the senders and the receivers. Before starting Round 1 and Round 2, subjects had to answer control questions to understand the game rules. In the end, subjects answered a questionnaire on attitudes and demographics (see Section 3.1). In addition to the payoff for Rounds 1 to 6, subjects received a show-up fee. In Part 1, we implemented an exchange rate of 1 ECU = €0.10, and we ran 15 sessions with six to seven senders on average. Their average completion time was approximately 25 minutes, and they earned €9.21 on average. This results in average hourly earnings for the senders of around €13.82.⁵ In Part 2, we implemented an exchange rate of 1 ECU = £0.09. The receivers' average completion time was approximately 20 minutes, and they earned £3.37 (approximately €3.82) on average. This results in average hourly earnings for the receivers of around €11.46.

⁴The Karlsruhe Decision and Design Lab (KD²Lab) has been funded by the DFG and the Karlsruhe Institute of Technology (INST-12138411-1FUGG).

⁵As is common practice for laboratory experiments, the completion time does not include the time for traveling to and from the lab as well as the waiting time before the start of the experiment. We assume that these additional times are, on average, around 15 minutes because subjects often live close by or participate in a break between lectures on campus.

We now describe the specific procedures for the senders in Part 1 (for a graphical illustration, see Figure 6 in Appendix B). The senders came to the KD²Lab and were randomly assigned to one of 40 air-conditioned and soundproofed one-person cubicles (see Figure 7 in Appendix B for an exemplary picture of the setup in the cubicle). Before the start of Round 2, we described in detail how the video recording worked, and the senders could ask the experimenters throughout the experiment if they encountered problems.

As described above, we executed all sessions of Part 1 before conducting Part 2 on Prolific. We implemented a technical check at the beginning of Part 2 to ensure that the audio and video were working. The receivers could only continue the experiment if they passed this test (for a graphical illustration of the procedures for the receivers, see Figure 8 in Appendix B).

2.4 Hypotheses

Our main focus is studying (dis)honesty and the choice of the communication channel. Therefore, our primary interest lies in the senders' behavior. In the second step, we also study the receivers' reaction. Recall that messages in the *NoChoice* treatment were only an information transmission because the senders were not allowed to lie and, thus, had no choice over the content. This was common knowledge. Therefore, the *NoChoice* treatment serves as a baseline to understand the senders' general channel preferences (e.g., some senders might prefer text over video messages because they have an aversion to showing themselves in a video). The *Choice* treatment adds other possible motives to this baseline. Here, the senders have the choice to send an honest or a dishonest message to the receivers. Another motive we expect in the *Choice* treatment is that subjects prefer text messages when lying to the receiver. The findings from Cohn et al. (2022) suggest that human presence is key to mitigating dishonest behavior. In their study, subjects who were more prone to dishonest behavior preferred to avoid human interactions. Furthermore, Abeler et al. (2014) and Conrads and Lotz (2015) revealed that subjects' extremely dishonest behavior increased for a more anonymous text communication channel compared to audio or face-to-face communication. Given that the senders were not allowed to lie in the *NoChoice* treatment, we expect that the additional motive to prefer text messages in the *Choice* treatment leads to differences between both treatments in the chosen communication channel. We therefore formulate the following hypothesis:

Hypothesis 1

The senders' share of video messages is lower (share of text messages is higher) if the senders have the option to be dishonest (*Choice* treatment) compared to a setup in which they have to be honest (*NoChoice* treatment).

The additional motive to prefer text over video messages in the *Choice* treatment should only impact the channel choice if subjects intend to send a dishonest message. As we compare senders' behavior within one treatment, we expect that there is a positive correlation between sending a text message and lying. Thus, we formulate the following hypothesis:

Hypothesis 2

Within the *Choice* treatment, the senders' share of video messages is lower (share of text messages is higher) if the senders are dishonest than if the senders are honest.

The chosen channel has no informational value for the senders in the *NoChoice* treatment because the message is always truthful. This was common knowledge. In contrast, the chosen channel might be perceived as a signal in the *Choice* treatment. Eckel and Petrie (2011) show that receivers in the trust game (Berg et al., 1995) are more trustworthy if they have the opportunity to see a photo of the senders. Thus, in our modified deception game, sending a video message and revealing one's face and identity might be perceived as a signal of trustworthiness. Additionally, senders in the trust game (Berg et al., 1995) trust less if the setup between both subjects is more anonymous (Johnson and Mislin, 2011; Barmettler et al., 2012). Therefore, in our setup, we expect that a receiver's decision to trust relates positively to receiving a less anonymous video message. We thus formulate the following hypothesis:

Hypothesis 3

Within the *Choice* treatment, the receivers' share of follow decisions is higher when receiving video messages compared to text messages.

3 Data and Estimation Strategy

In the following, we describe the main variables used in the analyses and provide information on the sample and our estimation strategy.⁶

3.1 Variables of Interest

Our main variables of interest concern the senders' behavior in Rounds 2 to 6, in which they played five consecutive rounds of our modified deception game with the communication channel choice. In particular, we are interested in whether the senders chose the text or the video channel. Second, we are interested if the channel preferences differed between the *NoChoice* treatment and the *Choice* treatment. We use an indicator variable *Choice Treatment* to analyze the differences between the two treatments, which is one if a subject was part of the *Choice* treatment and zero otherwise. To analyze the channel preferences, we use an indicator variable *Video*, which is one if a sender decided to send a video message and zero otherwise. The variable *Share Video* refers to the share of the five rounds, in which a sender chose the video message ranging from zero (only text messages) to one (only video messages). For the *Choice* treatment, we are also interested in the senders' decision to send an honest or a dishonest message and how this decision interacts with the channel choice. To analyze the content of the message, we use an indicator variable *Dishonest*, which is one if a sender's message was dishonest ($r \neq s$) and zero otherwise.

To study potential mechanisms, we followed Cohn et al. (2022) and elicited the senders' perceived human presence from the receivers. For each communication channel, we used three items in which the senders self-stated their perceived human presence on a 7-point Likert scale. Δ *Human Presence*_{Video - Text} indicates the difference in perceived human presence between video and text messages. Positive values of Δ *Human Presence*_{Video - Text} indicate that the senders perceived a higher human presence in video messages than in text messages. Negative values indicate that human presence was lower in video messages than in text messages.

Our main variable of interest for the receivers' behavior is the decision to follow the senders' messages in Rounds 2 to 6. The indicator variable *Follow* is one if a receiver followed a sender's message and zero otherwise. The variable *Share Follow* refers to the share of the five rounds, in

⁶All control variables used in the analyses in Section 4 and Appendix B are described in Appendix A.

which a receiver followed the message ranging from zero (no follow decisions) to one (only follow decisions). To analyze the communication channel of the message, we use an indicator variable *Video Message*, which is one when receiving a video message and zero otherwise.

3.2 Sample Selection

For Part 1, we gathered observations from 100 subjects. We conducted two attention checks in our post-experimental questionnaire, in which one subject failed one of the two attention checks.⁷ We excluded observations from two senders due to technical issues (no sound, no video storage). Four senders used non-verbal cues, such as shaking their heads, to indicate that they were honest or dishonest in their message. We excluded observations from these senders. This leaves us with observations from 94 senders in our analytical sample (30 senders in the *NoChoice* treatment and 64 senders in the *Choice* treatment). Due to excluded observations in Part 1, for Part 2, we gathered observations from 94 subjects. Again, we conducted two attention checks in our post-experimental questionnaire which seven subjects failed and were excluded from the data set. This leaves us with observations from 87 receivers in our analytical sample (27 receivers in the *NoChoice* treatment and 60 receivers in the *Choice* treatment). See Appendix B for demographic information of the senders in Table 7 and in Table 8 for the receivers.

3.3 Empirical Strategy

Our empirical strategy is as follows. We analyzed the senders' and the receivers' behavior separately. We started our analyses with non-parametric tests. Next, we estimated a series of regressions to answer our research questions. Since we are interested in the subjects' behavior over five rounds and for all hypotheses the dependent variables (*Video* and *Follow*) are binary, we estimated a series of panel probit regressions where i indexes subjects and t indexes rounds.⁸

To investigate Hypothesis 1, we analyzed the sender behavior and first introduced the variable *Choice Treatment* to show the pure treatment effect. In the second specification, we added the

⁷In line with our preregistration, this subject was not excluded because we only excluded subjects that failed both attention checks.

⁸ $video_{it}$ and $follow_{it}$ are the binary dependent variables for subject i in round t ; X_{it} is the collection of independent variables for subject i in round t and are more detailed defined in the sum of $\phi(\cdot)$; α_i is the unobserved subject-specific effect (random effect); $\phi(\cdot)$ is the cumulative distribution function of the standard normal distribution

variable *Round* and the variable *Assigned Number*. To test further potential mechanisms, we also included Δ *Human Presence_{Video - Text}* (Δ *Human Presence* in the regression equations below). In the third specification, we include the interaction between *Choice Treatment* and Δ *Human Presence_{Video - Text}*. In the last specification, we added controls for demographic information.⁹ This results in the following regression equation:

$$P(\text{video}_{it} = 1 | X_{it}, \alpha_i) = \phi(\beta_0 + \beta_1 \text{choicetreatment}_i + \beta_2 \text{round}_{it} + \beta_3 \text{assignednumber}_{it} + \beta_4 \Delta \text{humanpresence}_i + \beta_5 \text{choicetreatment}_i \times \Delta \text{humanpresence}_i + \beta_6 \text{controls}_i + \alpha_i)$$

We use a similar strategy when investigating Hypotheses 2 but restrict the sample to the sender behavior in the *Choice* treatment. First, we introduced the variable *Dishonest* to show the pure effect of whether the senders sent an honest or a dishonest message. The second specification is enriched with controls for the *Round* and the *Assigned Number*, and again includes Δ *Human Presence_{Video - Text}*. The third specification also contains the interaction with *Dishonest* to test for potential mechanisms. The fourth specification includes demographic controls. This leads to the following regression equation:

$$P(\text{video}_{it} = 1 | X_{it}, \alpha_i) = \phi(\beta_0 + \beta_1 \text{dishonest}_{it} + \beta_2 \text{round}_{it} + \beta_3 \text{assignednumber}_{it} + \beta_4 \Delta \text{humanpresence}_i + \beta_5 \text{dishonest}_{it} \times \Delta \text{humanpresence}_i + \beta_6 \text{controls}_i + \alpha_i)$$

For Hypothesis 3, we analyze the receiver behavior. We first introduced the variable *Video Message* to show the pure effect of whether the receivers received a text or a video message. In the second specification, we added the variable *Round* and the content of the message using the variable *Reported Number*. In the third and last specification, we again added demographics, which results in the following regression equation:

$$P(\text{follow}_{it} = 1 | X_{it}, \alpha_i) = \phi(\beta_0 + \beta_1 \text{videomessage}_{it} + \beta_2 \text{round}_{it} + \beta_3 \text{reportednumber}_{it} + \beta_4 \text{controls}_i + \alpha_i)$$

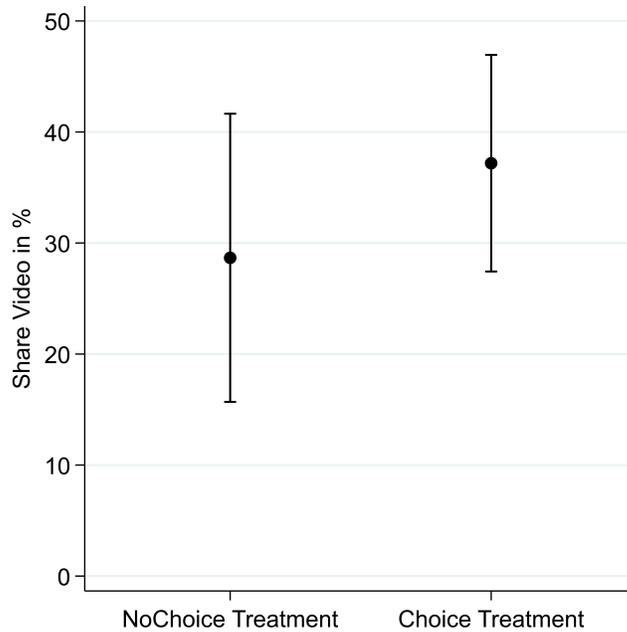
⁹In Appendix A, we provide a further specification of all other control variables used in the analyses in Appendix B that are not included in the equations below.

4 Results

In the following, we first analyze the senders' behavior and, afterward, the receivers' behavior.

4.1 Sender Behavior

We start with descriptive information about the senders' behavior in both treatments. *Share Video* was, on average, 28.67% in the *NoChoice* treatment and 37.19% in the *Choice* treatment (see Figure 1). Even though we observe a higher share of video messages in the *Choice* treatment, the difference is not statistically significant (two-sided Mann-Whitney U test, $p = 0.326$). When we look at behavior across rounds, 53.33% of senders in the *NoChoice* treatment and 43.75% of senders in the *Choice* treatment had a strong preference for the text channel and chose text messages in all five rounds. Whereas, 10.00% of senders in the *NoChoice* treatment and 18.75% of senders in the *Choice* treatment preferred video messages in all rounds. A series of panel probit regressions reported in



Note: Dots indicate averages and whiskers indicate 95% confidence intervals.

Figure 1: Share of video messages over all rounds by treatment

Table 1 support the initial impression that there is no significant difference in the channel choice between our treatments. Models (1) and (2) list the main effects of our treatment variation and

show that the coefficient for the *Choice* treatment is positive but not significant. Interestingly, a higher assigned number increased the likelihood that the senders preferred the video channel irrespective of the treatment, whereas $\Delta \text{Human Presence}_{\text{Video} - \text{Text}}$ had a negative impact on the likelihood of sending a video. Recall that positive values of $\Delta \text{Human Presence}_{\text{Video} - \text{Text}}$ indicate that the senders perceived a higher human presence in video messages than in text messages. Thus, the negative coefficient in our regressions indicates that the senders preferred a text message if they perceived a higher difference in human presence. In Model (3), we added the interaction effect

| Dep. Var.: Video | (1) | (2) | (3) | (4) |
|--|----------------------|----------------------|---------------------|---------------------|
| Choice Treatment | 0.569 (0.529) | 0.519 (0.536) | -0.005 (0.776) | 0.128 (0.768) |
| Round | | -0.003 (0.059) | -0.003 (0.059) | -0.003 (0.059) |
| Assigned Number | | 0.200*** (0.072) | 0.200*** (0.072) | 0.202*** (0.072) |
| $\Delta \text{Human Presence}_{\text{Video} - \text{Text}}$ | | -0.529*** (0.183) | -0.848** (0.331) | -0.792** (0.330) |
| Choice Treatment \times $\Delta \text{Human Presence}_{\text{Video} - \text{Text}}$ | | | 0.418 (0.380) | 0.401 (0.378) |
| Age | | | | 0.087 (0.095) |
| Business and Economics | | | | -0.422 (0.511) |
| Constant | -1.342*** (0.480) | -1.401** (0.631) | -0.977 (0.767) | -3.041 (2.566) |
| Observations | 470 | 470 | 470 | 470 |
| Log pseudolikelihood | -215.578 | -205.492 | -205.039 | -204.103 |
| $\Delta \text{Human Presence}_{\text{Video} - \text{Text}} + \text{Choice Treatment} \times \Delta \text{Human Presence}_{\text{Video} - \text{Text}} = 0$ | | | 0.038 | 0.054 |

Robust standard errors adjusted for 94 clusters (subjects) in parentheses, * $p < 0.10$,

** $p < 0.05$, *** $p < 0.01$

Note: The figures in the row “ $\Delta \text{Human Presence}_{\text{Video} - \text{Text}} + \text{Choice Treatment} \times \Delta \text{Human Presence}_{\text{Video} - \text{Text}} = 0$ ” are the p-values for the overall effect of $\Delta \text{Human Presence}_{\text{Video} - \text{Text}}$ on *Video* in the *Choice* treatment. Since $\Delta \text{Human Presence}_{\text{Video} - \text{Text}}$ is quasi-continuous, we used the sample mean of $\Delta \text{Human Presence}_{\text{Video} - \text{Text}}$ in the *Choice* treatment (1.193). For the complete table with all control variables, see Table 9 in Appendix B.

Table 1: Panel probit regression (random effects) with *Video* as dependent variable and *Choice Treatment* as independent variable

Choice Treatment \times $\Delta \text{Human Presence}_{\text{Video} - \text{Text}}$ to test if a higher perceived human presence in video messages than in text messages interacts with our treatment manipulation. We observe no significant effect ($p = 0.272$) between $\Delta \text{Human Presence}_{\text{Video} - \text{Text}}$ and *Choice Treatment*. The coefficient for $\Delta \text{Human Presence}_{\text{Video} - \text{Text}}$ shows that the overall effect on *Video* in the *NoChoice* treatment is negative (-0.848) and significant ($p = 0.010$). Using a two-sided F-test, we analyzed the overall effect of $\Delta \text{Human Presence}_{\text{Video} - \text{Text}}$ on *Video* in the *Choice* treatment revealing a negative

(-0.431) significant effect ($p = 0.038$). Thus, $\Delta Human\ Presence_{Video - Text}$ has a significant effect on the channel choice in both treatments.

Result 1 There are no statistically significant differences regarding the chosen channel between the *NoChoice* treatment and the *Choice* treatment.

Next, we investigate if there are differences between the chosen channels in the *Choice* treatment when the senders were honest or dishonest, and thus, whether there is a relation between the channel choice and the choice to lie. On average, the senders' share of dishonest messages in the *Choice* treatment was 48.13%. 15.63% of senders never lied over the five rounds, 10.94% always lied, and 73.44% switched between honest and dishonest messages. On average, the senders' share of video messages when lying to the receivers was 27.13%. In contrast, the senders' average share of video messages when being honest was 44.74%. A two-sided Wilcoxon signed-rank test comparing each sender's share of video messages when being dishonest to when being honest on a subject level shows that the sender's share of video messages was significantly lower when being dishonest compared to being honest ($p = 0.005$). Thus, the data suggest that there is a correlation between the chosen channel and the decision to lie on subject level. Figure 2 depicts the share of video messages over the rounds and reveals that the senders' average share of videos was lower when lying in each of the five rounds.

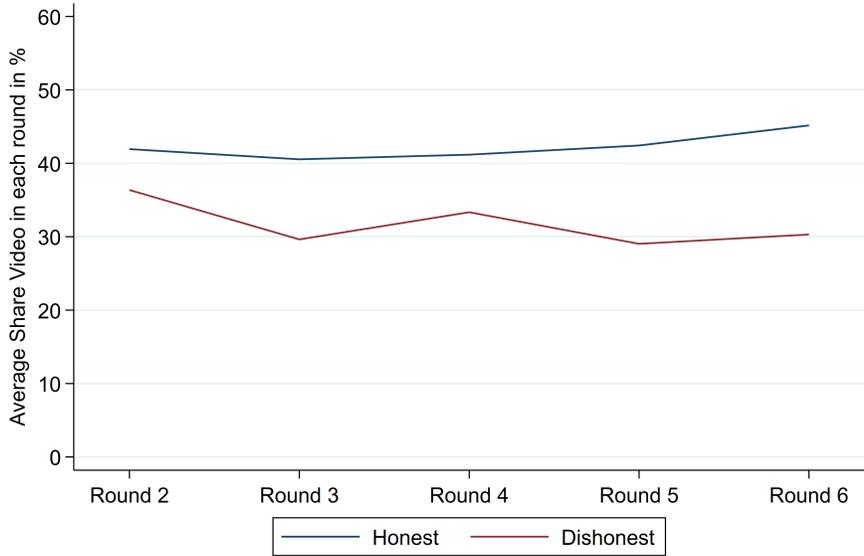


Figure 2: Share of video messages in each round by message content in the *Choice* treatment

To investigate if the impression from Figure 2 is reflected in an econometric analysis, we conducted another series of panel probit regressions reported in Table 2. In Models (1) and (2), the main effects of *Dishonest* are negative, statistically significant ($p < 0.05$), and robust to *Round*, *Assigned Number* and $\Delta \text{Human Presence}_{\text{Video} - \text{Text}}$ as controls. The results support our hypothesis that the senders chose text messages more often when lying to the receivers. Similar to our previous findings, a higher perceived human presence in video messages than in text messages relates to a higher likelihood that the senders preferred text messages.

| Dep. Var.: Video | (1) | (2) | (3) | (4) |
|---|----------------------|---------------------|--------------------|--------------------|
| Dishonest | -1.329*** (0.401) | -1.411** (0.581) | -1.100* (0.604) | -1.117* (0.608) |
| Round | | -0.002 (0.072) | 0.014 (0.072) | 0.016 (0.072) |
| Assigned Number | | -0.032 (0.122) | -0.019 (0.124) | -0.020 (0.124) |
| $\Delta \text{Human Presence}_{\text{Video} - \text{Text}}$ | | -0.505** (0.243) | -0.377 (0.308) | -0.326 (0.303) |
| $\text{Dishonest} \times \Delta \text{Human Presence}_{\text{Video} - \text{Text}}$ | | | -0.388 (0.290) | -0.391 (0.290) |
| Age | | | | 0.190 (0.174) |
| Business and Economics | | | | -0.285 (0.829) |
| Constant | -0.340 (0.467) | 0.402 (0.726) | 0.126 (0.772) | -4.351 (4.355) |
| Observations | 314 | 314 | 314 | 314 |
| Log pseudolikelihood | -136.348 | -134.276 | -132.997 | -131.960 |
| $\Delta \text{Human Presence}_{\text{Video} - \text{Text}} + \text{Dishonest} \times \Delta \text{Human Presence}_{\text{Video} - \text{Text}} = 0$ | | | 0.020 | 0.024 |

Robust standard errors adjusted for 64 clusters (subjects) in parentheses, * $p < 0.10$,

** $p < 0.05$, *** $p < 0.01$

Note: The figures in the row “ $\Delta \text{Human Presence}_{\text{Video} - \text{Text}} + \text{Dishonest} \times \Delta \text{Human Presence}_{\text{Video} - \text{Text}} = 0$ ” are the p-values for the overall effect of $\Delta \text{Human Presence}_{\text{Video} - \text{Text}}$ on *Video* when the senders were dishonest. Since $\Delta \text{Human Presence}_{\text{Video} - \text{Text}}$ is quasi-continuous, we used the sample mean of $\Delta \text{Human Presence}_{\text{Video} - \text{Text}}$ in the *Choice* treatment (1.193). We excluded six observations due to downward lying ($r < s$). For the complete table with all control variables, see Table 10 in Appendix B.

Table 2: Panel probit regression (random effects) with *Video* as dependent variable and *Dishonest* as independent variable

In Model (3), we added the interaction effect $\text{Dishonest} \times \Delta \text{Human Presence}_{\text{Video} - \text{Text}}$ to test if a higher perceived human presence in video messages than in text messages interacted with the content of the message. The coefficient of the interaction effect $\text{Dishonest} \times \Delta \text{Human Presence}_{\text{Video} - \text{Text}}$ is also negative (-0.388) but not significant ($p = 0.181$). Thus, there is a tendency that the senders’ likelihood to send a text message negatively relates to a dishonest message

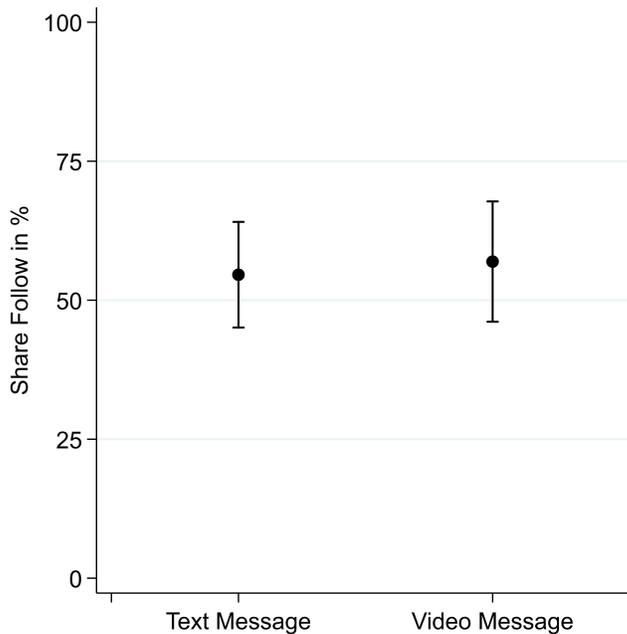
and a higher perceived difference in human presence between both channels. While the overall effect of $\Delta \text{Human Presence}_{\text{Video} - \text{Text}}$ on *Video* is negative (-0.377) but not significant ($p = 0.222$) when the senders were honest, the significance changes when the senders were dishonest. A two-sided F-test reveals that the overall effect of $\Delta \text{Human Presence}_{\text{Video} - \text{Text}}$ on *Video* is negative (-0.764) and significant ($p = 0.020$) when the senders were dishonest. Model (4) shows that the results are robust to demographic controls.

Result 2 There is a positive significant correlation between the senders' decisions to choose a text messages and to send a dishonest message.

4.2 Receiver Behavior

For the receiver behavior, our focus lies on whether the decision to follow or not differed depending on the communication channel in the *Choice* treatment.

The receiver's average share of follow decisions was 54.58% when they received text messages and 56.94% when they received video messages (see Figure 3). A comparison on subject level using a two-sided Wilcoxon signed-rank test shows no statistically significant difference ($p = 0.948$).



Note: Dots indicate averages and whiskers indicate 95% confidence intervals.

Figure 3: Share of follow decisions by communication channel in the *Choice* treatment

We report a series of panel probit regressions in Table 3. The coefficients for *Video Message* are positive but not significant in all three specifications. Thus, despite differences in sender behavior, there seems to be no signaling value regarding the chosen channel in the *Choice* treatment. As expected from previous studies, a higher reported number decreased the likelihood that the receivers follow the message.

| Dep. Var.: Follow | (1) | (2) | (3) |
|----------------------|------------------|---------------------|---------------------|
| Video Message | 0.041 (0.175) | 0.018 (0.180) | 0.015 (0.179) |
| Round | | 0.068 (0.052) | 0.068 (0.052) |
| Reported Number | | -0.201** (0.095) | -0.203** (0.095) |
| Age | | | -0.018 (0.020) |
| University Degree | | | -0.143 (0.338) |
| Constant | 0.164 (0.184) | 0.894 (0.545) | 1.508* (0.897) |
| Observations | 300 | 300 | 300 |
| Log pseudolikelihood | -182.276 | -177.750 | -177.284 |

Robust standard errors adjusted for 60 clusters (subjects) in parentheses, * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Note: For the complete table with all control variables, see Table 11 in Appendix B.

Table 3: Panel probit regression (random effects) with *Follow* as dependent variable and *Video Message* as independent variable

Result 3 We find no significant differences in receivers' follow behavior depending on whether they received text or video messages.

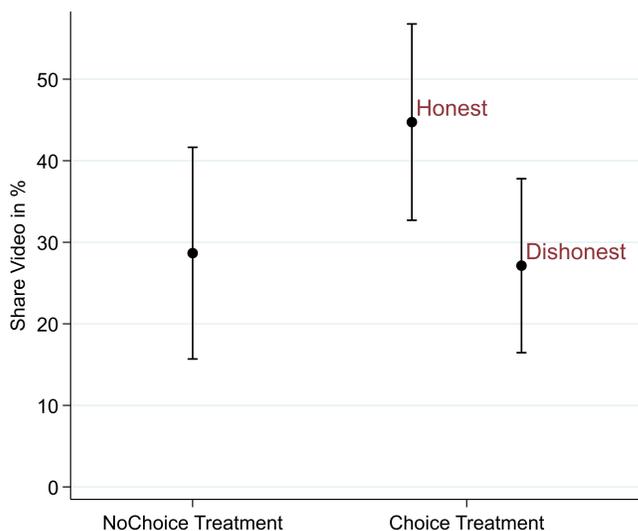
5 Discussion

The results of our study show that channel decisions did not differ depending on our treatment manipulations. However, we observe a correlation between the chosen channel and the truthfulness of the message if the senders had the opportunity to lie. Below we discuss potential mechanisms that may explain our findings. Even though we do not observe treatment differences in general, behavioral differences might be masked by the fact that the senders could be dishonest in the *Choice* treatment. In the following, we first focus on the results for senders in both treatments. We discuss

potential reasons why we did not observe any significant treatment differences in channel choices and explain some indications that point to a general video aversion. Second, we focus on senders within the *Choice* treatment. We discuss $\Delta \text{Human Presence}_{\text{Video} - \text{Text}}$ as a possible mechanism for our second hypothesis and outline alternative explanations. Third, we briefly discuss the results for receivers. Last, we explain limitations and highlight avenues for future research.

Sender behavior in both treatments:

On average, the senders’ share of video messages in the *Choice* treatment was 44.74% when being honest, 27.13% when being dishonest, and 28.67% in the *NoChoice* treatment (see Figure 4). Recall that information asymmetries existed only in the *Choice* treatment, and the receivers had



Note: Dots indicate averages and whiskers indicate 95% confidence intervals.

Figure 4: *Share Video* by treatment and communication content

no information about whether the senders’ messages were honest. In contrast, the senders’ messages in the *NoChoice* treatment were only an information transmission. Table 2 reveals that sending a dishonest message significantly decreased the senders’ likelihood to send a video message. In other words, being honest increased the senders’ likelihood to send a video message. Qualitative responses further indicate why some senders preferred the video message when sending an honest message. After Round 6, we asked all senders why they chose the text or video messages in Round 6. Of all senders in the *Choice* treatment who sent a video message and were honest, 64.29% stated that they chose this channel because it is more credible, personal, honest, or trustworthy.

This indicates that these senders chose video messages to signal the receivers that the message was honest. According to Spence (1973), signals need to be costly to be effective in conveying valuable information. Video messages are, among other things, less anonymous or allow a higher human presence (we will examine this further in the next paragraph). Thus, we suggest that sending a video message instead of a text message might lead to costs and, therefore, also a valuable signal. There was no such signal value regarding the channel choice in the *NoChoice* treatment because the receivers knew that the senders had to be honest. For further analyses, we compared the senders' average share of video messages when being honest in the *Choice* treatment (44.74%) and the senders' average share of videos (all messages were honest) in the *NoChoice* treatment (28.67%). Although this difference is not significant (two-sided Mann-Whitney U test, $p = 0.139$), there is a tendency for the senders who sent an honest message to have a higher preference for video messages in the *Choice* treatment. Additionally, the senders in the *Choice* treatment tended to prefer text messages when being dishonest (see Table 2). This might be due to lower lying costs when the senders chose a text instead of a video message. Compared to the *NoChoice* treatment (28.67%), the share of video messages when the senders were dishonest in the *Choice* treatment (27.13%) was only slightly smaller. The non-significant difference might be due to limited statistical power or other possible alternative explanations like spiteful preferences that could have increased the likelihood of video messages when being dishonest in the *Choice* treatment. The two effects mentioned above, i) more video when being honest as a signal, and ii) more text when being dishonest, have had an impact in different directions (see Figure 4), and, therefore, might explain why we do not observe significant treatment differences regarding the channel choice.

Recall that the senders had a higher preference for text messages the higher they perceived the difference in human presence between video and text messages, irrespective of the treatment. Model (2) in Table 1 reveals that $\Delta \text{Human Presence}_{\text{Video} - \text{Text}}$ has a statistically significant effect on *Video*. In addition, Model (3) shows that the overall effects (main and interaction) of $\Delta \text{Human Presence}_{\text{Video} - \text{Text}}$ on *Video* are negative and significant in the *NoChoice* treatment ($p = 0.010$) as well as in the *Choice* treatment ($p = 0.038$) (see Section 4). Given that the interaction effect $\text{Choice Treatment} \times \Delta \text{Human Presence}_{\text{Video} - \text{Text}}$ is not significant, the treatment manipulation did not interact with the difference in perceived human presence. We interpret this finding as an indicator of a general video aversion. Some subjects preferred text over video channels because

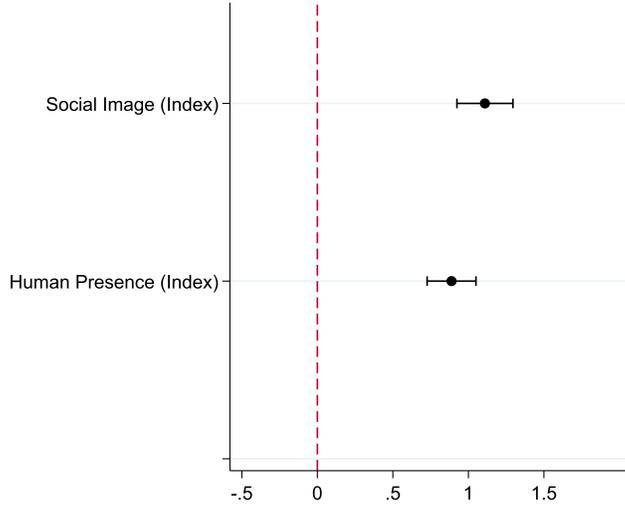
they did not want to show themselves in a video. This impacted the channel choice for the senders in both treatments.

Sender behavior in the *Choice* treatment:

Regarding our second hypothesis, we explore whether the perceived difference in human presence impacted the channel choice differently depending on the truthfulness of the message in the *Choice* treatment. Cohn et al. (2022) state that human presence can reduce dishonest behavior. Our results suggest that the impact of human presence on dishonest behavior is also important in the context of using different communication channels. In general, dishonest behavior can be explained by a variety of intrinsic lying costs and reputational costs associated with inference about peoples' honesty (see Abeler et al., 2019, for a meta-study). Thus, the channel choice might offer senders the opportunity to reduce costs associated with their lie. A lower perceived human presence in text compared to video messages might account for reduced costs when lying. The results of our survey show that the perceived human presence was about 0.9 standard deviations lower for text compared to video messages (see Figure 5), and this difference is statistically significant (two-sided Wilcoxon signed-rank test, $p < 0.01$).¹⁰ In Table 2, the interaction between *Dishonest* and Δ *Human Presence*_{Video - Text} has a negative coefficient but is not statistically significant (e.g., $p = 0.177$ in Model (4)). If we look at the overall (main and interaction) effect of Δ *Human Presence*_{Video - Text} on *Video*, it is only statistically significant if the senders lied but not if the senders were honest. For a further analysis, we excluded observations, in which the senders had no incentive to send a dishonest message because the assigned number s was six (see Table 4). Now, the interaction effects *Dishonest* \times Δ *Human Presence*_{Video - Text} in Models (3) and (4) are significant (Model (3) $p = 0.044$ and Model (4) $p = 0.040$). Thus, we suggest that the choice to send a text instead of a video message facilitated the senders to behave more dishonestly because the lower perceived human presence in text messages reduced lying costs.

Besides our potential mechanism, one might speculate that there are also alternative reasons why people might prefer to send text or video messages in our setup. With our design and experimental

¹⁰For each communication channel, we used three items in which the senders self-stated their perceived human presence and three items in which the senders self-stated their social image concerns on a 7-point Likert scale. All responses were standardized using the mean and standard deviation for video message responses. We then created a human presence index and a social image concerns index using the unweighted average of the standardized responses. At last, we subtracted the index for text from the index for video to measure the difference in human presence and social image concerns.



Note: Dots indicate averages and whiskers indicate 95% confidence intervals.

Figure 5: Difference in perceived human presence and social image concerns between video and text messages (std.)

| Dep. Var.: Video | (1) | (2) | (3) | (4) |
|--|----------|----------|----------|----------|
| Dishonest | -1.055** | -1.089** | -0.504 | -0.543 |
| | (0.425) | (0.539) | (0.578) | (0.586) |
| Round | | 0.017 | 0.058 | 0.060 |
| | | (0.076) | (0.077) | (0.077) |
| Assigned Number | | -0.019 | -0.006 | -0.009 |
| | | (0.125) | (0.131) | (0.131) |
| Δ Human Presence _{Video - Text} | | -0.388* | -0.071 | -0.039 |
| | | (0.221) | (0.320) | (0.321) |
| Dishonest \times Δ Human Presence _{Video - Text} | | | -0.632** | -0.640** |
| | | | (0.313) | (0.312) |
| Age | | | | 0.162 |
| | | | | (0.168) |
| Business and Economics | | | | -0.084 |
| | | | | (0.769) |
| Constant | -0.396 | 0.065 | -0.533 | -4.388 |
| | (0.420) | (0.687) | (0.772) | (4.238) |
| Observations | 266 | 266 | 266 | 266 |
| Log pseudolikelihood | -120.448 | -119.004 | -116.225 | -115.470 |

Robust standard errors adjusted for 64 clusters (subjects) in parentheses, * $p < 0.10$,

** $p < 0.05$, *** $p < 0.01$

Note: We excluded two observations due to downward lying ($r < s$). For the complete table with all control variables, see Table 12 in Appendix B.

Table 4: Panel probit regression (random effects) with *Video* as dependent variable, *Dishonest* as independent variable and only observations without assigned number $s = 6$

procedures, we mitigated some of these. We ensured that the channel choice was not affected by the fact that sending text messages can be faster in terms of time compared to recording videos. For both channels, the senders could only proceed with the experiment after at least 40 seconds expired. Sending text messages might also be easier in terms of the cognitive load than recording video messages. However, our data indicate that cognitive load did not depend on whether the senders sent an honest or a dishonest message because being dishonest did not significantly increase the senders' completion times for recording video messages.¹¹ Furthermore, our payment structure, in which the senders' payoff is independent of the receivers' action, had the purpose of reducing some strategic concerns when choosing a channel. Compared to other payment structures, such as the one used in Gneezy (2005), the senders had no own monetary incentives to convince the receivers of their lies.

Receiver behavior:

To sum up, from our sender decisions in Part 1, we found that channel preferences did not differ depending on our treatment manipulation but depending on whether the senders were honest. Some senders tried to use the channel choice as a signal, but when looking at Part 2, this signal was not relevant to the receivers. Our results in Table 3 reveal that follow decisions did not significantly vary between text and video messages in the *Choice* treatment. The coefficient for the reported number in Table 3 is negative and marginally statistically significant. Thus, the content of the messages was of some relevance to the receivers but not the chosen channel. This might be due to the fact the receivers may not have perceived the senders' choice to send a video message costly enough in order for it to serve as a reliable signal.

Limitations and future research opportunities:

In the following, we discuss the limitations of our study and highlight opportunities for future research. First, our study serves as a starting point to investigate preferences for different communication channels with a focus on dishonest behavior. We provided evidence that this research field is of high relevance because senders' channel preferences can vary, and we shed light on potential mechanisms. Our goal was to use common communication channels. Thus, the senders had the choice between text and video messages. However, these channels differ in several aspects (e.g., media richness, anonymity, or perceived human presence), and we leave it to future research projects

¹¹Regression results are available upon request.

to disentangle these aspects. A more nuanced variation of treatments, including text messages with images of subjects’ faces, could be one potential avenue to disentangle anonymity. Furthermore, some senders stated that they chose a text message when lying to the receivers because video messages contain non-verbal cues that might be useful for receivers to detect a lie. Comparing audio and video messages would be an important extension of our experiment and would provide a more precise investigation into the impact of non-verbal cues, such as facial expressions or gestures, on economic decision-making. Similarly, comparing text and audio messages would make it possible to identify the influence of para-verbal cues.

A second limitation refers to our potential mechanism that the difference in perceived human presence between text and video messages impacted the channel decision when the senders decided to lie in the *Choice* treatment. With our findings, we cannot clearly distinguish how this mechanism affected the lying costs and, thus, the senders’ preference for text messages. Cohn et al. (2022) suggest that higher social image concerns could be a reason. Similar to perceived human presence, our senders stated that social image concerns were about 1.1 standard deviations higher for video compared to text messages (see Figure 5), and this difference is statistically significant (two-sided Wilcoxon signed-rank, $p < 0.01$). In addition, a statistically significant correlation of 0.532 shows that the difference in social image concerns can be partly attributed to differences in perceived human presence. Recent studies indicate that social image concerns increase honesty (Dufwenberg and Dufwenberg, 2018; Gneezy et al., 2018; Abeler et al., 2019; Khlametski and Sliwka, 2019). Further analyses of our results in Table 5 show that the coefficients related to $\Delta \textit{Social Image}_{\textit{Video} - \textit{Text}}$ are negative and, thus, increased the preference for text messages. However, at least in our setup, these concerns had no significant effect on the channel choice, which might be due to limited statistical power. Recall that we used different subject pools to hire the senders and the receivers. This high anonymity between the senders and the receivers could be a reason why social image concerns did not play a major role in our setup.

At last, we decided to hire only male subjects primarily due to two reasons. First, we thereby excluded gender effects as a potential driving factor for the channel choices, which could have a stronger effect in our sender-receiver task than in other tasks without interaction between subjects, such as those used in (Conrads and Lotz, 2015; Cohn et al., 2022). Due to the reason that we included video messages, the gender of the senders was recognizable to the receivers. Studies

| Dep. Var.: Video | (1) | (2) | (3) | (4) |
|---|----------------------|---------------------|-------------------|-------------------|
| Dishonest | -1.329*** (0.401) | -1.410** (0.584) | -1.141 (0.716) | -1.144 (0.717) |
| Round | | -0.001 (0.071) | 0.002 (0.069) | 0.005 (0.069) |
| Assigned Number | | -0.033 (0.123) | -0.034 (0.123) | -0.033 (0.123) |
| $\Delta \text{ Social Image}_{\text{Video} - \text{Text}}$ | | -0.207 (0.232) | -0.142 (0.263) | -0.107 (0.255) |
| Dishonest \times $\Delta \text{ Social Image}_{\text{Video} - \text{Text}}$ | | | -0.139 (0.231) | -0.146 (0.233) |
| Age | | | | 0.197 (0.168) |
| Business and Economics | | | | -0.398 (0.808) |
| Constant | -0.340 (0.467) | 0.200 (0.838) | 0.066 (0.859) | -4.534 (4.242) |
| Observations | 314 | 314 | 314 | 314 |
| Log pseudolikelihood | -136.348 | -135.821 | -135.544 | -134.277 |

Robust standard errors adjusted for 64 clusters (subjects) in parentheses, * $p < 0.10$,

** $p < 0.05$, *** $p < 0.01$

Note: We excluded six observations due to downward lying ($r < s$). For the complete table with all control variables, see Table 13 in Appendix B.

Table 5: Panel probit regression (random effects) with *Video* as dependent variable and *Dishonest* and $\Delta \text{ Social Image}_{\text{Video} - \text{Text}}$ as independent variables

revealed that there can be gender differences in trust and trustworthiness (see, e.g., Croson and Gneezy, 2009; Van Den Akker et al., 2020). Therefore, gender can serve as a signal about the trustworthiness of a person, and a variation in gender could have interfered with the effect of the chosen communication channel. In addition, studies showed that there are gender differences in lying (see Capraro, 2018; Gerlach et al., 2019, for meta-analyses), and thus, these gender effects could have affected our results. Second, our study serves as a starting point. Hiring either male or female subjects ensured a more homogeneous sample and enabled us to focus more on investigating subjects' channel preferences. We decided on male subjects because dishonest behavior is more prevalent among men than among women in particular in sender-receiver games (see Capraro, 2018; Gerlach et al., 2019, for meta-analyses). To conclude, we point out that the results of our study are not necessarily relevant for non-male subjects. However, our results show that including female and non-binary subjects would be a valuable extension of our experiment.

6 Conclusion

Our study presents a controlled experiment using a sender-receiver game to study if the choice of the communication channel varies with the truthfulness of the message content. We concentrated on comparing text and video channels because these are two common ways of communication in companies and organizations, as well as in day-to-day conversations in private settings. We conducted two controlled treatments to study if the opportunity to lie impacts the chosen communication channel. Overall, we observed no significant impact of the opportunity to lie on the channel choice. However, our data revealed that the video channel was chosen more often when sending a truthful message, and the text channel was preferred if the message contained a lie. This suggests that the senders indeed used the channel choice as a signal if they had the opportunity to lie. Our results suggest that the choice of communication channels can convey information about intentions and that text communication channels can enable dishonest behavior. Thus, carefully selecting available communication channels might be an option to prevent dishonest communication. Interestingly, the receivers did not adapt their behavior to the chosen channel. While our study used a simple sender-receiver game, the results provide a first step towards a better understanding of the interplay between communication channels and truthful communication. Further research is needed to disentangle potential mechanisms and shed more light on the causal relationship between (dis)honest reporting and channel choices in different situations.

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A Control variables

In this section, we first describe all control variables used in the analyses in Section 4. With respect to demographics, *Age* measures subjects' age.¹² As the senders in Part 1 were students recruited from the KD²Lab subject pool, we asked them for their current major in their studies. We grouped those in majors related to *Business and Economics*, and *Other majors*, with the latter category serving as a baseline unless otherwise mentioned. In contrast to the senders, the receivers in Part 2 were hired from Prolific. Therefore, we asked the receivers about their highest education level. The indicator variable *University Degree* is one if the receivers' highest education level is a university degree and zero otherwise. With respect to subjects' behavior in Rounds 2 to 6, we use the variable *Round* to control for the respective round. Due to the fact that only the senders were informed about the assigned number, we use the variable *Assigned Number* to control for this. To get some qualitative data on why the senders preferred a text or a video message, we included a text field and asked the senders after Round 6 why they chose a text or video message in Round 6. For the receivers' behavior, we use the variable *Reported Number* to control for the content of the senders' messages.

For additional analyses in Section 5, similar to Δ *Human Presence*_{Video - Text}, we elicited the senders' social image concerns. For each communication channel, we used three items in which the senders self-stated their social image concerns on a 7-point Likert scale. Δ *Social Image*_{Video - Text} indicates the difference in social image concerns between video and text messages. Positive values of Δ *Social Image*_{Video - Text} indicate that the senders had higher social image concerns in video messages than in text messages. Negative values indicate that social image concerns were lower in video messages than in text messages.

Next, we describe all additional control variables used in the analyses in Appendix B. *Participation* describes an indicator variable, which is one if a subject already participated in at least one experiment and zero otherwise.¹³ Remember that subjects played the standard deception game using the strategy method in Round 1. Thus, every sender had to send six messages and, thus, had six decisions to send an honest or a dishonest message. To control whether the senders' general honesty behavior explains the channel decisions in Rounds 2 to 6, the variable *Share Dishonest Round 1* refers to the share of dishonest messages ranging from zero (only honest messages) to one (only dishonest messages). Similar to *Share Dishonest Round 1*, the variable *Share Follow Round 1* refers to the receivers' share of follow decisions in Round 1, ranging from zero (no follow decisions) to one (only follow decisions). Because the senders had in Rounds 2 to 6 the option of sending video messages, we asked them on an 11-point scale the likelihood that a receiver would recognize them from their voice or face when he saw the video message (*Recognition*). To control for the unlikely event that the senders and the receivers knew each other, we elicited this information from the receivers. The indicator variable *Identification* is one if a receiver stated that they knew a sender and zero

¹²In Part 1, we asked subjects for their year of birth and "translated" these into the age. In Part 2, we elicited subjects' age using age groups.

¹³The senders were asked whether they already participated in at least one experiment at the KD²Lab.

otherwise. We asked one question each using a 5-point Likert scale to measure subjects’ experience with text and video communication channels. The variable *Diff. in Experience* describes the difference in experience between video and text messages. On a 6-point scale, we asked subjects how regularly they use text and video communication channels. The variable *Diff. in Usage* describes the difference in usage between video and text messages. We used the ICT Self-Concept Scale on a 6-point Likert scale according to (Schauffel et al., 2021) to assess subjects’ general (*ICT General*) and communication-specific (*ICT Communication*) competence self-concept related to the use of information and communication technology. In addition, we measured subjects’ perceptions about online and mobile communication (*Online Comm.*) on an 11-point scale according to ESS Round 10 (2023). We used five questions that measure different aspects of online and mobile communication (see Table 6 for more details). To control for personality, we used the BFI-10 scale according to the five-factor model Rammstedt et al. (2014) using a 5-point Likert scale. The BFI-10 scale classifies personality into five constructs (*Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness*). *Trust* refers to the interpersonal trust of subjects measured with three items using a 5-point Likert scale according to (Nießen et al., 2021). After the general instructions and before Round 1 and Round 2, subjects had to answer control questions on understanding the game rules. *Failed Attempts* is the sum of failed attempts across all control questions.

| Measure | To what extent would you say that online and mobile communication ... |
|-----------------------|--|
| <i>Online Comm. 1</i> | ... makes people feel closer to one another? |
| <i>Online Comm. 2</i> | ... makes work and personal life interrupt each other? |
| <i>Online Comm. 3</i> | ... makes it easy to coordinate and manage activities? |
| <i>Online Comm. 4</i> | ... undermines personal privacy? |
| <i>Online Comm. 5</i> | ... exposes people to misinformation? |

Table 6: Five questions about online and mobile communication according to ESS Round 10 (2023)

B Tables and Figures

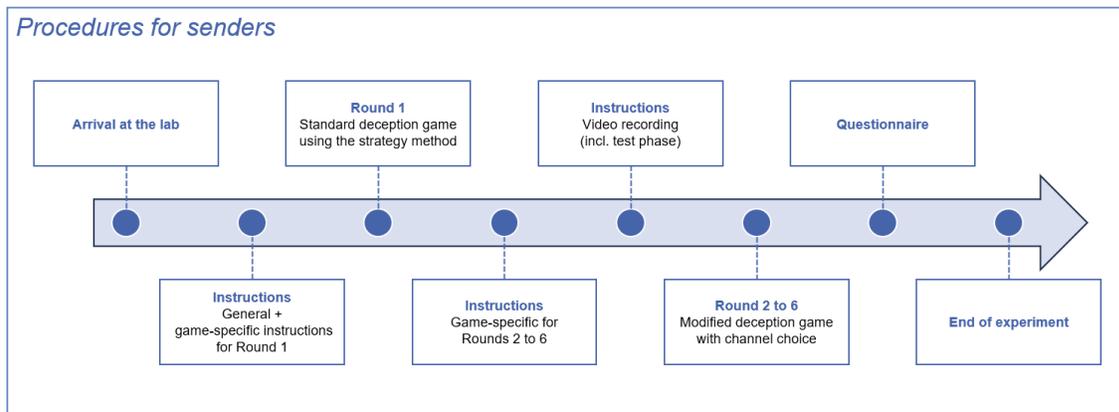


Figure 6: Procedures for the senders in Part 1

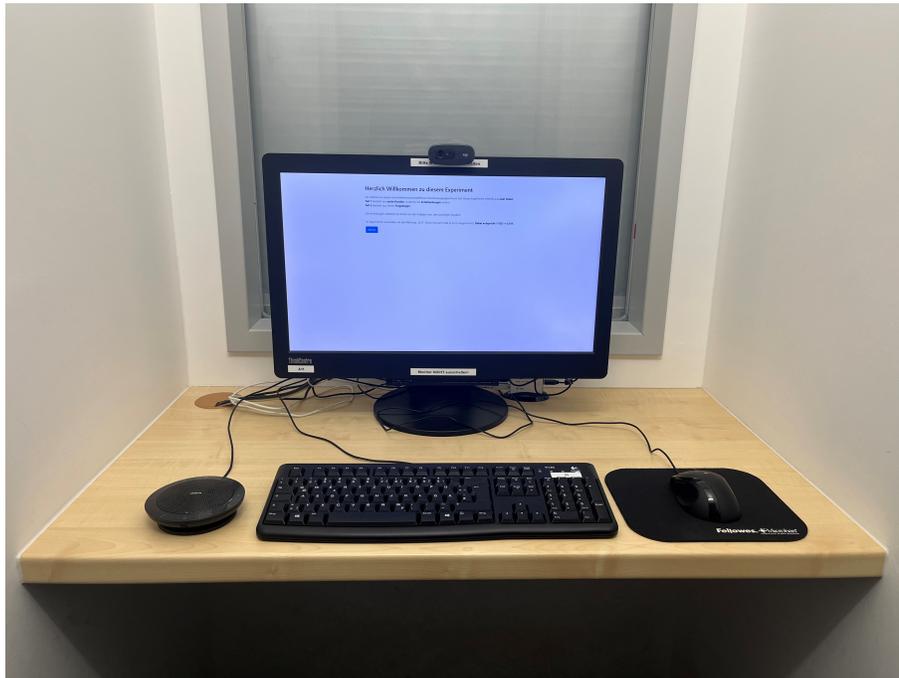


Figure 7: Setup in each cubicle consisting of a computer, an external webcam, and an external conference speaker

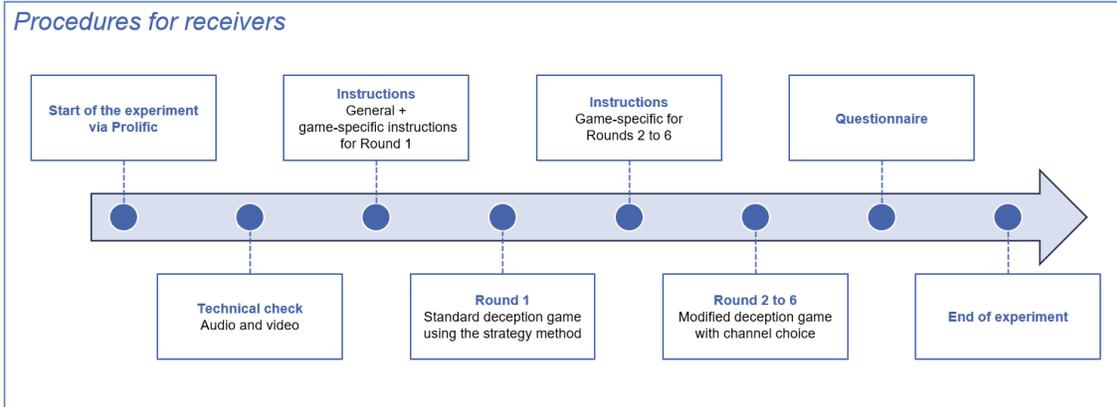


Figure 8: Procedures for the receivers in Part 2

| | <i>NoChoice</i> | <i>Choice</i> | Total |
|------------------------|------------------|------------------|------------------|
| Age | 24.20 (2.797) | 23.95 (2.687) | 24.03 (2.710) |
| Business and Economics | 0.333 (0.479) | 0.531 (0.503) | 0.468 (0.502) |
| Other majors | 0.667 (0.479) | 0.469 (0.503) | 0.532 (0.502) |

Table 7: Means of key demographics of the senders across treatments.

| | <i>NoChoice</i> | <i>Choice</i> | Total |
|----------------------|------------------|------------------|------------------|
| Age | 30.35 (8.880) | 30.15 (7.902) | 30.21 (8.166) |
| University Degree | 0.519 (0.509) | 0.483 (0.504) | 0.494 (0.503) |
| No University Degree | 0.481 (0.509) | 0.517 (0.504) | 0.506 (0.503) |

Table 8: Means of key demographics of the receivers across treatments.

| Dep. Var.: Video | (1) | (2) | (3) | (4) | (5) |
|--|---------|-----------|----------|----------|-----------|
| Choice Treatment | 0.569 | 0.519 | -0.005 | 0.128 | 0.113 |
| Round | (0.529) | (0.536) | (0.776) | (0.768) | (0.664) |
| Assigned Number | | -0.003 | -0.003 | -0.003 | -0.002 |
| | | (0.059) | (0.059) | (0.059) | (0.059) |
| Δ Human Presence _{Video - Text} | | 0.200*** | 0.200*** | 0.202*** | 0.200*** |
| | | (0.072) | (0.072) | (0.072) | (0.070) |
| Choice Treatment \times Δ Human Presence _{Video - Text} | | -0.529*** | -0.848** | -0.792** | -0.958*** |
| | | (0.183) | (0.331) | (0.330) | (0.320) |
| Age | | | 0.418 | 0.401 | 0.697* |
| | | | (0.380) | (0.378) | (0.391) |
| Business and Economics | | | | 0.087 | 0.088 |
| | | | | (0.095) | (0.087) |
| Share Dishonest Round 1 | | | | -0.422 | -0.568 |
| | | | | (0.511) | (0.502) |
| Diff. in Usage | | | | | -0.655 |
| | | | | | (0.729) |
| Diff. in Experience | | | | | -0.118 |
| | | | | | (0.270) |
| ICT General | | | | | 0.480* |
| | | | | | (0.281) |
| ICT Communication | | | | | -0.335 |
| | | | | | (0.425) |
| Online Comm. 1 | | | | | 0.304 |
| | | | | | (0.390) |
| Online Comm. 2 | | | | | -0.042 |
| | | | | | (0.085) |
| Online Comm. 3 | | | | | -0.098 |
| | | | | | (0.102) |
| Online Comm. 4 | | | | | 0.130 |
| | | | | | (0.173) |
| Online Comm. 5 | | | | | 0.054 |
| | | | | | (0.106) |
| Participation | | | | | -0.059 |
| | | | | | (0.118) |
| Failed Attempts | | | | | -0.243 |
| | | | | | (0.599) |
| Trust | | | | | -0.712** |
| | | | | | (0.337) |
| Extraversion | | | | | 0.936* |
| | | | | | (0.509) |
| Agreeableness | | | | | -0.014 |
| | | | | | (0.294) |
| Conscientiousness | | | | | -0.097 |
| | | | | | (0.313) |
| Neuroticism | | | | | -0.253 |
| | | | | | (0.295) |
| Openness | | | | | -0.252 |
| | | | | | (0.309) |
| Constant | | | | | -0.189 |
| | | | | | (0.282) |
| Observations | | | | | -3.041 |
| | | | | | (2.566) |
| Log pseudolikelihood | | | | | (5.424) |
| | | | | | -215.578 |
| | | | | | -205.492 |
| | | | | | -205.039 |
| | | | | | -204.103 |
| | | | | | -192.853 |
| Δ Human Presence _{Video - Text} + Choice Treatment \times Δ Human Presence _{Video - Text} = 0 | | | 0.038 | 0.054 | 0.217 |

Robust standard errors adjusted for 94 clusters (subjects) in parentheses, * $p < 0.10$,

** $p < 0.05$, *** $p < 0.01$

Note: The figures in the row “ Δ Human Presence_{Video - Text} + Choice Treatment \times Δ Human Presence_{Video - Text} = 0” are the p-values for the overall effect of Δ Human Presence_{Video - Text} on Video in the Choice treatment. Since Δ Human Presence_{Video - Text} is quasi-continuous, we used the sample mean of Δ Human Presence_{Video - Text} in the Choice treatment (1.193).

Table 9: Panel probit regression (random effects) with Video as dependent variable, Choice Treatment as independent variable and all control variables

| Dep. Var.: Video | (1) | (2) | (3) | (4) | (5) |
|---|----------------------|---------------------|--------------------|--------------------|--------------------|
| Dishonest | -1.329*** (0.401) | -1.411** (0.581) | -1.100* (0.604) | -1.117* (0.608) | -1.192* (0.614) |
| Round | | -0.002 (0.072) | 0.014 (0.072) | 0.016 (0.072) | 0.012 (0.072) |
| Assigned Number | | -0.032 (0.122) | -0.019 (0.124) | -0.020 (0.124) | -0.037 (0.127) |
| Δ Human Presence _{Video - Text} | | -0.505** (0.243) | -0.377 (0.308) | -0.326 (0.303) | -0.291 (0.304) |
| Dishonest \times Δ Human Presence _{Video - Text} | | | -0.388 (0.290) | -0.391 (0.290) | -0.335 (0.275) |
| Age | | | | 0.190 (0.174) | 0.187 (0.145) |
| Business and Economics | | | | -0.285 (0.829) | -0.536 (0.736) |
| Share Dishonest Round 1 | | | | | 0.931 (1.206) |
| Diff. in Usage | | | | | -0.936* (0.499) |
| Diff. in Experience | | | | | 0.362 (0.415) |
| ICT General | | | | | -0.569 (0.812) |
| ICT Communication | | | | | 0.030 (0.667) |
| Online Comm. 1 | | | | | 0.036 (0.142) |
| Online Comm. 2 | | | | | -0.039 (0.154) |
| Online Comm. 3 | | | | | -0.116 (0.320) |
| Online Comm. 4 | | | | | 0.174 (0.148) |
| Online Comm. 5 | | | | | -0.160 (0.149) |
| Participation | | | | | -0.902 (1.015) |
| Failed Attempts | | | | | -0.123 (0.441) |
| Trust | | | | | 1.167 (0.746) |
| Extraversion | | | | | 0.076 (0.445) |
| Agreeableness | | | | | -0.662 (0.495) |
| Conscientiousness | | | | | -0.073 (0.408) |
| Neuroticism | | | | | -0.561 (0.403) |
| Openness | | | | | -0.275 (0.447) |
| Constant | -0.340 (0.467) | 0.402 (0.726) | 0.126 (0.772) | -4.351 (4.355) | -1.102 (7.566) |
| Observations | 314 | 314 | 314 | 314 | 314 |
| Log pseudolikelihood | -136.348 | -134.276 | -132.997 | -131.960 | -125.513 |
| Δ Human Presence _{Video - Text} + Dishonest \times Δ Human Presence _{Video - Text} = 0 | | | 0.020 | 0.024 | 0.043 |

Robust standard errors adjusted for 94 clusters (subjects) in parentheses, * $p < 0.10$,

** $p < 0.05$, *** $p < 0.01$

Note: The figures in the row “ Δ Human Presence_{Video - Text} + Dishonest \times Δ Human Presence_{Video - Text} = 0” are the p-values for the overall effect of Δ Human Presence_{Video - Text} on Video when the senders were dishonest. Since Δ Human Presence_{Video - Text} is quasi-continuous, we used the sample mean of Δ Human Presence_{Video - Text} in the Choice treatment (1.193). We excluded six observations due to downward lying ($r < s$).

Table 10: Panel probit regression (random effects) with Video as dependent variable, Dishonest as independent variable and all control variables

| Dep. Var.: Follow | (1) | (2) | (3) | (4) |
|---|------------------|---------------------|---------------------|---------------------|
| Video Message | 0.041 (0.175) | 0.018 (0.180) | 0.015 (0.179) | 0.015 (0.183) |
| Round | | 0.068 (0.052) | 0.068 (0.052) | 0.069 (0.052) |
| Reported Number | | -0.201** (0.095) | -0.203** (0.095) | -0.207** (0.092) |
| Age | | | -0.018 (0.020) | -0.002 (0.024) |
| University Degree | | | -0.143 (0.338) | -0.273 (0.309) |
| Δ Human Presence _{Video - Text} | | | | -0.108 (0.128) |
| Share Follow Round 1 | | | | 2.510*** (0.620) |
| Diff. in Usage | | | | 0.186 (0.151) |
| Diff. in Experience | | | | -0.299* (0.182) |
| ICT General | | | | -0.290 (0.449) |
| ICT Communication | | | | 0.742* (0.388) |
| Online Comm. 1 | | | | 0.256*** (0.072) |
| Online Comm. 2 | | | | 0.047 (0.079) |
| Online Comm. 3 | | | | -0.111 (0.096) |
| Online Comm. 4 | | | | 0.042 (0.080) |
| Online Comm. 5 | | | | 0.161 (0.102) |
| Participation | | | | 0.293 (0.288) |
| Failed Attempts | | | | 0.036 (0.141) |
| Trust | | | | 0.483** (0.244) |
| Extraversion | | | | 0.184 (0.215) |
| Agreeableness | | | | -0.414** (0.192) |
| Conscientiousness | | | | -0.196 (0.177) |
| Neuroticism | | | | -0.084 (0.237) |
| Openness | | | | 0.340* (0.196) |
| Constant | 0.164 (0.184) | 0.894 (0.545) | 1.508* (0.897) | -6.572** (2.833) |
| Observations | 300 | 300 | 300 | 300 |
| Log pseudolikelihood | -182.276 | -177.750 | -177.284 | -154.670 |

Robust standard errors adjusted for 60 clusters (subjects) in parentheses, * $p < 0.10$,

** $p < 0.05$, *** $p < 0.01$

Table 11: Panel probit regression (random effects) with *Follow* as dependent variable, *Video Message* as independent variable and all control variables

| Dep. Var.: Video | (1) | (2) | (3) | (4) | (5) |
|--|---------------------|---------------------|---------------------|---------------------|---------------------|
| Dishonest | -1.055** (0.425) | -1.089** (0.539) | -0.504 (0.578) | -0.543 (0.586) | -0.591 (0.594) |
| Round | | 0.017 (0.076) | 0.058 (0.077) | 0.060 (0.077) | 0.061 (0.079) |
| Assigned Number | | -0.019 (0.125) | -0.006 (0.131) | -0.009 (0.131) | -0.015 (0.133) |
| Δ Human Presence _{Video - Text} | | -0.388* (0.221) | -0.071 (0.320) | -0.039 (0.321) | 0.014 (0.343) |
| Dishonest \times Δ Human Presence _{Video - Text} | | | -0.632** (0.313) | -0.640** (0.312) | -0.688** (0.312) |
| Age | | | | 0.162 (0.168) | 0.152 (0.142) |
| Business and Economics | | | | -0.084 (0.769) | -0.549 (0.731) |
| Share Dishonest Round 1 | | | | | 0.804 (1.182) |
| Diff. in Usage | | | | | -0.817* (0.459) |
| Diff. in Experience | | | | | 0.424 (0.422) |
| ICT General | | | | | -0.687 (0.808) |
| ICT Communication | | | | | 0.238 (0.653) |
| Online Comm. 1 | | | | | 0.115 (0.138) |
| Online Comm. 2 | | | | | -0.038 (0.141) |
| Online Comm. 3 | | | | | -0.188 (0.300) |
| Online Comm. 4 | | | | | 0.217 (0.145) |
| Online Comm. 5 | | | | | -0.210 (0.141) |
| Participation | | | | | -1.115 (0.930) |
| Failed Attempts | | | | | -0.143 (0.460) |
| Trust | | | | | 0.808 (0.716) |
| Extraversion | | | | | 0.326 (0.411) |
| Agreeableness | | | | | -0.566 (0.481) |
| Conscientiousness | | | | | 0.001 (0.406) |
| Neuroticism | | | | | -0.324 (0.376) |
| Openness | | | | | -0.256 (0.430) |
| Constant | -0.396 (0.420) | 0.065 (0.687) | -0.533 (0.772) | -4.388 (4.238) | -1.042 (7.518) |
| Observations | 266 | 266 | 266 | 266 | 266 |
| Log pseudolikelihood | -120.448 | -119.004 | -116.225 | -115.470 | -108.784 |

Robust standard errors adjusted for 64 clusters (subjects) in parentheses, * $p < 0.10$,

** $p < 0.05$, *** $p < 0.01$

Note: We excluded two observations due to downward lying ($r < s$).

Table 12: Panel probit regression (random effects) with *Video* as dependent variable, *Dishonest* as independent variable, only observations without assigned number $s = 6$ and all control variables

| Dep. Var.: Video | (1) | (2) | (3) | (4) | (5) |
|--|----------------------|---------------------|-------------------|-------------------|---------------------|
| Dishonest | -1.329*** (0.401) | -1.410** (0.584) | -1.141 (0.716) | -1.144 (0.717) | -1.251* (0.697) |
| Round | | -0.001 (0.071) | 0.002 (0.069) | 0.005 (0.069) | 0.002 (0.069) |
| Assigned Number | | -0.033 (0.123) | -0.034 (0.123) | -0.033 (0.123) | -0.057 (0.125) |
| Δ Social Image _{Video - Text} | | -0.207 (0.232) | -0.142 (0.263) | -0.107 (0.255) | 0.012 (0.240) |
| Dishonest \times Δ Social Image _{Video - Text} | | | -0.139 (0.231) | -0.146 (0.233) | -0.127 (0.215) |
| Age | | | | 0.197 (0.168) | 0.215 (0.143) |
| Business and Economics | | | | -0.398 (0.808) | -0.520 (0.693) |
| Share Dishonest Round 1 | | | | | 1.161 (1.196) |
| Diff. in Usage | | | | | -0.999** (0.501) |
| Diff. in Experience | | | | | 0.479 (0.404) |
| ICT General | | | | | -0.721 (0.784) |
| ICT Communication | | | | | -0.137 (0.649) |
| Online Comm. 1 | | | | | 0.011 (0.142) |
| Online Comm. 2 | | | | | -0.037 (0.151) |
| Online Comm. 3 | | | | | -0.020 (0.303) |
| Online Comm. 4 | | | | | 0.123 (0.141) |
| Online Comm. 5 | | | | | -0.153 (0.154) |
| Participation | | | | | -0.829 (1.004) |
| Failed Attempts | | | | | -0.341 (0.452) |
| Trust | | | | | 1.067 (0.763) |
| Extraversion | | | | | 0.210 (0.398) |
| Agreeableness | | | | | -0.500 (0.461) |
| Conscientiousness | | | | | -0.193 (0.393) |
| Neuroticism | | | | | -0.690* (0.411) |
| Openness | | | | | -0.015 (0.382) |
| Constant | -0.340 (0.467) | 0.200 (0.838) | 0.066 (0.859) | -4.534 (4.242) | -1.505 (7.512) |
| Observations | 314 | 314 | 314 | 314 | 314 |
| Log pseudolikelihood | -136.348 | -135.821 | -135.544 | -134.277 | -127.177 |

Robust standard errors adjusted for 64 clusters (subjects) in parentheses, * $p < 0.10$,

** $p < 0.05$, *** $p < 0.01$

Note: We excluded six observations due to downward lying ($r < s$).

Table 13: Panel probit regression (random effects) with *Video* as dependent variable, *Dishonest* and Δ *Social Image*_{Video - Text} as independent variables and all control variables

C Instructions for Senders

Welcome to this experiment

You take part in an economic decision-making experiment. This experiment consists of **two parts**:

Part 1 consists of **six rounds** in which you make **decisions**.

Part 2 consists of a **questionnaire**.

You will receive the instructions directly before the task or the respective rounds.

In the experiment, we use the currency “ECU”. This is converted into euros at the end of the experiment. **Here, 1 ECU = €0.10.**

Your payoff

Your decisions in **Part 1** are relevant for your **payoff**. **You will receive more detailed information before the start of each round. In addition,** you will receive **20 ECU** for carefully completing the **questionnaire in Part 2**.

Immediately after the experiment, you will receive a link to an **encrypted website of the KD²Lab**, where you can deposit your **bank details** to receive your payoff for the experiment. The bank data will be stored separately from the experimental data. Please deposit your bank details there immediately after the experiment so that the money you have earned in the experiment can be transferred to your account soon. Therefore, please do not close the experiment browser window until you are asked to do so.

Please note:

The payoff is **anonymous**, i.e., no participant is informed of the total payoff of another participant.

Contact for questions

During the entire experiment, no communication is allowed except via the experimental software. If you have a question, please open the cubicle door wide. We will then come to you.

Part 1: Instructions Round 1

In Part 1, two participants (Participant A and Participant B) are each assigned to a group. You will **be in the role of Participant A** throughout Part 1.

Participants in the role of Participant B will **participate in a separate session with a time delay**, are male, and will **not be recruited via the KD²Lab panel**.

Part 1 consists of **six rounds**, and each round is divided into **two stages**. First, we describe both stages of Round 1.

Stage 1

In Stage 1, the computer randomly assigns **each group (Participant A and Participant B)** an **integer between 1 and 6**. Each number 1, 2, 3, 4, 5, or 6 is **equally likely**.

Only **at the end of the experiment** do you receive the information as to which random number was **actually** assigned by the computer.

For **each possible assigned number (1, 2, 3, 4, 5, and 6)**, you must write a pre-written **message to Participant B** about the assigned number (see Table 1). This message **does not have to** contain the actually assigned number. Participant **B does not receive any information about the actually assigned number** before his decision at Stage 2.

Table 1: Your decisions in Round 1

| Assigned number | 1 | 2 | 3 | 4 | 5 | 6 |
|-----------------------------|---|---|---|---|---|---|
| Message to Participant B: | | | | | | |
| “The assigned number is...” | | | | | | |

Stage 2

Participant B must decide whether to **follow your message**. To do this, Participant B decides for **all possible messages whether** or not to follow this message.

At the end of the experiment, you send the corresponding message to Participant B according to the **actually assigned number**, and Participant B makes the corresponding decision.

Payoff

The payoff for both participants is determined as follows:

Your payoff (see Table 2):

You receive a payoff of **10 ECU plus three times the number sent in the message in ECU**. That is, 13 ECU if you send the message that the assigned number is 1, 16 ECU if you send the message that the assigned number is 2, etc.

Table 2: Your payoff table in Round 1

| Number sent | 1 | 2 | 3 | 4 | 5 | 6 |
|----------------------|----|----|----|----|----|----|
| Your payoff (in ECU) | 13 | 16 | 19 | 22 | 25 | 28 |

Payoff Participant B (see Table 3):

If Participant B **follows your message**, Participant B receives a **payoff of 10 ECU** if the **message contains the actual number**. If your message **does not contain the actually assigned number**, Participant B receives a payoff of **0 ECU**.

If Participant B **does not follow** your message, Participant B receives a **payoff of 3 ECU**.

Table 3: Payoff table for Participant B in Round 1

| Decision | Payoff Participant B (in ECU) |
|---|--------------------------------------|
| Participant B follows your message, and the message contains the actually assigned number | 10 |
| Participant B follows your message, and the message does not contain the actually assigned number | 0 |
| Participant B does not follow your message | 3 |

Participant B is informed about the procedures and the resulting payoff for participants A and B.

Your decision based on the **actually assigned number** will be decisive for the payoff in **Round 1**. You will receive the information about the actually assigned number at the **end of the experiment**.

Comprehension questions Round 1

You ...

- ... must always write a message to Participant B.
- ... are free to decide whether to write a message to Participant B.

If the wrong answer was given: Unfortunately, your answer to this question is incorrect. The correct answer is "... must always write a message to Participant B."

Participant B ...

- ... must follow your message.
- ... is free to decide whether to follow your message.

If the wrong answer was given: Unfortunately, your answer to this question is incorrect. The correct answer is "... is free to decide whether to follow your message."

Your payoff is...

- ... 10 ECU plus three times the number sent in the message in ECU, irrespective of the decision of Participant B.
- ... 10 ECU plus three times the number sent in the message in ECU if Participant B follows the message, otherwise 0 ECU.
- ... 10 ECU plus three times the number sent in the message in ECU if Participant B does not follow the message, otherwise 0 ECU.

If the wrong answer was given: Unfortunately, your answer is incorrect. Please review the summary of instructions at the bottom of the page and try.

After two incorrect answers: Unfortunately, your answer is incorrect. The correct answer is: "... 10 ECU plus three times the number sent in the message in ECU, irrespective of the decision of Participant B."

Decisions Round 1

As described in the instructions, you are in the role of **Participant A** in Stage 1.

For **each possible assigned number (1, 2, 3, 4, 5, and 6)**, decide which pre-written message you would like to write to **Participant B**.

| Assigned number | Message to Participant B: “The assigned number is ...” | | | | | |
|-----------------|--|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| 1 | <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 | <input type="radio"/> 4 | <input type="radio"/> 5 | <input type="radio"/> 6 |
| 2 | <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 | <input type="radio"/> 4 | <input type="radio"/> 5 | <input type="radio"/> 6 |
| 3 | <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 | <input type="radio"/> 4 | <input type="radio"/> 5 | <input type="radio"/> 6 |
| 4 | <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 | <input type="radio"/> 4 | <input type="radio"/> 5 | <input type="radio"/> 6 |
| 5 | <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 | <input type="radio"/> 4 | <input type="radio"/> 5 | <input type="radio"/> 6 |
| 6 | <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 | <input type="radio"/> 4 | <input type="radio"/> 5 | <input type="radio"/> 6 |

Part 1: Instructions Round 2 - 6

Rounds 2 - 6 are identical and are described below. In **each round**, the groups are **reassigned**, and you work on the task with a **different participant in the role of Participant B**.

The task is similar to Round 1. We will now explain the differences.

Stage 1

In Stage 1, the computer randomly assigns **each group (Participant A and Participant B)** an **integer between 1 and 6**. Each number 1, 2, 3, 4, 5, or 6 is **equally likely**.

In Rounds 2 - 6, you will be **informed** about **the assigned number**. You then send a **pre-written message** to Participant B about the assigned number.

[Choice Treatment]

As in Round 1, this message **does not** have to contain the actually assigned number. Participant B **does not** receive **any information about the actually assigned number** before making his decision at Stage 2.

In contrast to Round 1, you now have **two options** in Rounds 2 - 6 to send the message to Participant B:

[NoChoice Treatment]

In contrast to Round 1, **this message must contain the actually assigned number**. **Participant B does not** receive **any information about the actually assigned number** before his decision on Stage 2, but is informed that your message must contain the actually assigned number.

In addition, you now have **two options** in Rounds 2 - 6 to send the message to Participant B:

[Both Treatments]

Option 1: **A video message.**

Option 2: **A text message** (“The assigned number is ...”)

Below, you can see an **example of a video message.**

[Choice Treatment]

After you have been informed of the assigned number, you are **free to decide** in **Rounds 2 - 6** whether you want to send Participant B **a text message or a video message**. You then decide **which message** you want to send to Participant B in the text or video message (see Table 4).

[NoChoice Treatment]

After you have been informed of the assigned number, you are **free to decide** in **Rounds 2 - 6** whether you want to send Participant B **a text message or a video message** (see Table 4).

Table 4: Your decisions in Rounds 2 - 6

Do you want to send Participant B a text message or a video message?

Text message Video message

[Choice Treatment]

**Which message do you want to send to Participant B in the text or video message?
“The assigned number is ...”**

1 2 3 4 5 6

If you decide to send Participant B **a video message**, you then record a video message about the assigned number. The video message **may only** contain **the sentence** “**The assigned number is ...**”, **i.e.** the video message may not contain any other words.

[NoChoice Treatment]

If you decide to send Participant B **a video message**, you then record a video message about the assigned number. The video message **must** contain **the actually assigned number** and **may only** contain **the sentence** “**The assigned number is ...**”, **i.e.** the video message may not contain any other words.

[Both Treatments]

You have at least **40 seconds** in each round to record the video message. After these 40 seconds have expired, **the “Next” button appears**, and you can move to the next page.

If you decide to send Participant B a **text message** and therefore do not record a video message, the **“Next” button will** only appear after **40 seconds have expired**.

Stage 2

As in Round 1, Stage 2 of Rounds 2 - 6 takes place after Stage 1 in a separate session with a time delay. Participant B receives a text message or a video message from you about the assigned number and decides whether or not to follow the message.

Part 1: Payoff Round 2 - 6

The payoff for both participants **does not change in Rounds 2 - 6** and is **identical to the payoff in Round 1**:

Your payoff (see Table 5):

Table 5: Your payoff table in Rounds 2 - 6

| Number sent | 1 | 2 | 3 | 4 | 5 | 6 |
|----------------------|----|----|----|----|----|----|
| Your payoff (in ECU) | 13 | 16 | 19 | 22 | 25 | 28 |

Payoff Participant B (see Table 6):

Table 6: Payoff table for Participant B in Rounds 2 - 6

| Decision | Payoff Participant B (in ECU) |
|---|--------------------------------------|
| Participant B follows your message, and the message contains the actually assigned number | 10 |
| Participant B follows your message, and the message does not contain the actually assigned number | 0 |
| Participant B does not follow your message | 3 |

As in Round 1, Participant B is informed about the procedures and the resulting payoff for participants A and B. In addition, in Rounds 2 - 6, Participant B is informed that you have **two options (text message or video message)** for the message to Participant B.

At the end of the experiment, **two of the five rounds** are **randomly drawn**. The decisions made by you and Participant B in these two Rounds are used to **determine the payoff**.

Note:

The random numbers (actually assigned number and payoff-relevant rounds) are independent of each other.

Comprehension question Round 2 - 6

You ...

- ... must always send a video message to Participant B.
- ... must always send a text message to Participant B.
- ... are free to decide whether to send a text message or a video message to Participant B.

If the wrong answer was given: Sorry, your answer to this question is incorrect. The correct answer is: "... are free to decide whether to send a text message or a video message to Participant B."

Note on the video messages

As described in the privacy policy, depending on your decisions in Rounds 2 - 6, you **might** record video messages that will be shown to other participants in a separate session with a time delay. At no time will the other participants know your name or the total amount of your payoff. Other participants might be able to recognize you by your language or appearance. However, these will **not** be recruited via the KD²Lab panel, but throughout Germany, Austria, and Switzerland.

Instructions for recording a video message

Before you start with Round 2, we will explain how to record a video message, and you can test the video recording.

In the middle of the top edge of the monitor in front of you, you will find a **camera** with which the frames of the video message are recorded. The **microphone** for recording your voice is located **on the table in front of you**.

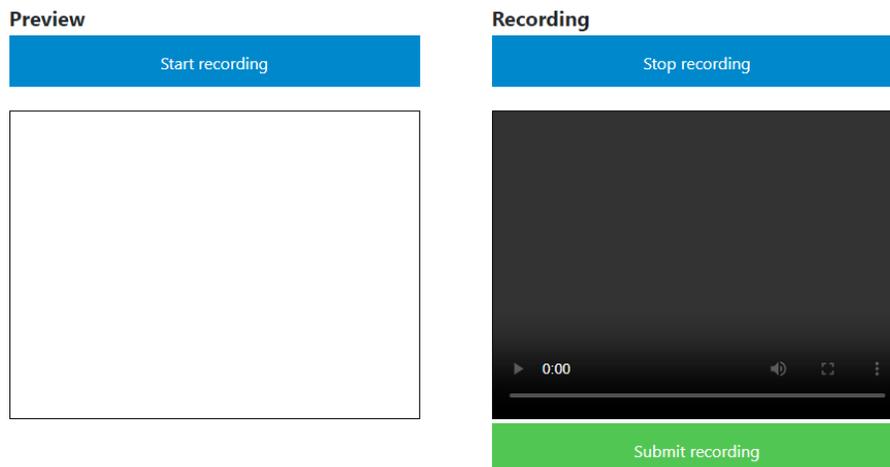
If you click on the **blue “Start recording”** button, you start recording a video message, and the color of the button **changes to red**. All sounds are now recorded via the microphone and frames via the camera. You can see the video recorded in real-time below the “Start recording” button.

Recording stops automatically after a maximum of **5 seconds**. You can also stop the recording **manually earlier** by clicking on the **blue “Stop recording”** button. The color of the **“Start recording”** button then changes back to **blue**, and the recorded video message with frames and sound is displayed below the “Stop recording” button.

As standard with a video player, you can listen to and watch the recorded video message again using the **Play (triangle)** button.

If you click on the **green “Submit recording”** button, you submit the current video message, and it is **downloaded and saved locally on your computer**. The downloaded files are only stored **internally by the university and not on external servers**. In addition, the video message is only downloaded via the **“Submit recording” button and not automatically** when the recording is stopped.

If you are not satisfied with the current video message or have not met the video message requirements, **you can start a new recording using the “Start recording” button**. In this case, the current video message will be deleted and overwritten with the new video message.



Please test the recording of a video message now. You can **test** the video recording **as often as you want** to familiarize yourself with how it works. These test videos have **no impact** on your payoff and will not be shown to Participant B.

Please do **not** wear a **face mask** during video recording. If your face is not fully visible in the videos, you can adjust the camera vertically upwards or downwards.

If you have any **questions or problems with recording a video message**, please open the cubicle door wide. We will then come to you.

Trial round

Before you start Round 2, a trial round will be conducted. Your decisions in this trial round are **not relevant for your payoff, and your text message or video message will not be sent to other participants B.** Apart from this, the trial round is **identical** to Rounds 2 - 6.

Trial round: Decision text or video message

Your group has been assigned the following number by a computer in the **trial round**:

Number X

[Choice Treatment]

Do you want to send Participant B a text message or a video message in the trial round?

Text message Video message

**Which message do you want to send to Participant B in the text or video message?
“The assigned number is ...”**

1 2 3 4 5 6

[NoChoice Treatment]

**Do you want to send Participant B the message “The assigned number is X.”
as a text message or as a video message in the trial round?**

Text message Video message

[Choice Treatment]

If you decide to send Participant B a **video message**, you then record a video message about the assigned number. The video message **may only** contain **the sentence “The assigned number is ...”**, i.e. the video message may not contain any other words.

[NoChoice Treatment]

If you decide to send Participant B a **video message**, you then record a video message about the assigned number. The video message **must** contain **the actually assigned number** and **may only** contain **the sentence “The assigned number is ...”**, i.e. the video message may not contain any other words.

[Both Treatments]

You have at least **40 seconds** in each round to record the video message. After these 40 seconds have expired, **the “Next” button appears**, and you can move to the next page.

If you decide to send Participant B a **text message** and therefore do not record a video message, the **“Next” button will** only appear after **40 seconds have expired**.

Trial round: Please wait ...

If the participant has decided for the text message

[Choice Treatment]

In the **trial round**, you were assigned the **number X** and decided to send the message **“The assigned number is Y”** as a **text message**.

[NoChoice Treatment]

In the **trial round**, you were assigned the **number X** and decided to send the message **“The assigned number is X”** as a **text message**.

[Both Treatment]

You now need to wait **40 seconds until** the “Next” button appears, and you can continue with the task.

Note:

At the bottom of the page, you will see the **remaining time** until the “Next” button appears. Please **do not** reopen the page, as this will restart the timer for the remaining time.

Trial round: Recording the video message

If the participant has decided for the video message

[Choice Treatment]

In the **trial round**, you were assigned the **number X** and decided to send the message **“The assigned number is Y”** as a **video message**.

[NoChoice Treatment]

In the **trial round**, you were assigned the **number X** and decided to send the message **“The assigned number is X”** as a **video message**.

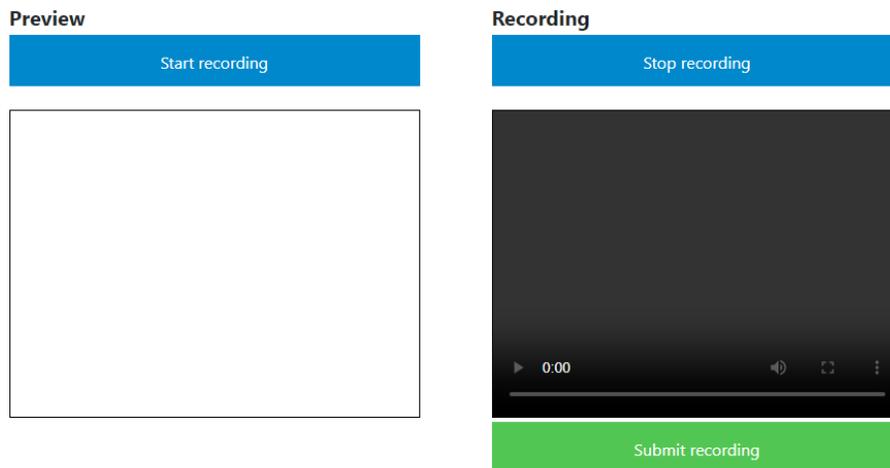
[Both Treatments]

Please record this video message to Participant B.

You can submit the recorded video message using the **“Submit recording”** button. Look **into the camera** while recording, and **do not wear a face mask**.

Please submit only **one** video message. If you submit several video messages, the **last submission will be used**. **The video message may not contain any words other than the sentence “The assigned number is ...”**.

You can open the instructions for recording a video message again below.



Note:

At the bottom of the page, you will see the **remaining time** until the “Next” button appears. Please **do not** reopen the page, as this will restart the timer for the remaining time.

Trial round: Result

[Choice Treatment]

| | Number assigned by the computer | Your message to Participant B | Text message or video message | Your payoff |
|-------------|--|--|--|--------------------|
| Trial round | X | The assigned number is Y | ... | aa ECU |

[NoChoice Treatment]

| | Number assigned by the computer | Your message to Participant B | Text message or video message | Your payoff |
|-------------|--|--|--|--------------------|
| Trial round | X | The assigned number is X | ... | aa ECU |

[Both Treatments]

Round 2: Decision text or video message

Your group has been assigned the following number by a computer in **Round 2**:

Number X

[Choice Treatment]

Do you want to send Participant B a text message or a video message in Round 2?

Text message Video message

**Which message do you want to send to Participant B in the text or video message?
“The assigned number is ...”**

1 2 3 4 5 6

[NoChoice Treatment]

Do you want to send Participant B the message “The assigned number is X.” as a text message or as a video message in Round 2?

Text message Video message

[Choice Treatment]

If you decide to send Participant B a **video message**, you then record a video message about the assigned number. The video message **may only** contain **the sentence “The assigned number is ...”, i.e.** the video message may not contain any other words.

[NoChoice Treatment]

If you decide to send Participant B a **video message**, you then record a video message about the assigned number. The video message **must** contain **the actually assigned number** and **may only** contain **the sentence “The assigned number is ...”, i.e.** the video message may not contain any other words.

[Both Treatments]

You have at least **40 seconds** in each round to record the video message. After these 40 seconds have expired, **the “Next” button appears**, and you can move to the next page.

If you decide to send Participant B a **text message** and therefore do not record a video message, the **“Next” button will** only appear after **40 seconds have expired**.

Round 2: Please wait ...

If the participant has decided for the text message

[Choice Treatment]

In **Round 2**, you were assigned the **number X** and decided to send the message **“The assigned number is Y”** as a **text message**.

[NoChoice Treatment]

In **Round 2**, you were assigned the **number X** and decided to send the message **“The assigned number is X”** as a **text message**.

[Both Treatment]

You now need to wait **40 seconds** until the “Next” button appears and you can continue with the task.

Note:

At the bottom of the page, you will see the **remaining time** until the “Next” button appears. Please **do not** reopen the page, as this will restart the timer for the remaining time.

Round 2: Recording the video message

If the participant has decided for the video message

[Choice Treatment]

In **Round 2**, you were assigned the **number X** and decided to send the message “**The assigned number is Y**” as a **video message**.

[NoChoice Treatment]

In **Round 2**, you were assigned the **number X** and decided to send the message “**The assigned number is X**” as a **video message**.

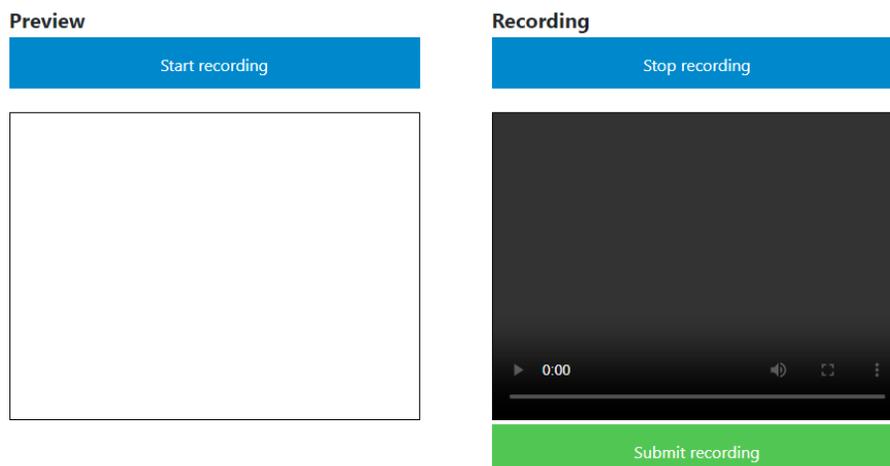
[Both Treatments]

Please record this video message to Participant B.

You can submit the recorded video message using the “**Submit recording**” button. Look **into the camera** while recording, and **do not wear a face mask**.

Please submit only **one** video message. If you submit several video messages, the **last submission will be used**. **The video message may not** contain any **words other than the sentence “The assigned number is ...”**.

You can open the instructions for recording a video message again below.



Note:

At the bottom of the page, you will see the **remaining time** until the “Next” button appears. Please **do not** reopen the page, as this will restart the timer for the remaining time.

Pages now repeat for Rounds 3 - 6

Part 1: End

Please briefly state why you decided to send a text message / video message in Round 6.

[open text field]

You have completed Part 1 of the study. Part 2 begins for you on the next page.

Part 2: Questionnaire Page 1

In Part 2 of the study, you will answer a questionnaire.

The first questions refer to **Rounds 2 - 6 in Part 1**. In these rounds, you had two options to send the message to Participant B:

Option 1: **A video message.**

Option 2: **A text message** (“The assigned number is ...”)

| Please rate the extent to which you agree with the following statements if you would send [have sent] Participant B a video message. [If Participant A sent at least one video message] | Do not agree at all | | | | | | Fully agree |
|--|---------------------|---|---|---|---|---|-------------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| I would feel [have felt] very close to Participant B. (“close” in the sense of emotional rather than physical proximity) | | | | | | | |
| I would feel [have felt] the presence of Participant B very strongly. | | | | | | | |
| I would feel [have felt] very connected to Participant B. | | | | | | | |
| I would be [have been] very concerned about what Participant B thinks about me. | | | | | | | |
| I would care [cared] very much about leaving a good impression on Participant B. | | | | | | | |
| It would be [was] very important for me that Participant B thinks I am honest. | | | | | | | |

| Please rate the extent to which you agree with the following statements if you would send [have sent] Participant B a text message. [If Participant A sent at least one text message] | Do not agree at all | | | | | | Fully agree |
|--|---------------------|---|---|---|---|---|-------------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

I would feel [have felt] very close to Participant B. (“close” in the sense of emotional rather than physical proximity)

I would feel [have felt] the presence of Participant B very strongly.

I would feel [have felt] very connected to Participant B.

I would be [have been] very concerned about what Participant B thinks about me.

I would care [cared] very much about leaving a good impression on Participant B.

It would be [was] very important for me that Participant B thinks I am honest.

Please answer using a scale.

The value **1** means: **Very unlikely**, the value **11** means: **Very likely**.

How high do you estimate the **probability that** a participant in the role of Participant B will **recognize you by your language or your face** if they see a video message from you?

| 1: Very unlikely | 11: Very likely |
|---|---|
| <input type="radio"/> | <input type="radio"/> <input type="radio"/> <input type="radio"/> |

Questionnaire Page 2

Before we ask you the next questions, we would first like to explain the **two categories of communication channels** in more detail. In this context, communication channels are defined as media that can be used to transfer information between two or more people.

We will now ask you questions about your **experience and use of the two different communication channels**. Please note that the questions refer to your **entire life, i.e.** your private life as well as your studies, work, etc.

| | |
|---|--|
| Written Communication Channels | This refers to communication channels, such as email, SMS, or WhatsApp (without voice messages, video calls, etc.), with which messages are only transmitted using text and emojis . Sounds and images cannot be transmitted using these communication channels. |
| Audiovisual Communication Channels | This refers to communication channels, such as video conferencing, Facetime, or video calls, with which messages are transmitted via sounds and images . These communication channels can be used to transmit information about voice pitch, pronunciation, intonation, pace of speech, posture, gestures, and facial expressions. |

How often do you use written communication channels?

- Never
- At least once a year
- At least once a month
- At least once a week
- At least once a day
- Several times a day

How often do you use audiovisual communication channels?

- Never
- At least once a year
- At least once a month
- At least once a week
- At least once a day
- Several times a day

Questionnaire Page 3

Please rate the extent to which you agree with the following statements.

Do not agree at all Rather disagree Somewhat agree Rather agree Fully agree

I have a lot of experience with written communication channels

I have a lot of experience with audiovisual communication channels

Questionnaire Page 4

In the following, you will be asked questions about the **handling of digital systems**. Digital systems are all **digital applications (e.g., software or apps)** and **all digital devices (e.g., computers or smartphones)**.

| Please rate the extent to which you agree with the following statements. | Strongly disagree | Disagree | Slightly disagree | Slightly agree | Agree | Strongly agree |
|---|-------------------|----------|-------------------|----------------|-------|----------------|
|---|-------------------|----------|-------------------|----------------|-------|----------------|

I can operate digital systems.

I am good at using digital systems.

I quickly learn when it comes to using digital systems.

It is easy for me to get familiar with new digital systems.

I have always been good at using digital systems.

I can communicate information through various media formats (text, image, video, sound ...).

Careful processing is important. Please click on “Slightly agree” for this question.

I am good at collaborating with others through digital systems.

I quickly learn which communication medium (text, audio, video, sound ...) has to be used for editing a task.

It is easy for me to spread information through digital systems.

Questionnaire Page 5

The next questions are about **online and mobile communication**. This refers to **communication** taking place over the **Internet or mobile networks**, using **mobile phones, computers, tablets or other digital devices**.

| To what extent would you say that online and mobile communication . . . | Not at all | Completely |
|--|------------|------------|
| ... makes people feel closer to one another? (“closer” in the sense of emotional rather than physical proximity) | | |
| ... makes work and personal life interrupt each other? | | |
| ... makes it easy to coordinate and manage activities? | | |
| ... undermines personal privacy? | | |
| ... exposes people to misinformation? | | |

Questionnaire Page 6

| How well do the following statements describe your personality? I see myself as someone who . . . | Disagree strongly | Disagree a little | Neither agree nor disagree | Agree a little | Agree strongly |
|--|----------------------|----------------------|----------------------------------|-------------------|-------------------|
| ... is reserved. | | | | | |
| ... is generally trusting | | | | | |
| ... tends to be lazy | | | | | |
| ... is relaxed, handles stress well | | | | | |
| ... has few artistic interests | | | | | |
| ... is outgoing, sociable | | | | | |
| ... tends to find fault with others | | | | | |
| ... does a thorough job | | | | | |
| ... gets nervous easily. | | | | | |
| ... has an active imagination | | | | | |

Questionnaire Page 7

| | | | | | |
|--|-----------------------|------------------|------------------|----------------|--------------------|
| The following statements may apply more or less to you. To what extent do you think each statement applies to you personally? | Does not apply at all | Applies a little | Applies somewhat | Applies mostly | Applies completely |
|--|-----------------------|------------------|------------------|----------------|--------------------|

I am convinced that most people have good intentions.

Careful processing is important. Please click on “Applies mostly” here.

You can’t rely on anyone these days.

In general, people can be trusted.

Result Part 1 and payoff

Result Round 2 - 6

The following table gives you an overview of your results in Rounds 2 - 6.

| Round | Number assigned by the computer | Your message to Participant B | Text message or video message | Your payoff |
|---------|---------------------------------|-------------------------------|-------------------------------|-------------|
| Round 2 | X | The assigned number is Y | Text message | xx ECU |
| Round 3 | X | The assigned number is Y | Video message | xx ECU |
| Round 4 | X | The assigned number is Y | Video message | xx ECU |
| Round 5 | X | The assigned number is Y | Video message | xx ECU |
| Round 6 | X | The assigned number is Y | Text message | xx ECU |

Your expected payoff

In **Round 1 of Part 1**, the computer assigned the **number X** to your group and you earned **xx ECU**.

For **Rounds 2 - 6 of Part 1**, **Rounds a and b** have been drawn for your payoff.

Please note that in Rounds 2 - 6 only your decisions in the video messages are relevant for your payoff and we will check your video messages first. Therefore, your final payoff may differ from the expected payoff.

Your total payoff in **Part 1 of the study** is **xx ECU**.

In addition, you will receive **20 ECU** for **Part 2 of the study**.

Your expected payoff for the entire study is, therefore, xx ECU.

Transition to SoSci Survey

We will now ask you for socio-demographic data (age and course of study). As this data is personal and we take the issue of data protection very seriously, this part will be carried out on the **SoSci Survey software hosted by the university**.

Click [here](#) to go to SoSci Survey.

Part 2: Socio-demographic data

Please give us a little more information about you before we conclude the experiment.

In which year were you born?

Which of the following subjects are you studying? (multiple answers possible)

- Industrial Engineering and Management
- Mechanical engineering
- Informatics
- Information Systems
- Information Engineering and Management
- Business Administration
- Mathematics
- Other [Open text field]

Have you already taken part in other experiments in the KD²Lab?

- Yes
- No

Please indicate how much **attention** you have paid to this survey. You will receive your **payoff** regardless of your answer to this question. We appreciate your honesty!

very little little some much very much

I have paid ____ attention to this survey.

Do you have any comments on the experiment? [Open text field]

Payoff

Thank you for your participation!

Before payoff is made, we will check whether you have complied with the video message requirements in Part 1 and answered the questionnaire fully and carefully. Participants who fail to do so will not receive a payoff.

In order to receive the amount by bank transfer, you must send your bank details to the KD²Lab. Personal data that you transmit to the KD²Lab for payoff will not be associated with your decisions in the study. To deposit your bank details, you will need your access key. You will receive this access key from the experiment management.

Please click on “Complete study” to deposit your bank details. Please enter your details now - it will not be possible to enter them later.

[Complete study](#)

D Instructions for Receivers

Please enter your (24-digit) Prolific ID first.

[Text field]

Technology check

In this study, you will **listen to** and **watch** videos. Therefore, we will first check your **technical requirements** to ensure that audio and video will work for you.

Please watch **and listen to** the following video and then answer the **two questions**.

Audio check

What color did the person in the video name?

- Red
- Blue
- Green
- Yellow

Video check

How many fingers did the person in the video show?

- One finger
- Two fingers
- Three fingers
- Four fingers
- Five fingers

[If one of the two questions is answered incorrectly, a participant cannot continue with the questionnaire.]

Welcome to this study

You take part in an economic decision-making experiment. This experiment consists of **two parts**:

Part 1 consists of **six rounds** in which you make **decisions**.

Part 2 consists of a **questionnaire**.

You will receive the instructions directly before the task or the respective rounds.

In the experiment, we use the currency “ECU”. This is converted into pounds at the end of the experiment. **Here, 1 ECU = £0.09.**

Please note:

NO DECEPTION POLICY. In this study, **all information in the instructions is true**. We will inform you in detail about the procedures and the information available to all participants.

Your payoff

Your decisions in **Part 1** are relevant for your **payoff**. **You will receive more detailed information before the start of each round**. **In addition**, you will receive **20 ECU** for carefully completing the **questionnaire in Part 2**.

At the end of the experiment, you will receive your **completion code** to confirm that you have completed the study. You will receive your payoff no later than four working days after your participation after we have evaluated your decisions.

Please note:

The **payoff is anonymous**, i.e. no participant is informed of the total payoff of another participant.

Part 1: Instructions Round 1

In Part 1, two participants (Participant A and Participant B) are each assigned to a group. You will **be in the role of Participant B** throughout Part 1.

Participants in the role of Participant A **took part in a separate session with a time delay**, are male and were **not recruited via Prolific**.

Part 1 consists of **six rounds**, and each round is divided into **two stages**. First, we describe both stages of Round 1.

Stage 1

In Stage 1, the computer randomly assigned **each group (Participant A and Participant B)** an **integer between 1 and 6**. Each number 1, 2, 3, 4, 5, or 6 was **equally likely**.

Only **at the end of the experiment** do you receive the information as to which random number was **actually** assigned by the computer.

For **each possible assigned number (1, 2, 3, 4, 5, and 6)**, Participant A had to write a **pre-written message to you about the assigned number**. This message **did not have to** contain the actually number assigned. **You will not receive any information about the actually assigned number** before your decision at Stage 2.

Stage 2

You must decide whether to **follow the message from Participant A**. To do this, you decide for **all possible messages whether** or not to follow this message (see Table 1).

Table 1: Your decisions in Round 1

| Message from Participant A | Your decision | |
|-----------------------------------|------------------------------|-------------------------------------|
| “The assigned number is 1” | follow <input type="radio"/> | do not follow <input type="radio"/> |
| “The assigned number is 2” | follow <input type="radio"/> | do not follow <input type="radio"/> |
| “The assigned number is 3” | follow <input type="radio"/> | do not follow <input type="radio"/> |
| “The assigned number is 4” | follow <input type="radio"/> | do not follow <input type="radio"/> |
| “The assigned number is 5” | follow <input type="radio"/> | do not follow <input type="radio"/> |
| “The assigned number is 6” | follow <input type="radio"/> | do not follow <input type="radio"/> |

At the end of the experiment, the corresponding message is sent to you by Participant A according to the **actually assigned number**, and your corresponding decision is executed.

Payoff

The payoff for both participants is determined as follows:

Payoff Participant A (see Table 2):

Participant A has received a payoff of **10 ECU plus three times the number sent in the message in ECU**. That is, 13 ECU if Participant A has sent the message that the assigned number is 1, 16 ECU if Participant A has sent the message that the assigned number is 2, etc.

Table 2: Payoff table for Participant A in Round 1

| Number sent | 1 | 2 | 3 | 4 | 5 | 6 |
|-------------------------------|----|----|----|----|----|----|
| Payoff Participant A (in ECU) | 13 | 16 | 19 | 22 | 25 | 28 |

Your payoff (see Table 3):

If you **follow the message from Participant A**, you will receive a payoff of **10 ECU** if the message contains the actual number. If the message from Participant A **does not contain the actually assigned number**, you will receive a payoff of **0 ECU**.

If you **do not follow** the message from Participant A, you will receive a **payoff of 3 ECU**.

Table 3: Your payoff table in Round 1

| Decision | Your payoff (in ECU) |
|---|----------------------|
| You follow the message from Participant A and the message contains the actually assigned number | 10 |
| You follow the message from Participant A and the message does not contain the actually assigned number | 0 |
| You do not follow the message from Participant A | 3 |

Participant A was informed about the procedures and the resulting payoff for participants A and B.

Your decision based on the **actually assigned number** will be decisive for the payoff in **Round 1**. You will receive information about the actually assigned number at the **end of the experiment**.

Examples of the payoff

In the following table, you will find 4 examples that illustrate your payoff and the payoff of Participant A.

| Assigned number by the computer | Message from Participant A | Decision by Participant B | Payoff for Participant A | Payoff for Participant B |
|---------------------------------|----------------------------|---------------------------|--------------------------|--------------------------|
| 2 | The assigned number is 2 | Follow | 16 ECU | 10 ECU |
| 2 | The assigned number is 2 | Do not follow | 16 ECU | 3 ECU |
| 2 | The assigned number is 6 | Follow | 28 ECU | 0 ECU |
| 2 | The assigned number is 6 | Do not follow | 28 ECU | 3 ECU |

On the following pages, we describe **2 exemplary scenarios**. Please read through them and **then answer the questions about the payoff**.

Scenario 1:

The assigned **number** by the computer is **4**. If the assigned number is 4, Participant A has decided to send you the message “**The assigned number is 4**”

Question 1:

What **payoff in ECU** would **Participant A** have received if you do not follow the message?

- 13
- 16
- 19
- 22
- 25
- 28

If the wrong answer was given: Unfortunately, your answer to this question is incorrect. The correct answer is: Participant A would have received a payoff off 22 ECU. At the bottom of the page, you will find the instructions for the payoff.

Question 2:

What payoff in ECU would you receive if you follow the message?

- 10
- 0
- 3

If the wrong answer was given: Unfortunately, your answer to this question is incorrect. The correct answer is: You would receive a payoff of 10 ECU because you followed the message and the message contained the actually assigned number. At the bottom of the page, you will find the instructions for the payoff.

Scenario 2:

The assigned **number** by the computer is **1**. If the assigned number is 1, Participant A has decided to send you the message “**The assigned number is 4**”

Question 1:

What payoff in ECU would Participant A have received if you do not follow the message?

- 13
- 16
- 19
- 22
- 25
- 28

If the wrong answer was given: Unfortunately, your answer to this question is incorrect. The correct answer is: Participant A would have received a payoff off 22 ECU. At the bottom of the page, you will find the instructions for the payoff.

Question 2:

What payoff in ECU would you receive if you follow the message?

- 10
- 0
- 3

If the wrong answer was given: Unfortunately, your answer to this question is incorrect. The correct answer is: You would receive a payoff of 0 ECU, because you followed the message and the message did not contain the actually assigned number. At the bottom of the page you will find the instructions for the payoff.

Control question 1:

Before you make your decisions in Round 1, we have two control questions below.

Participant A ...

- ... always had to write a message to you.
- ... was free to decide whether to write a message to you.

If the wrong answer was given: Unfortunately, your answer to this question is incorrect. The correct answer is: "Participant A always had to write a message to you".

Control question 2:

You ...

- ... must follow the message from Participant A.
- ... are free to decide whether to follow the message from Participant A.

If the wrong answer was given: Unfortunately, your answer to this question is incorrect. The correct answer is: "You are free to decide whether to follow the message from Participant A".

Decisions Round 1

As described in the instructions, you are in the role of **Participant B** in Stage 2.

For **all possible messages from Participant A**, decide whether you **follow** the message **or not**.

| Message from Participant A | Your decision |
|----------------------------|--|
| “The assigned number is 1” | follow <input type="radio"/> do not follow <input type="radio"/> |
| “The assigned number is 2” | follow <input type="radio"/> do not follow <input type="radio"/> |
| “The assigned number is 3” | follow <input type="radio"/> do not follow <input type="radio"/> |
| “The assigned number is 4” | follow <input type="radio"/> do not follow <input type="radio"/> |
| “The assigned number is 5” | follow <input type="radio"/> do not follow <input type="radio"/> |
| “The assigned number is 6” | follow <input type="radio"/> do not follow <input type="radio"/> |

Part 1: Instructions Round 2 - 6

Rounds 2 - 6 are identical and are described below. In **each round**, the groups are **reassigned**, and you work on the task with a **different participant in the role of Participant A**.

The task is similar to Round 1 and we will now explain the differences.

Stage 1

In Stage 1, the computer randomly assigned **each group (Participant A and Participant B)** an **integer between 1 and 6**. Each number 1, 2, 3, 4, 5, or 6 was **equally likely**.

In Rounds 2 - 6, participant A was informed about **the assigned number**. Participant A then sent you a **pre-written message** about the assigned number.

[Choice Treatment]

As in Round 1, the message from Participant A **did not** have to contain the actually assigned number. You will **not** receive **any information about the actually assigned number** before you make your decision at Stage 2.

In contrast to Round 1, Participant A now had **two options** in Rounds 2 - 6 to send the message to you:

[NoChoice Treatment]

In contrast to Round 1, **the message from Participant A had to contain the actually assigned number**. You will **not** receive **any information about the actually assigned number** before you make your decision at Stage 2.

In addition, Participant A now had **two options** in Rounds 2 - 6 to send the message to you:

[Both Treatments]

Option 1: **a video message**.

Option 2: **a text message** ("The assigned number is ...")

Below you can see an **example of a video message**.

Stage 2

As in Round 1, Stage 1 took place before Stage 2 was conducted in a separate session with a time delay.

Each round you receive a video message or a text message from a Participant A about the assigned number and decide whether to **follow** the message **or not**.

Please note:

In this study, **two treatment groups** were used, which differed in **Rounds 2 to 6** in terms of **whether or not the message from Participant A had to contain the actually assigned number**.

[Choice Treatment]

You are in the treatment group in which the message from Participant A did not have to contain the actually assigned number.

[NoChoice Treatment]

You are in the treatment group in which the message from Participant A always had to contain the actually assigned number.

Part 1: Payoff Round 2 - 6

The payoff of both participants **does not change in Rounds 2 - 6** and is **identical to the payoff in Round 1:**

Payout Participant A (see Table 4):

Table 4: Payoff table for Participant A in Rounds 2 - 6

| Number sent | 1 | 2 | 3 | 4 | 5 | 6 |
|-------------------------------|----|----|----|----|----|----|
| Payoff Participant A (in ECU) | 13 | 16 | 19 | 22 | 25 | 28 |

Your payoff (see Table 5):

Table 5: Your payoff table in Rounds 2 - 6

| Decision | Your payoff (in ECU) |
|---|----------------------|
| You follow the message from Participant A and the message contains the actually assigned number | 10 |
| You follow the message from Participant A and the message does not contain the actually assigned number | 0 |
| You do not follow the message from Participant A | 3 |

As in Round 1, Participant A was informed about the procedures and the resulting payoff for participants A and B.

At the end of the experiment, **two of the five rounds** are **randomly drawn**. The decisions made by you and Participant A in these two rounds are used to **determine the payoff**.

Note:

The random numbers (actually assigned number and payoff-relevant rounds) are independent of each other.

Control question 1: Round 2 - 6

Please answer the following control questions.

In Rounds 2 to 6 ...

- ... the message from Participant A had to contain the actually assigned number.
- ... the message from Participant A did not have to contain the actually assigned number.

[Choice Treatment]

If the wrong answer was given: Unfortunately, your answer to this question is incorrect. The correct answer is: "In Rounds 2 to 6, the message from Participant A did not have to contain the actually assigned number."

[NoChoice Treatment]

If the wrong answer was given: Unfortunately, your answer to this question is incorrect. The correct answer is: "In Rounds 2 to 6, the message from Participant A had to contain the actually assigned number."

[Both Treatments]

Control question 2: Round 2 - 6

Participant A ...

- ... always had to send you a video message.
- ... was free to choose whether to send you a video message or a text message.
- ... always had to send you a text message.

If the wrong answer was given: Unfortunately, your answer is not correct. Please take another look at the summary of the instructions at the bottom of the page and try again. If again the wrong answer was given: Unfortunately, your answer to this question is incorrect. The correct answer is: "Participant A was free to choose whether to send you a video message or a text message."

Control question 3: Round 2 - 6

In a round, a Participant B receives the message from a Participant A: "The assigned number is 3".

What payout will Participant B receive if he follows the message?

- 0 ECU
- 10 ECU
- 3 ECU
- I cannot say because I do not know the actually assigned number.

[Choice Treatment]

[If the wrong answer was given: Unfortunately, your answer to this question is incorrect. The correct answer is: “I cannot say because I do not know the actually assigned number.”]

[NoChoice Treatment]

[If the wrong answer was given: Unfortunately, your answer to this question is incorrect. The correct answer is: “Participant B receives 10 ECU because the message from Participant A in Rounds 2 to 6 had to contain the actually assigned number.”]

[Both Treatments]

Please note:

[Choice Treatment]

In this round, the message from Participant A did not have to contain the actually assigned number.

[NoChoice Treatment]

In this round, the message from Participant A always had to contain the actually assigned number.

The messages have been checked to ensure that they always contain the actually assigned number..

Your payoff:

- 10 ECU: Follow & message contains the number
- 0 ECU: Follow & message does not contain the number
- 3 ECU: Do not follow

Round 2 (3, 4, 5, 6): Decision

[Participant B receives a text message]

(The Next button on this page appears after 10 seconds)

You have received a text message from Participant A. The text message from Participant A is:

“The assigned number is X.”

What number did Participant A send you in the text message?

- Number 1
- Number 2
- Number 3
- Number 4
- Number 5
- Number 6

Decide whether to follow the message or not

follow do not follow

[Participant B receives a video message]

(The Next button on this page appears after 10 seconds)

You have received a **video message** from Participant A.

Listen to and watch the video message and then decide whether you want to **follow** the message or **not**.

You can **listen to and watch** the **video message** several times.

What number did Participant A send you in the video message?

- Number 1
- Number 2
- Number 3
- Number 4
- Number 5
- Number 6

Decide whether to follow the message or not

follow do not follow

End Part 1

You have completed Part 1 of the study. Part 2 begins for you on the next page.

Part 2: Questionnaire Page 1

In Part 2 of the study, you will answer a questionnaire.

The first questions refer to **Rounds 2 - 6 in Part 1**. In these rounds, Participant A had two options to send a message to you:

Option 1: **A video message.**

Option 2: **A text message** (“The assigned number is …”)

| Please rate the extent to which you agree with the following statements if Participant A has sent you a video message. | Do not agree at all | | | | | | Fully agree |
|---|---------------------|---|---|---|---|---|-------------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| I felt very close to Participant A. (“close” in the sense of emotional rather than physical proximity) | | | | | | | |
| I felt the presence of Participant A very strongly. | | | | | | | |
| I felt very connected to Participant A. | | | | | | | |
| I was very concerned about what Participant A thinks about me. | | | | | | | |
| I cared very much about leaving a good impression on Participant A. | | | | | | | |
| It was very important for me that Participant A thinks I am honest. | | | | | | | |

| Please rate the extent to which you agree with the following statements if Participant A has sent you a text message. | Do not agree at all | | | | | | Fully agree |
|--|---------------------|---|---|---|---|---|-------------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| I felt very close to Participant A. (“close” in the sense of emotional rather than physical proximity) | | | | | | | |
| I felt the presence of Participant A very strongly. | | | | | | | |
| I felt very connected to Participant A. | | | | | | | |
| I was very concerned about what Participant A thinks about me. | | | | | | | |
| I cared very much about leaving a good impression on Participant A. | | | | | | | |
| It was very important for me that Participant A thinks I am honest. | | | | | | | |

Questionnaire Page 2

Did you know a Participant A in a video message?

- Yes
- No

If yes was selected

In which round(s) did you know a Participant A?

- 2
- 3
- 4
- 5
- 6
- I do not remember

Questionnaire Page 3

Before we ask you the next questions, we would first like to explain the **two categories of communication channels** in more detail. In this context, communication channels are defined as media that can be used to transfer information between two or more people.

| | |
|---|--|
| Written Communication Channels | This refers to communication channels, such as email, SMS, WhatsApp (without voice messages, video calls, etc.), with which messages are only transmitted using text and emojis . Sounds and images cannot be transmitted using these communication channels. |
| Audiovisual Communication Channels | This refers to communication channels, such as video conferencing, Facetime, or video calls, with which messages are transmitted via sounds and images . These communication channels can be used to transmit information about voice pitch, pronunciation, intonation, pace of speech, posture, gestures, and facial expressions. |

We will now ask you questions about your **experience and use of the two different communication channels**. Please note that the questions refer to your **entire life, i.e.** your private life as well as your studies, work, etc.

How often do you use written communication channels?

- Never
- At least once a year
- At least once a month
- At least once a week
- At least once a day
- Several times a day

How often do you use audiovisual communication channels?

- Never
- At least once a year
- At least once a month
- At least once a week
- At least once a day
- Several times a day

Questionnaire Page 4

| | | | | | |
|---|---------------------|-----------------|----------------|--------------|-------------|
| Please rate the extent to which you agree with the following statements. | Do not agree at all | Rather disagree | Somewhat agree | Rather agree | Fully agree |
|---|---------------------|-----------------|----------------|--------------|-------------|

I have a lot of experience with written communication channels

I have a lot of experience with audiovisual communication channels

Questionnaire Page 5

In the following, you will be asked questions about the **handling of digital systems**. Digital systems are all **digital applications** (e.g., software or apps) and all **digital devices** (e.g., computers or smartphones).

| | | | | | | |
|---|-------------------|----------|-------------------|----------------|-------|----------------|
| Please rate the extent to which you agree with the following statements. | Strongly disagree | Disagree | Slightly disagree | Slightly agree | Agree | Strongly agree |
|---|-------------------|----------|-------------------|----------------|-------|----------------|

I can operate digital systems.

I am good at using digital systems.

I quickly learn when it comes to using digital systems.

It is easy for me to get familiar with new digital systems.

I have always been good at using digital systems.

I can communicate information through various media formats (text, image, video, sound ...).

Careful processing is important. Please click on "Slightly agree" for this question.

I am good at collaborating with others through digital systems.

I quickly learn which communication medium (text, audio, video, sound ...) has to be used for editing a task.

It is easy for me to spread information through digital systems.

Questionnaire Page 6

The next questions are about **online and mobile communication**. This refers to **communication** taking place over the **Internet or mobile networks**, using **mobile phones, computers, tablets or other digital devices**.

| To what extent would you say that online and mobile communication . . . | Not at all | Completely |
|--|------------|------------|
| ... makes people feel closer to one another? (“closer” in the sense of emotional rather than physical proximity) | | |
| ... makes work and personal life interrupt each other? | | |
| ... makes it easy to coordinate and manage activities? | | |
| ... undermines personal privacy? | | |
| ... exposes people to misinformation? | | |

Questionnaire Page 7

| How well do the following state- ments describe your personality? I see myself as someone who . . . | Disagree strongly | Disagree a little | Neither agree nor disagree | Agree a little | Agree strongly |
|--|----------------------|----------------------|----------------------------------|-------------------|-------------------|
| ... is reserved. | | | | | |
| ... is generally trusting | | | | | |
| ... tends to be lazy | | | | | |
| ... is relaxed, handles stress well | | | | | |
| ... has few artistic interests | | | | | |
| ... is outgoing, sociable | | | | | |
| ... tends to find fault with others | | | | | |
| ... does a thorough job | | | | | |
| ... gets nervous easily. | | | | | |
| ... has an active imagination | | | | | |

Questionnaire Page 8

| | | | | | |
|--|-----------------------|------------------|------------------|----------------|--------------------|
| The following statements may apply more or less to you. To what extent do you think each statement applies to you personally? | Does not apply at all | Applies a little | Applies somewhat | Applies mostly | Applies completely |
|--|-----------------------|------------------|------------------|----------------|--------------------|

I am convinced that most people have good intentions.

Careful processing is important. Please click on “Applies mostly” here.

You can't rely on anyone these days.

In general, people can be trusted.

Questionnaire Page 9

Please give us a little more information about you before we conclude the experiment.

Please enter your gender.

- Male
- Female
- Miscellaneous
- Not specified

How old are you?

- 18 - 20
- 21 - 25
- 26 - 30
- 31 - 35
- 36 - 40
- 41 - 50
- 51 - 60
- 61 - 70
- Not specified

What is your highest educational qualification?

- Without a general school-leaving certificate
- Secondary school leaving certificate
- Advanced secondary school leaving certificate
- Advanced technical college or university entrance qualification
- University degree (Bachelor, ...)
- University degree (Master, Diplom, Magister, ...)
- Doctor/PhD
- Other [Open text field]

Have you already taken part in other experiments?

- Yes
- No

Questionnaire Page 10

Please indicate how much **attention** you have paid to this survey. You will receive your **payoff regardless of your answer to this question**. We appreciate your honesty!

very little little some much very much

I have paid ____ attention to this survey.

Questionnaire Page 11

Thank you for your participation! If you have any suggestions or would like to tell us something, please write to us here. Please do not enter any personal data (including third-party data) in this field:

[Text field]

Result Part 1

Before the experiment is finished, we would like to give you some information about your results in rounds 1 - 6 in Part 1.

The following table gives you an overview.

| Round | Number assigned by the computer | Your message to Participant B | Text message or video message |
|--------------|--|--|--|
| Round 1 | X | The assigned number is Y | |
| Round 2 | X | The assigned number is Y | Text message |
| Round 3 | X | The assigned number is Y | Video message |
| Round 4 | X | The assigned number is Y | Video message |
| Round 5 | X | The assigned number is Y | Video message |
| Round 6 | X | The assigned number is Y | Text message |

Thank you for your participation!

We would like to thank you very much for your help. Your answers have been saved.

You will receive £1.80 for carefully completing the questionnaire in Part 2. For the experimental task in Part 1, you will receive a payoff depending on your decisions and the decisions of Participant A. After we have evaluated your decisions, you will receive this payoff as a bonus.

Before the payoff is made, we will check whether you have answered the questions completely and carefully. Participants who fail to do so will not receive a payout.

Please click on the following link to complete the study.

[Complete study](#)