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I MIGHT BE A LIAR, BUT NOT A THIEF: AN EXPERIMENTAL DISTINCTION BETWEEN THE MORAL COSTS OF LYING AND STEALING

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I might be a liar, but not a thief:

An experimental distinction between the moral costs of lying and stealing

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Abstract

In this paper, we shed light on the different moral costs of dishonesty and stealing. To accomplish this, we set up a die-rolling task which allowed participants to increase their own payout through dishonesty or theft. The results show that participants have fewer reservations about dishonesty compared to stealing, which implies higher intrinsic costs for stealing. We found that gender contributes to this effect, as women distinguish significantly between lying and stealing, while men do not.

Keywords: Lying, Deception, Stealing, Laboratory Experiment, Behavioral Economics

JEL Codes: C91, D63, D82

1. Introduction

Immoral actions are commonplace and their consequences affect everyone in the private, business and public sector. Very topical demonstrations of large-scale dishonesty are the Volkswagen emission control defeat device (Wang, Jerrett, Sinsheimer, & Zhu, 2016) and the Libor manipulation (Abrantes-Metz, Kraten, Metz, & Seow, 2012). Volkswagen was dishonest regarding their emission values and thereby have harmed their customers and the public

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due to decreasing residual values of purchased cars and decreased air quality (Wang et al., 2016). The Libor manipulation, on the other hand, was a dishonest report of interest rates by large banks. These reports led to manipulated reference interest rates and damage to the global economy running into the millions of euros (Abrantes-Metz et al., 2012). Besides these examples of lying, stealing also harms the economy. The 2017 National Retail Security Survey indicated that a loss of $14.67 billion arises annually from inventory–related employee theft in the retail industry of the U.S. alone (National Retail Federation, 2017). Worldwide, there is about $48 billion of retail loss annually due to employee theft and about $48 billion from shoplifting (The Smart Cube). Such theft is mainly committed by men (Centre of Retail Research).

Due to the importance of immoral behavior in all of its manifestations in the economic context, several studies have focused on lying and stealing in different situations (see Rosenbaum, Billinger, & Stieglitz, 2014). There is evidence that non-pecuniary moral costs arise from lying and stealing. This enhances the classical theory on immoral behavior as a product of income effects and the probability of getting caught and punished (Fischbacher & Föllmi-Heusi, 2013; Gneezy, 2005). Further research found that the intrinsic costs of lying depend on the context: Kocher, Schudy, and Spantig (2018) reported that teams lie more often than individuals. This effect is driven by communication which seems to reduce moral costs regarding dishonesty. Moreover, pay schemes affect the intrinsic costs of lying. Belot and Schröder (2013) showed that competition fosters lying compared to fixed wage and piece-rate incentives. Furthermore, participants in experiments have also been found to lie more often when they feel they are treated unfairly (Houser, Vetter, & Winter, 2012). The same context dependency holds true for the intrinsic costs of stealing. Greenberg (1993) revealed that unfairly treated participants who are underpaid show a higher tendency to steal. Moreover, it is more likely that people steal from their companies compared to individual coworkers, indicating varying intrinsic costs of stealing which are conditional on the victim (Greenberg, 2002).

Summarizing these findings, there is evidence that costs of immoral behavior reasonably depend on factors allowing the self-justification of the decisions (Gravert, 2013).

While the framework conditions are crucial for lying as well as stealing, there has not been any attempt to compare the level of lying and stealing under identical incentives so far. However, there are two studies illustrating that such a comparison seems worthwhile. Gravert (2013) investigated stealing with two experimental tasks: the effort-based theft task according to Mazar, Amir, and Ariely (2008) and a chance-based modified die-rolling task (Fischbacher & Föllmi-Heusi, 2013). The author found that the rate of theft was lower in the die-rolling setting, as moral costs are reduced by the effort put forth in the theft task. In this case, effort provides a self-justification for stealing. Therefore, this contribution provides evidence that different experimental settings complicate a comparison of lying and stealing between studies. In a further study conducted by Belot and Schröder (2013), the authors introduced a design which allowed participants to simultaneously lie and steal from the experimenters. Furthermore, they compared different pay schemes using this design. Their results indicate that there was no evidence for theft, while lying in various forms arose and amounted to 10% of participants' productivity in a previously carried out real effort task. Due to the different types of immoral behaviors which are possible in such a setting, stealing might be the less favorable because of higher moral costs.

To the best of our knowledge, there is no study comparing the amount of lying and stealing in an experiment with constant incentives and risk of being caught as a consequence of immoral behavior. The differentiation of the costs associated with these two immoral behaviors has relevant implications for social interactions and economic questions. If one of these immoral behaviors is associated with higher intrinsic costs for economic agents, it might be possible to reduce economic losses by reframing decisions in the various contexts. For instance, the transfer of responsibility to agents under conditions of asymmetric information and consequently the changed perception of the immoral action might increase behavior which is in

accordance with moral convictions. To address this point, our study contributes to the literature in two ways: 1) We investigated whether intrinsic costs of lying and stealing differ. To achieve this, we implemented an experimental design in which participants in a lying treatment rolled a die on their computer screen and reported the outcome. In contrast, participants in a stealing treatment did not report the outcome, but rather allocated the money in private, i.e., it was possible to steal. Participants received an envelope containing the maximum possible payoff and were asked to take the money according to the die-rolling outcome. Based on the identical framework conditions and incentives, we were able to distinguish between moral costs of lying and stealing. 2) We investigated gender differences regarding intrinsic costs of lying versus stealing. Gender differences regarding the intrinsic costs of immoral behavior are a matter of discussion in the literature (Childs, 2012; Grosch & Rau, 2017). Results regarding a potential effect of gender on lying (Childs, 2012; Grosch & Rau, 2017; Gylfason, Arnardottir, & Kristinsson, 2013; Houser et al., 2012; Kajackaite & Gneezy, 2017) as well as stealing (Friesen & Gangadharan, 2013; Gravert, 2013) are ambiguous. Thus, we shed light on gender-specific costs of immoral behavior in three fields: lying, stealing and distinctions between lying and stealing.

2. Theoretical framework and behavioral predictions

We will first define a theoretical framework explaining dishonesty as well as stealing as immoral behavior from an economic point of view. This framework is based on the model introduced by Kajackaite and Gneezy (2017). We start by considering a situation in which an individual i observes a state of nature t. This individual has the possibility to report t and earn the associated financial payoff m_t. It is also possible to report t', which results in payoff $m_{t'}$. The benefit of the immoral behavior then is $m_{t'} - m_t$.

However, immoral behavior is not solely associated with benefits. Disutility arises from violating a moral concept (Gneezy, 2005). These intrinsic costs are defined as C_i and are hetero-

geneous across individuals but constant for each individual i (Kajackaite & Gneezy, 2017). The range of C_i is restricted to $0 \leq C_i \leq \infty$, where $C_i = 0$ and $C_i = \infty$ characterize an individual without any intrinsic value for moral behavior and an individual with pure aversion to immoral behavior, respectively (López-Pérez & Spiegelman, 2013).

A second disutility arises from immoral behavior if the individual i is exposed when acting immorally. This disutility can be described by a function $f(m_{t'}, m_t, p_i)$ which is increasing with the probability p_i of being exposed and the size of the immoral action $m_{t'} - m_t$ (Kajackaite & Gneezy, 2017). Individuals are heterogeneous regarding their disutility of getting caught. Therefore, we denoted this by including parameter γ_i with $\gamma_i \geq 0$.

Consequently, an individual will take immoral action whenever:

$$m_{t'} - C_i - \gamma_i f(m_{t'}, m_t, p_i) > m_t \, .$$

Starting from this theoretical framework, it becomes obvious that, on the one hand, incentives influence immoral behavior, and, on the other hand, intrinsic as well as extrinsic costs of immorality can influence a participant's decision to state t' instead of t. With this in mind, our experimental design becomes relevant. We held γ_i and $m_{t'}$ constant across treatments, but shifted the responsibility for the assignment of money, i.e., enabling lying in one experimental setting and stealing in another.

A review of the relevant literature does not yield information regarding the assumption of varying intrinsic costs associated with lying and stealing. In Table 1, we provide a brief overview about honesty levels in studies using self-reported outcomes (e.g. Fischbacher & Föllmi-Heusi, 2013) and theft tasks (e.g. Mazar et al., 2008). Here, self-reported outcomes measure lying, while theft tasks disclose the proportion of theft. It becomes obvious that honesty levels in both tasks are rather comparable. This is underlined by the literature review of Rosenbaum et al. (2014), which derived average full honesty levels from reviewed studies. They indicate overall full honesty of 52.9% for self-reported outcomes (6 observations) and 64.7% for theft

tasks (8 observations), both with a relatively large spread: 33.5% - 74.0% for self-reported outcomes and 37.3% - 85.0% for theft tasks.

However, the studies of Belot and Schröder (2013) as well as Gravert (2013) indicate that a direct comparison of lying and stealing might be recommendable. Gravert (2013) found that self-reported outcome tasks reduce stealing compared to an effort-based theft task. Furthermore, providing the possibility to lie and steal simultaneously (Belot & Schröder, 2013) leads to the avoidance of stealing by participants. Thus, we assume that the intrinsic moral costs are higher for stealing, while theoretical predictions and previous research would imply constant intrinsic costs for both types of immoral behavior.

Table 1: Proportion of fully honest decisions in self-reported outcome and theft tasks of past studies (cf. Rosenbaum et al., 2014)

Study	Type	Sample	Overall full honesty in %
Gino and Wiltermuth (2014)	SRO	178 US citizens	76%
Fischbacher and Föllmi-Heusi (2013)	SRO	478 students	39%
Kocher et al. (2018)	SRO	273 students	59% - 69%
Gneezy, Kajackaite, and Sobel (2018)	SRO	916 students	67% - 74%
Friesen and Gangadharan (2013)	TT	115 students	67%
Gino and Pierce (2009)	TT	53 students	37%
Shu and Gino (2012)	TT	56 students	68%
Gino and Wiltermuth (2014)	TT	153 US citizens	41%

Note: SRO = self-reported outcome; TT = theft task

3. Experimental design

In this section, we describe our experiment. First, the design allowing participants to lie is introduced. Second, we explain the changes made in the experiment in order to test for theft. Third, we provide insights into the experimental procedure.

3.1. Die-rolling task

The general design was based on the die-rolling task introduced by Kocher et al. (2018) which is an extension of the Fischbacher and Föllmi-Heusi (2013) task. Before the task was carried out, participants had to correctly answer control questions regarding the task to ensure their understanding (see appendix A.1). Afterwards, participants saw a video of a die roll on their respective computer screens. A classic six-sided die was rolled in the video leading to six possible outcomes: ⚀, ⚁, ⚂, ⚃, ⚄ or ⚅. By drawing a random number, the software determined which outcome was shown. Participants were informed that the outcome of the die roll was determined by a random draw from six outcomes with an equal probability of occurrence. After the video played, the outcome of the die roll was visible on the participants' screens for about 12 seconds. Subsequently, the participants' task was to report the outcome of the die roll ('Die number seen: ___'). Any possible outcome (1, 2, 3, 4, 5 or 6) could be entered by the participants. Thus, participants had the possibility to report dishonestly. The reported number determined the payoff of the participant, while the outcome of the die roll did not affect the payoff. We used a specific payoff structure for the die roll outcome (see Table 2). As in previous research, the highest payoff was associated with rolling a '5' and the lowest payoff with rolling a '6' (Fischbacher & Föllmi-Heusi, 2013). Therefore, a payoff maximizer would always report the number associated with the highest payoff, i.e., '5'.

Table 2: Payoff structure of die-rolling task

Entered number	Your payoff	Residual
'1'	€2	€8
'2'	€4	€6
'3'	€6	€4
'4'	€8	€2
'5'	€10	€0
'6'	€0	€10

As the participants were aware that the random number determining the outcome in the video was derived by the software, they could conclude that their lies were observed by the experimenter (Kocher et al., 2018).

3.2. Treatments

To answer our research questions, we implemented two treatments: *Lying* and *Stealing*. The general design of the die-rolling task described in the last section was used to observe *Lying* and was thus a replication of the Kocher et al. (2018) design. For the *Stealing* treatment, the die-rolling task was also carried out in order to determine the participants' payoffs and provide comparable framework conditions for both treatments. However, we then introduced specific modifications in the design to observe stealing: in the *Stealing* treatment, the participants were responsible for the allocation of money. Therefore, the outcome of the die-rolling task was not entered in the computer. Instead, each participant received an envelope containing five €2 coins, i.e., €10. In accordance with their respective outcomes, participants were asked to allocate the money in the envelope by removing their payoff and leaving the residual. Afterwards, they were asked to close the envelope. It was obvious from the instructions of the *Stealing* treatment (appendix A.1) that the envelopes were not collected during the experiment. The closed envelopes were simply left behind at the respective cabins.[3] In order to avoid any potential misleading with regard to the attribution of envelopes to cabins after the experiment, we prepared our envelopes with specific signs on the corners which were only visible under UV-light (see appendix A.2). We prepared each envelope with a specific sign combination associated with a particular cabin number. With this modification in the *Stealing* treatment, we let participants allocate the money in the envelope by themselves and therefore allowed theft. Table 3 illustrates the characteristics of both treatments.

[3] At the end of the experiment, one experimenter paid participants the remaining payment and a second experimenter made sure no one took the envelopes from other cabins.

Table 3: Comparison of treatments

	Treatment	
	Lying	*Stealing*
Control questions	x	x
Die roll video	x	x
Outcome of die roll suggests payoff	x	x
Enter die-rolling outcome in computer	x	-
Receive an envelope containing €10	-	x

3.3. Experimental procedure

The experiment was conducted in autumn 2017 at the University of Göttingen. A total of 80 participants (46.25% female) took part in the experiment, with 40 individuals randomly assigned to each treatment. The participants were recruited using ORSEE (Greiner, 2015) and the experiment was programmed in z-tree (Fischbacher, 2007).

We favored a between-subject design for our treatment comparison for the following reasons: i) In a within-subject design, we would not be able to randomize the payoff-relevant treatment for the individuals as in Kocher et al. (2018). In our case, we would have to hand over the envelope containing real money, which would disclose the payoff-relevant task within the experiment directly. ii) It would be possible to pay individuals for all treatments in a within-subject design; however, this would lead to order effects induced by wealth changes as well as compensation effects, which are difficult to control for, making the within-subject design pointless. iii) In a within-subject comparison, it would be favorable that framework conditions were equal, i.e., the two outcomes of the die-rolling tasks matched, but this contradicts the premise of a random draw.

At the beginning of the experiment, participants received written instructions (see appendix A.1) and were requested to raise their hands if questions arose. Questions were asked and answered in private. Afterwards, participants carried out the die-rolling task followed by additional experimental tasks. In addition to the die-rolling task, we measured protected values regarding honesty according to Gibson, Tanner, and Wagner (2013). This detailed questionnaire is available in appendix A.3. Afterwards, participants answered two short incentivized fairness tasks which are not related to this paper. Subsequently, participants were asked to answer another short questionnaire. Finally, participants received their payoffs from the experimenter privately, which were composed of: i) a fee for showing up and ii) payoffs for the die-rolling task (*Lying* treatment only) and the additional tasks.

4. Results

In order to provide an overview of the participants' decisions, we illustrate the reports and the associated outcomes for both treatments in Figure 1. The outcome is the number which was shown by the dice. The report is the number the participant entered in the computer in the *Lying* treatment. As participants in the *Stealing* treatment did not report directly, we counted the amount of money remaining in the envelope to determine the report.[4] On the one hand, Figure 1 demonstrates that in the *Lying* treatment, a considerable share of participants reported a higher pay-off than their outcomes indicated. Furthermore, most participants who lied reported a roll of '5' instead of their true outcome. On the other hand, there were only a few participants in the *Stealing* treatment who took advantage of the opportunity to withdraw more money from the envelope than their outcome suggested.

[4] For simplicity, we also use the term 'report' for the *Stealing* treatment in the following.

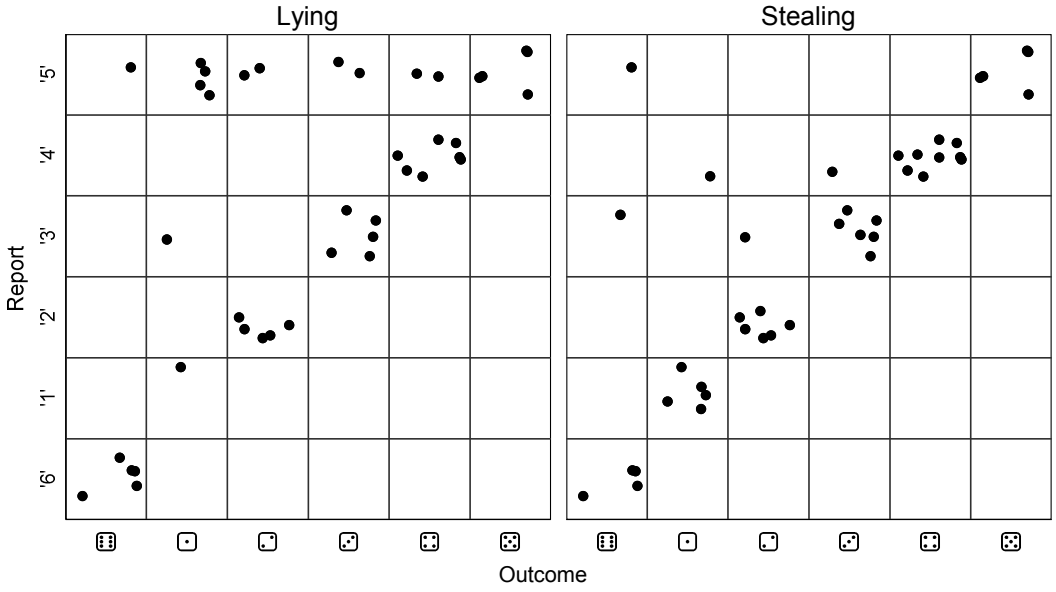

Figure 1: Scatterplot with jitter for outcomes and reports in the two treatments (n per treatment = 40).
Note: Reports in the stealing treatments were recorded based on the money removed from the envelope; honest reports fall along the main diagonal.

In total, 30% of the participants lied while only 12.5% of participants stole. This difference is statistically significant according to a Chi² test[5] ($p = 0.056$). Based on the different relative amounts of lying and stealing, we also calculated a measure for the relative additional payoff.[6] Unsurprisingly, comparing the relative additional payoffs, we also found a statistically significant difference according to a Mann-Whitney test ($p = 0.030$). For *Lying*, the relative additional payoff was 0.288, while for Stealing it was only 0.080.

Result 1: Stealing is less frequent than lying.

Subsequent to the investigation of differences in the incidence of lying and stealing, we further analyzed whether this effect was justified by varying intrinsic costs between lying and stealing. To accomplish this, we measured the extent to which honesty is a protected value for participants according to Gibson et al. (2013). The lower the score of this protected value measure, the more easily participants will trade honesty for other goods. Thus, we expected a

[5] We used the Chi² test if possible and the Fisher's exact test otherwise.
[6] The relative additional payoff is defined as: (report-outcome) / (10 euros-outcome). Thus, it is restricted between 0 (a participant reporting the true outcome) and 1 (a participant with an outcome < 5 reporting a 5).

correlation between the protected value score and lying in the respective treatment. Indeed, the correlation of protected values with the relative additional payoff was highly significant for the *Lying* treatment (Spearman rank correlation = -0.462; $p = 0.003$). Surprisingly, this correlation was not significant for the *Stealing* treatment (Spearman rank correlation = -0.182; $p = 0.261$). Therefore, the score in the protected value measure can be used to predict lying but not stealing (for illustration, see Figure 2). The reason for the lack of a significant correlation for *Stealing* was revealed by participants with a low protected value measure (median split). We compared the relative additional payoff of these participants between treatments. Indeed, we found a significant decrease in immoral behavior of participants with a low protected values score in the *Stealing* treatment ($p = 0.044$; Mann-Whitney test). Thus, participants who are willing to trade honesty as a moral value for other goods reveal less immoral behavior as they are faced with higher costs of immorality in the *Stealing* task. In contrast, those who regard honesty as a highly protected value were already acting according to their morale values in the *Lying* treatment, as their intrinsic costs for immoral behavior are generally high.

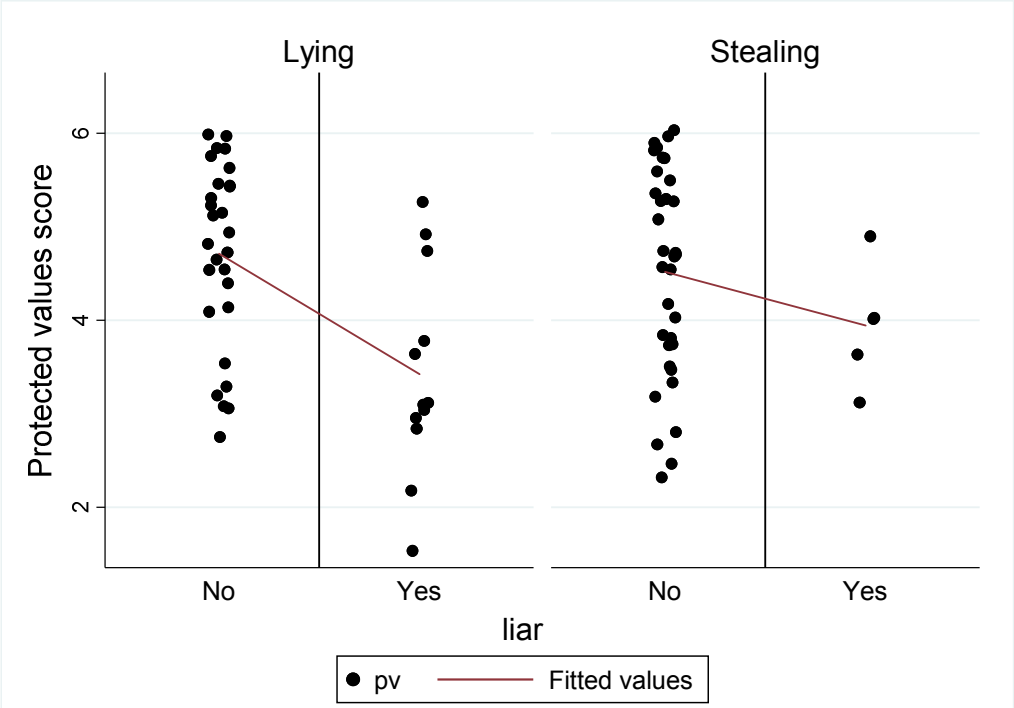

Figure 2: Scatterplot with x-axis jitter for the protected value scores of honest and dishonest participants in the two treatments (n per treatment = 40).
Note: Protected value score for honesty according to Gibson et al. (2013); possible values ranging from 0 to 6.

Result 2: Moral values on honesty predict lying but not stealing.

Result 3: Stealing is associated with higher intrinsic costs compared to lying.

Additionally, we investigated individual characteristics which explain the significant difference in immoral behavior we observed. An important characteristic of agents regarding their moral behavior is gender (Gylfason et al., 2013). The proportion of women and men showing immoral behavior in both treatments is shown in Table 4. Surprisingly, we did not find evidence for a gender effect in either treatment, i.e., gender does not predict lying or stealing. In both the *Lying* treatment ($p = 1.000$; Fisher's exact test) and the *Stealing* treatment ($p = 0.345$; Fisher's exact test), women showed a rate of moral behavior that was not significantly different from that of men. These results also hold true for the amount of the additional payoff ($p = 0.695$, $p = 0.229$; Mann-Whitney tests). However, comparing the treatment effect for genders separately, we found that women's behavior differed significantly ($p = 0.090$; Fish-

er's exact test) between the two treatments, but men's behavior did not ($p = 0.488$; Fisher's exact test). This result is also supported considering the relative additional payoff (women: $p = 0.071$, men: $p = 0.167$; Mann-Whitney tests). Thus, our treatment effect was driven by women who lie but avoid stealing.

Table 4: Moral and immoral behavior in both treatments divided by gender

	Lying		*Stealing*	
	Men (n = 22)	Women (n = 18)	Men (n = 21)	Women (n = 19)
Honest	68.2%	72.2%	80.9%	94.7%
Lie/Steal	31.8%	27.8%	19.1%	5.3%

Result 4: There is no gender effect for the moral costs of lying or stealing.

Result 5: Women steal less frequently than they lie.

5. Conclusion and Discussion

Lying and stealing are immoral actions disturbing social interactions and harming economic agents in various ways. We found a variation in the rate of immoral action between lying and stealing when all incentives and the risk of consequences from immoral actions were kept constant. Results suggest higher intrinsic costs associated with stealing compared to lying. Recent studies focus on self-justification as a main determinant of intrinsic costs of immoral behavior. We conclude, in line with these studies, that the authority receiving the immoral act provides participants with a potential self-justification. If someone is dishonest to someone else, the victim has the opportunity to convict the liar. This (possibly unrealistic) opportunity might be operationalized by liars to justify their immoral behavior. However, removing this authority leaves agents with less self-justification and increases their intrinsic costs of immoral behavior.

Focusing on the extent of lying in our experiment, the results are comparable to other studies using a die-rolling task with observable outcomes. Kocher et al. (2018) reported between 31% and 41% of participants lying under the same experimental conditions. Comparable results were also obtained by Gneezy et al. (2018), who did not use die-rolling, but rather a related task with observable outcomes. They found dishonesty levels between 26% and 33%. In contrast, for a theft task, different levels of stealing were reported. The proportion of thefts in our sample was more comparable to those elicited by Gravert (2013) with a similar design, i.e. randomly determined outcomes. However, the rate of theft in the studies applying the task of Mazar et al. (2008) was higher, ranging between 30% and 60% (Friesen & Gangadharan, 2013; Gino & Pierce, 2009; Shu & Gino, 2012). Gravert (2013) provided evidence for this difference, namely that the effort made in the classical theft task seems to be responsible for the higher levels of theft.

A further comparison of our results can be made regarding the gender difference in lying and stealing. As we did not find evidence for a statistically significant gender difference for the amount of lying, we contradict findings of other researchers (Fosgaard, Hansen, & Piovesan, 2013; Grosch & Rau, 2017; Houser et al., 2012; Kajackaite & Gneezy, 2017). Nevertheless, the gender difference in honesty is a matter of discussion, as there are also studies that rejected the hypothesis of gender differences (Childs, 2012; Gylfason et al., 2013; Kajackaite & Gneezy, 2017). Our results support the latter studies; however, the tendency of the gender difference we observed was in line with predictions. In contrast, previous studies on stealing indicate a weak gender difference in stealing (Friesen & Gangadharan, 2013; Gravert, 2013). Indeed, our results tend in the direction that women steal less than men; however, they support the weak correlation found in the literature. Consequently, we contribute to the insights about gender differences regarding intrinsic costs of immoral behavior by finding evidence that women have more difficulty self-justifying stealing compared to lying.

The results obtained in this study could be used as a starting point for future investigations regarding moral costs of lying and stealing. It might be a worthwhile approach to apply our comparison of lying and stealing to the theft task of Mazar et al. (2008). Since Gravert (2013) reported that stealing varies from a die-rolling task to an effort task where stealing is possible, it might be feasible to investigate whether the different moral costs of lying and stealing are maintained in an effort-based framework. Furthermore, framework conditions for decision problems could be stylized to reflect applied decision situations which allow for immoral behavior. For instance, an interesting context could be a tax avoidance framing where participants have to report income and costs (lying) or have to pay the respective tax on their own (stealing). It could also be helpful to investigate the association of effort and intrinsic costs as well as moral compensation for lying and stealing in more detail.

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Appendix

A.1 Instructions for the experiment (*Lying* condition)

[The instructions were distributed in print. The task was completed on the computer.]

General instructions

Welcome to today's experiment.

Please keep quiet throughout the experiment and follow the experimenter's instructions. Please don't talk unless asked to talk.

If you have any questions, raise your hand. The experimenter will come to you and answer your questions confidentially. Please turn off your mobile devices and stow them.

Participants who fail to comply with these instructions will have to leave the room and will only be paid €2.

Task

Every participant in this room will see a video which shows a six-sided die being rolled. Each outcome (⚀, ⚁, ⚂, ⚃, ⚄, and ⚅) is equally likely to occur.

The die is rolled for each participant independently of the others. That is, the die is not rolled once for all participants, but for each participant individually.

You must remember the outcome of your throw and enter it subsequently into a field on your computer screen.

The number that you enter determines your share of €10. This share is your compensation from this experiment.

Number entered	Your share	Remainder
'1'	2 €	8 €
'2'	4 €	6 €
'3'	6 €	4 €
'4'	8 €	2 €
'5'	10 €	0 €
'6'	0 €	10 €

Payment

After the experiment, you will answer a number of questions. Your answers can earn you additional money.

You will receive your compensation at the end of the experiment in return for your numbered badge. In addition to your compensation from the task, you'll receive a fixed €4 payment.

You will be paid confidentially. Participants will be called out individually to go into the reception room.

Instructions for the experiment (*Stealing* condition)

[The instructions for the *Stealing* condition are identical to those for the *Lying* condition except for the section 'Task' and 'Payment' which reads as follows:]

Task

Every participant in this room will see a video which shows a six-sided die being rolled. Each outcome (⚀, ⚁, ⚂, ⚃, ⚄, and ⚅) is equally likely to occur.

The die is rolled for each participant independently of the others. That is, the die is not rolled once for all participants, but for each participant individually.

You must remember the outcome of your throw and open the envelope in your cabin afterwards.

The number that you remember determines your share of €10. This share is your compensation from this experiment. You will find €10 in €2 coins in the envelope.

Number entered	Your share	Remainder
'1'	2 €	8 €
'2'	4 €	6 €
'3'	6 €	4 €
'4'	8 €	2 €
'5'	10 €	0 €
'6'	0 €	10 €

Please remove your determined share from the envelope and subsequently close the envelope. This part of the experiment is then finished.

The envelope will not be collected immediately and you do not have to submit it at the end of the experiment. Please leave the envelope in your cabin. We will collect the envelopes once all participants have left the laboratory.

Payment

After the experiment, you will answer a number of questions. Your answers can earn you additional money.

You will receive your compensation for the additional tasks at the end of the experiment in return for your numbered badge. In addition to your compensation from the tasks, you'll receive a fixed €4 payment. This payment is independent from the already completed payment from the die-rolling task.

You will be paid confidentially. Participants will be called out individually to go into the reception room.

Comprehension questions

[Comprehension questions are identical for both conditions. In *Stealing* participants are asked to answer the questions for a hypothetical scenario in which they have to enter die-rolling outcome in the computer.]

Participants cannot proceed until they have answered 1 – a, 2 – 6, 3 – 4, and 4 – 8.

1. What is your task?

a. To enter the displayed number that you have memorized
b. To enter a different number than the displayed number that you have memorized
c. To enter an arbitrary number

2. Suppose you see a ⚀ and you enter a '3.' How many euros do you earn?

___

3. Suppose you see a ⚀ and you enter a '2.' How many euros do you earn?

___

4. Suppose you see a ⚀ and you enter a '4.' How many euros do you earn?

___

A.2 Picture of a marked envelope with and without UV light

A.3 Protected Value questions

What is your opinion on lying for one's own benefit?

I find this …

Not at all praiseworthy	1–2–3–4–5–6–7	very praiseworthy
Not at all shameful	1–2–3–4–5–6–7	very shameful
Not at all acceptable	1–2–3–4–5–6–7	very acceptable
Not at all outrageous	1–2–3–4–5–6–7	very outrageous
Not at all blameworthy	1–2–3–4–5–6–7	very blameworthy
Very immoral	1–2–3–4–5–6–7	very moral

Honesty is something …

… that one should not sacrifice, no matter what the (material or other) benefits.
Strongly disagree 1–2–3–4–5–6–7 strongly agree

… that cannot be measured in monetary terms.
Strongly disagree 1–2–3–4–5–6–7 strongly agree

… for which I think it is right to make a cost–benefit analysis.
Strongly disagree 1–2–3–4–5–6–7 strongly agree

… about which I can be flexible if the situation demands it.
Strongly disagree 1–2–3–4–5–6–7 strongly agree

… which is about things or values that are sacrosanct.
Strongly disagree 1–2–3–4–5–6–7 strongly agree