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The effect of communication channels on dishonest behavior☆

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ABSTRACT

The present research investigates the effects of various communication channels on dishonest behavior. We rely on a simple truth-telling experiment (i.e., a repeated coin-flip) and let subjects report their outcome through communication channels that differ in distance and anonymity (face-to-face, in-lab telephone, in-lab web-form, and home web-form). We find dishonest behavior across all communication channels, with important treatment differences. Reporting of extreme outcomes that maximize payoff increases in distance and anonymity. To the contrary, partial lying decreases in distance and anonymity. Furthermore, we find gender to moderate the effects and women tend to drive these results. The findings have important implications for the design of real-world communication structures that are relevant when honest reporting is particularly relevant, for example in insurance claims, income reports for tax purposes, or applicant screenings in labor markets.

1. Introduction

A key topic for current behavioral and experimental economic research is the scope and intensity of individual lying behavior (e.g., Abeler Becker, & Falk 2014; Conrads et al., 2013, Föllmi-Heusi & Fischbacher, 2013; Mazar, Amir, & Ariely 2008). An often-applied paradigm was developed by Föllmi-Heusi and Fischbacher (2013) in which subjects are asked to secretly roll a die and report the outcome. This outcome is tied to a financial payoff, therefore creating a material incentive to untruthfully report it, for example by claiming having seen "5" instead of "2" as this leads to a higher payoff for the subject. Laboratory evidence suggests that lying is frequent. However, Abeler, Becker, and Falk (2014) report data from a representative sample using a similar coin-flip paradigm, which suggests that hardly any lying occurs. Subsequently, Abeler, Becker, and Falk (2014) address the issue in a laboratory study and – again – find evidence of lying. Our research is designed as a follow-up to this work to further scrutinize this finding.

Interestingly, this difference between experiments may emerge due to at least two different reasons. First, the subject pool in the representative sample was different from the subject pool used for the laboratory experiment. Thus, differences may occur due to structural differences in the subject pools, implicating that student participants report outcomes dishonestly more frequently than the general population. Second, the communication channel was (slightly) different and may have impacted the individual inclination to report one's outcome in otherwise similar populations. While the representative sample reported their outcome using the telephone, the laboratory study asked the participants to go to an adjacent room to call an experimenter while present in a laboratory and after having participated in another (unrelated) experiment. Although it was a close approximation of the telephone-experiment, the degree of anonymity and distance was different in the two settings as visual interaction between researchers and participants has occurred before or after the experiment.

Therefore, we aim to contribute to the behavioral and experimental economic literature by addressing the impact of various communication channels on lying behavior using the same subject pool across all treatments. Thus, we are able to identify differences in communication channels. Beyond this contribution to the behavioral economic literature our research has an applied focus as it is highly interesting for the design of real-world reporting tools. Within and beyond organizational settings, we communicate with others through various communication channels. Routinely, we have to decide whether to visit friends directly to ask a favor, to call them, or to simply message them using a computer or phone. Within organizational settings, decision makers have to decide which communication channel

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to rely on when organizing communication among employees, with consumers and suppliers, or with regulatory bodies. All instances rely on honest reporting behavior.

Our central research question is most easily explainable by an example: let us assume an insurance company which offers two methods of reporting a lost or stolen item, either via the telephone or via an online questionnaire. Typically, reporting a stolen item – let us use a bike for the remainder of this illustration – involves answering various questions. Has the bike been looked properly? Where was it stolen? When was it stolen? Quite critically, the answering pattern will determine if the insurance company reimburses the victim, depending on the terms of service. Therefore, a customer has a material incentive to lie about any of the fine-print to make sure that the insurance company pays. But is reporting behavior influenced by the communication channel?

Despite the increasing research interest in (dis)honest behavior and despite the high practical relevance beyond the stated example (e.g., online vs. offline screening questions for job applicants, online vs. offline dating, etc.), experimental economic research has rarely investigated the effect of the communication channel on people's behavior (cf. Brosig, Joachim, & Ockenfels 2003; Brosig, 2006; Valley et al., 2002). Our research is designed to fill that gap. In particular, we recruit all our participants from the same subject pool that almost entirely consists of students. We compare four different treatments that vary the communication channel with which the outcome of the random draw is reported: face-to-face (*F-t-F*), phone, computerized within the lab (*C-lab*), or computerized via an internet connection from home (i.e., outside the laboratory environment, *C-remote*) and our research is exploratory as the literature provides us with good arguments that would support various hypotheses.

For instance, as material incentives exist, dishonest reporting may be prevalent throughout all communication channels. To the contrary, if lying aversion (e.g., Gneezy, Rockenbach, & Serra-Garcia 2013) is sufficiently high, we should observe little dishonest behavior. However, if there is an aversion to straightforwardly lie into one's face (e.g., Williams, 1977, DePaolo, 1996), there could be observable treatment differences, showing that dishonest reports increase as a function of distance and anonymity of the communication channel. This pattern of behavior may also be supported by the belief how well one expects the research assistant to be able to detect cheaters (Frank & Ekman, 1997). Theories such as self-concept maintenance theory (Mazar, Amir, & Ariely 2008) are mute on differences in communication channels while a preference not to violate someone's expectations (Battigalli & Dufwenberg, 2007) might be elevated by direct and personal communication.

As many good theoretical explanations exist that may support various patterns of behavior, we explore subjects' behavior across various communication channels that are designed according to how much they reflect realistic communication channels outside of academic research. Thus, we contribute to the results presented in Abeler, Becker, and Falk (2014) by exploring in more detail how communication channels affect reporting behavior in the coin-flip paradigm. Our study also augments recent literature that shows some differences in behavior across various communication channels (Pascual-Ezama et al., 2015) in a cross-cultural study. The authors investigate dishonesty in 16 countries while also varying the distance between the sender (participant) and receiver (researcher) of the report (face-to face, written, or self-payments). The results indicate vast amount of honesty with some differences across the communication channel. Thus, our research critically augments the existing experimental results while holding constant the subject pool and only varying the communication channel.

2. Experiment

A total of 246 participants (M_{age} = 24.06, SD_{age} = 3.96, 49 % females) were recruited from the 2000-student subject pool of the University Duisburg-Essen using ORSEE (Greiner, 2004). The experiment itself was realized using the software BoXS (Seithe, 2012). Each participant had the following decision task. S/he could earn money by privately flipping a coin four times in a row. Each time a participant reports tails as the outcome of the coin toss, s/he receives 1 euro. As this method does not allow us to compare reported and actual outcome directly, the main dependent variable is the distribution of reported outcomes in each treatment, which is tested against the expected (equal) distribution. Accordingly, participants can earn an amount between 0 and 4 euros, plus a flat compensation of 7 euros for completing a post-decision survey that included demographics and a few survey questions assessing individual differences in personality (i.e., the German version of a short BIG 5 measure, see Rammstedt & John, 2007) and a questionnaire designed to assess personal values (i.e., the German version of PVQ5X, Schwarz et al., 2012).

No participant participated in more than one treatment. Treatments were collected in independent sessions to avoid that any participant was aware about different procedures in his or her treatment. Consistent with Abeler, Becker, and Falk (2014), we mainly chose the coin-flip task instead of the die-rolling paradigm (Föllmi-Heusi & Fischbacher, 2013) as it is more likely that subjects in the *C-remote* treatment have a coin readily available, which may not be the case for a set of dice.

The experiment included four treatments. The treatments differed in the communication channel in a way that we varied how distant communication was, using either no technology at all or increasingly "distant" or "anonymous" communication tools. Importantly, our experimental treatments are not perfect manipulations of social distance or anonymity. They have rather been chosen according to how well they reflect real-world communication channels. We do argue that the treatments become increasingly distant and increasingly anonymous (i.e., that they are a monotonic function of the two). In *face-to-face* communication (*F-t-F*), subjects report the number of tails directly to a research assistant in their cabins, who knocks on their doors after they have finished flipping the coin. In *phone* communication, the research assistant contacted the subject via phone (i.e., using the software *Skype*), for which each cabin was equipped with a headset and speaker. In *PC-lab* communication, participants entered their ostensible outcome via a web-form, which is transmitted to the research assistant. Finally, in *C-remote*, the subject faced an identical web-form, but could access the site via the internet from home. Participants in the *C-remote* treatment gave us their bank account information in the end of the post-experimental questionnaire and the money was directly wire-transferred after they had finished.

Naturally, there are some differences between online and laboratory experiments that we were not able to control or hold constant. Although unlikely, we cannot entirely rule out that participants completed the online-study with another person present. Furthermore, concentration levels may be lower at home (or elsewhere) compared to the laboratory as participants may have been distracted. As the main interest of the paper lies in the effect of different (realistic) communication channels on dishonesty, we nevertheless opted to include the *C-remote* treatment despite these uncontrollable influences on behavior.

3. Results

Dishonest behavior was prevalent in all experimental treatments (see Fig. 1). The distributions of reported outcomes in all four treatments are significantly different from the truthful distributions (based on Kolmogorov-Smirnov tests, all p's < 0.01, confirmed by binomial tests). Despite the tendency to report dishonestly across all treatments, we find interesting differences in the treatments in line with what we expect.