

# Trust the Lies: Moral Self-Licensing and (Dis)Honesty\*

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**Abstract** I examined in the laboratory how the timing of the opportunity to donate to a charity affects the likelihood of behaving dishonestly in the present. The experiment consists of two stages: the first is to self-report the number of a die roll, which gives the subjects the opportunity to cheat and to remain undetected at the same time. Second, subjects can donate a certain amount of a potential jackpot to a charity. The treatment groups differ in the order of the two stages, and thus by the time when subjects get the information about the opportunity to donate. The approach is analogical to an experiment conducted by Cojoc & Stoian (2014), but was expanded by a new time of donation and the opportunity to reconsider the decision about the donation amount. I find that subjects cheat less if they have the opportunity to donate to charity before the dice rolling task. I also find that subjects end up donating more to charity when they can donate before the task. Nevertheless, there is no clear evidence for psychological phenomena like moral self-licensing or conscience numbing related to one's subconscious.

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## **1 Introduction**

Who has never lied? - It is difficult to imagine even one individual saying yes. Dishonest behavior is simply too prevalent in day-to-day life, and also in a wide range of economic contexts. Thus, many experimental studies have researched lying as the most familiar form of unethical conduct. Experiments often show high evidence for lying, but do not provide any answers about why people act like this. So how do individuals overcome all the ethical uncertainties that social life provides, and what are the reasons that people engage in unethical behavior, and trust their lies?

Typically, guilty individuals or individuals who make a morally questionable decision derive confidence and ease their conscience through good deeds and moral behavior. For example, sinners searching for repentance help in soup kitchens, volunteer in community projects, or donate to people in need. Polluting companies pass on their responsibility by giving money to environmental causes. Even the fundraising models of religions (Ekelund et al., 1992; Kuran, 1996) and charitable organizations (Hibbert et al., 2007) are built on the individuals' search for atonement. Modern social psychology gives such phenomena a name: moral licensing or cleansing. These concepts explain the compensation of immoral conduct, and therefore a negative effect on the self-esteem, by good or ethical corporate deeds (Dunning, 2007; Merritt et al., 2010). That means that the future opportunity to behave well, leads individuals to unethical behavior in the present or vice versa. Researchers have empirically demonstrated this phenomenon in different fields and under various circumstances over the last decade. For example, Monin & Miller (2001) showed moral licensing within the field of political correctness, and forced participants in role plays to demonstrate prejudice against African-Americans. It was revealed that subjects who conformed to social norms, were freed from the anxiety to violate these norms later when making a morally ambiguous decision. Similar findings appeared in voicing support for Barack Obama and John Kerry before the 2008 presidential election (Effron et al., 2009). In another domain, research has demonstrated moral licensing in consumer behavior. Khan & Dhar (2006) showed that individuals in purchasing decisions who imagined doing something altruistic (e.g., community services) were more likely to chose frivolous goods or luxury items without feeling self-indulgent or guilty. Moreover, studies have also shown that individuals behave strategically - meaning that opportunities to act morally were selected due to the attempt to earn moral credentials when anticipating a morally dubious action (Bradley-Geist et al., 2010; Merritt et al., 2012). More

similar to my experiment and similar in content, Sachdeva et al. (2009) found connections between one's own moral account and charitable givings. Participants were therefore requested to describe themselves with either morally positive or negative trait words, and were given the opportunity to donate money to charity afterwards. The results showed that subjects whose morality was harmed declared higher donation amounts than subjects whose morality was amplified.

With such a theory in mind, many concerns and questions arise: Do individuals always try to balance their moral account? Are moral choices really historically-dependent? If initial unethical behavior influences an upcoming moral choice in a positive manner, does the same principal apply the other way around? Or are there other effects beside the licensing effects that lead individuals to behave differently and not that predictably?

To answer these questions above, I designed a two stage experiment in the computer laboratory. In doing so, the first stage was mainly inspired by the pioneering design of Fischbacher & Föllmi-Heusi (2013) who asked subjects to report a privately observed value of a die roll, which determines a direct payment. They compared the payoff distribution of the experiment with a normal distribution, which would have resulted in truthful reported outcomes, to receive evidence of lying. Other surveys, for example, have investigated lying within a classic sender-receiver model (Gneezy, 2005; Erat & Gneezy, 2012). In the second stage, subjects were offered the opportunity to donate a certain amount of a potential payoff to Doctors Without Borders. In relation to the research about moral licensing, and some fields that have already been mentioned, I try to detect same effects in the interaction between dishonesty and charitable donations. The rest of the paper is organized as follows. The next section describes the experimental design. Afterwards, Sect. 3 explains the predictions generated by my hypotheses related to the moral self-licensing theory. Sect. 4 presents the main findings on dishonesty and donations, while the last section concludes and addresses some limitations of the experiment as well.

## **2 Experimental design**

The experiment took place on two consecutive days (21st and 22nd of June 2016) in a computer room at the University of Passau and was programmed and conducted with the software z-Tree by Fischbacher (2007). It was carried out alongside one other experiment with a similar topic and was the second of the two to be carried out. Participants were

recruited via social networks, posters and for the most part at the beginning of lectures and the experimental sessions itself. Overall, I ran ten sessions with a total number of 165 participants. 63.6 % were female, and the average age of the participants was 21.9 (comparatively young). 30.3 % of them majored in Business Administration or Economics, while another 30.3 % majored in International Cultural and Business Studies.

At the beginning of each session the participants were informed about general instructions regarding the behavioral guidelines in an experimental setting. The subjects were not allowed to talk, were informed about the anonymous data collection and were told to behave when questions arose. First, they participated in Wagner & Zauke's (2016) experiment that was conducted in the first half of the sessions.<sup>1</sup> Afterwards, subjects were shown instructions for my "Trust the Lies" experiment.<sup>2</sup> Here it was specifically recognized and orally announced that all the participants would now play for real money and that the game would be played only once.<sup>3</sup> The experiment lasted approximately five to seven minutes and had basically two stages. In the first stage subjects could win a lottery jackpot of 10 euros, out of which they could donate in the second stage any amount to the organization Doctors Without Borders. Per session only one subject could win and only had to donate if he or she won. The subjects who did not win did not have to donate. Winners donated on average 4.9 euros. In the first stage the subjects were asked to roll a dice three times to check if it was a fair dice. Afterwards they were told to roll the dice a fourth time and to self-report the outcome of the roll in the computer. Subjects rolled the dice in an unobservable box, which provided them with a possibility to defraud. Based on the number rolled, the subjects received lottery tickets. If a subject reported a three, he or she received three tickets, and so on. The higher the number rolled, the more tickets the subject would get and the higher the probability to win the jackpot of 10 euros. The first stage of the experiment ended when a subject reported a rolled number. In the second stage, participants were informed that they would have the opportunity to donate a part of their potential jackpot from the lottery in the first stage to Doctors Without

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<sup>1</sup> The unique experiment conducted by Wagner & Zauke (2016) was aimed at trying to figure out whether an actively redistributing state prevents a costly revolution of the poor in case of high inequality in the society. This ultimate game mainly focused on altruism, or egoism in a multiplayer setting, whereas my "Trust the Lies" experiment focused solely on history dependent moral decisions. Therefore, there should be no concerns about effects between the different experiments in subjects' behavior.

<sup>2</sup> The most important instructions, decision screens and questionnaires used in the experiment can be found in Appendix A.

<sup>3</sup> In contrast to all other experiments conducted in the seminar "Experimental Economics", this experiment offered its participants real money instead of sweets and pastries. This procedure is advisable because it is to be expected that subjects behave totally different in a donation decision without a real monetary incentive.

Borders. After subjects entered a specific amount between 0 and 10 euros, the computer randomly chose the winner of the jackpot of 10 euros with a probability depending on the lottery tickets each subject received in the first stage, and included their individual donation decision. After the lottery draw, the computer displayed for every subject if he or she had won the jackpot in the first stage (either 0 or 10 euros) and the final payoff, which was equal to the jackpot in the first stage, minus their individual donation. Then subjects were instructed to answer a questionnaire concerning their age, gender, degree program and other relevant questions for the experiment. They also were told to sit quietly at their computers until everyone finished and the experimenter officially announced that the experiment was over. The experiment ended with the payment to the subject that won the jackpot. This payment was made in a separate room, next to the computer lab, unattached from all other participants and the experimenter.

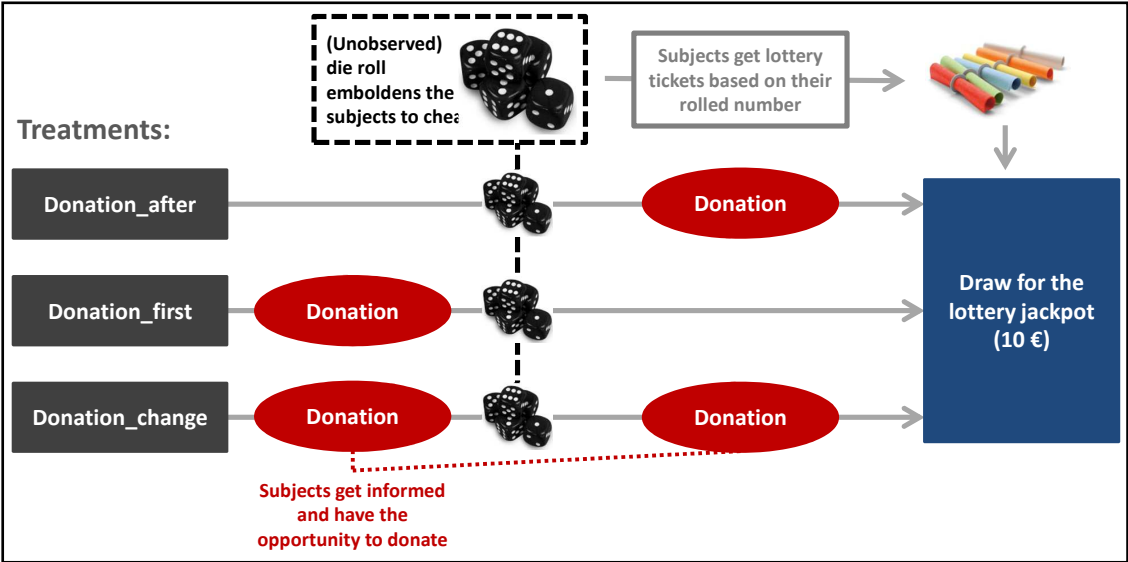


Fig.1: Graphic illustration of the experiment and the different treatments

Participants played one of three treatments. Fig. 1 graphically illustrates the experiment and the different treatments. The treatments mainly differed in the order of the two stages and therefore in the time in which the subjects were informed of and had the opportunity to donate. 51 subjects took place in the Donation\_after treatment, 66 in the Donation\_first treatment and 48 in the Donation\_change treatment. In the Donation\_after treatment the subjects first were informed about and had the opportunity to donate after the die roll. Whereas the other two treatment groups already had the opportunity to donate before the die roll, the Donation\_change treatment group could change their predetermined donation decision afterwards.

### 3 Hypotheses

In general, dishonest- and donation behaviors were discussed extensively in the literature and have been investigated by many papers.<sup>4</sup> But mostly separately, and usually not at the same time. My approach can be seen as an extension to the experiment conducted by Cojoc & Stoian (2014), who are one of very few exceptions. They analysed the Donation\_after situation for subjects who knew, compared to subjects that did not know about the opportunity to donate in the second stage. On the one hand, Cojoc & Stoian (2014) find that subjects who knew about the opportunity to donate behaved more dishonestly than subjects who did not. But on the other hand, the results show that these subjects also donate less to charity. To explain their findings they used a moral licensing assumption, as well as a new proposed mechanism, called conscience numbing. Here, subjects are numbed by initial violations of social norms and are more likely to execute additional transgressions. It appears that this effect has a stronger impact in treatment and exceeds the licensing effect. Otherwise Gneezy et al. (2014) present contradictory findings, and thus strongly support the moral licensing theory. The results of their experiment show that subjects who knew about a following donation opportunity behaved less honestly compared to those who did not know. It also turned out that individuals who initially made an immoral choice, gave more to charity than those who behaved morally correct. My extension of the research is to vary the order of the donation opportunity and the possibility for fraud in order to identify historically-dependent moral choices. All subjects have the opportunity to donate, but unlike the previous experiments the subjects in my experiment do not only differ in the awareness of it, they also can actively donate ahead of time. It can be assumed that actions speak louder than words, and thus subjects that are not only provided with information about the opportunity to donate in the second stage, but could actively donate right at the beginning of the experiment, would feel far more licensed to behave dishonestly afterwards.<sup>5</sup> Therefore, I predict that subjects adjust their behavior in accordance with the findings of Gneezy et al. (2014), and in order to balance their conscience (moral self-licensing). The following assumptions about the subject's dishonesty and donation behavior in the experiment are established as hypotheses:

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<sup>4</sup> For example - just to mention a few, the papers of Gneezy (2005), Mazar & Ariely (2006), Mazar et al. (2008), Lundquist et al. (2009), and Sutter (2009) looking at dishonesty from an economic perspective. Andreoni (2006) provides a summary of research from the prior 25 years of study on charitable giving.

<sup>5</sup> Papers on memory psychology demonstrate a clear memory advantage of a self-performed action compared to an imaginary prospective action. Zimmer & Cohen (2001) offer a good overview about the recent literature.

**Hypothesis 1** Subjects who have the prior opportunity to donate to charity will behave more dishonestly than subjects who first get to know the opportunity to donate later on.

**Hypothesis 2** Subjects who have the opportunity to donate afterwards will give more money to charity than subjects who have the prior opportunity to donate.

**Hypothesis 3** Subjects who have the opportunity to adjust their predetermined donation decision afterwards will give less than set at the beginning.

#### **4 Results and Discussion**

In the upcoming analysis of the hypotheses, the treatment groups Donation\_first and Donation\_change are combined. This method is recommended, because almost no subjects in the Donation\_change treatment took the opportunity to change their predetermined donation decision afterwards. In total only four subjects changed their prior decision. Two subjects adjusted their former donation amount upwards, while the other two subjects revised downwards. Even taking into account the precise donation changes, the difference between the average donations before and after the die roll is not relevant for further discussion (not statistically significant).<sup>6</sup> For these subjects also no differences nor noticeable stochastically distortions can be observed in the outcome of the die roll. This leads to the conclusion that no reliable statement within the Donation\_change treatment, and therefore for Hypothesis 3, can be made. Thus, the first finding is that Hypothesis 3 cannot be addressed in a suitable way, and can neither be confirmed nor rejected. It seems like the opportunity to change the donation decision had no measurable impact on the subjects, or failed to work at all. Under these conditions, I combined the above-mentioned treatment groups, Donation\_first and Donation\_change, into one single Donation\_first treatment group. This procedure is possible, because both groups are treated in the same way - with the prior opportunity to donate.

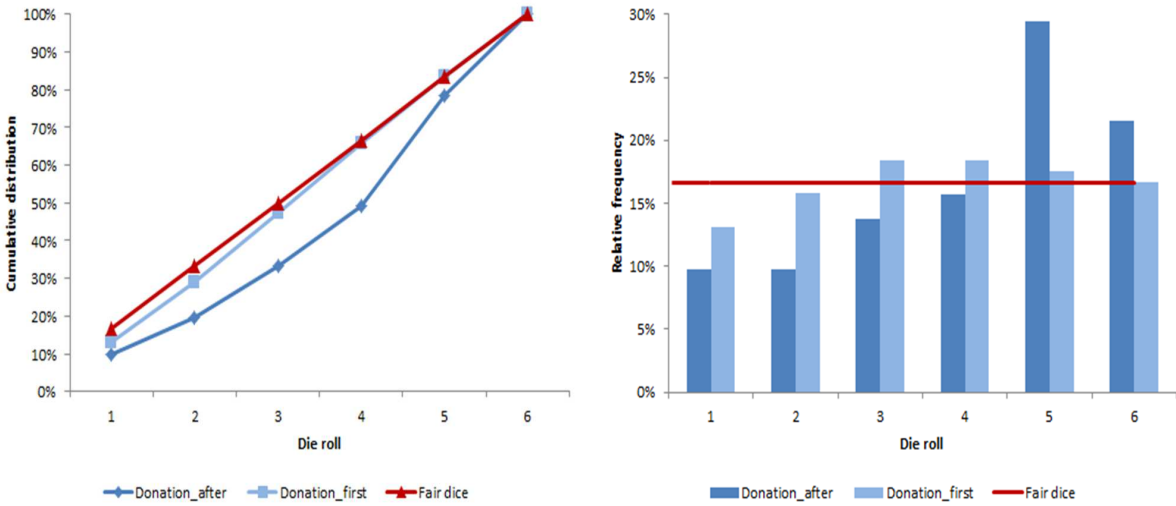
##### *4.1 Dishonesty*

First, I analyze how truthfully the subjects acted in the first stage of the experiment, the die rolling task. I wanted to discover the subjects cheating, but without deceiving or exposing the cheaters in person. Thus, I gave them the opportunity to cheat undetected. This approach

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<sup>6</sup> On average, subjects in the Donation\_change treatment first donated 5.2 euros. After the die roll, 91.7 % of them decided not to change their predetermined decision, and thus the final average donations remained nearly the same and only slightly decreased to 5.1 euros. This difference is statistically not significant in a non-parametric paired-sample Wilcoxon signed-rank test ( $z = 0.000$ ,  $p\text{-value} = 1.000$ ). The table of the Wilcoxon signed-rank test is available in Appendix B, Table 4.

provides uncertainty about which subjects behaved honestly and dishonestly, and gave me the possibility to use the average group behavior in my analysis. The first stage was designed to embolden subjects to cheat with the help of different settings and statements. Notably, subjects were not observed and did not have to prove their rolled number. In regard to this, subjects were also instructed to roll the dice three times before they reported their final result in order to establish if it was a fair dice. Under this pretext, the additional throws should have given them further assurance that they really were unobserved, and also helped them feel more comfortable with the experimental setting. All these circumstances, that allow an entirely random performance reporting, should have encouraged at least some subjects to cheat. Theoretically, especially unlucky subjects with low numbers in the decisive die roll could be more likely to justify reporting fictional higher numbers, or better numbers from the three test throws more easily. However, I am primarily focused on the differences in dishonesty between the varying treatments, and therefore between subjects who could donate before the die roll and those who could first donate later on.



(a) Cumulative distribution function: Probability of a fair dice (Control) in red; Treatment Donation\_after in dark blue; Treatment Donation\_first in light blue

(b) Bar chart: Control (fair dice) in red, solid line; Treatment Donation\_after in dark blue, left; Donation\_first in light blue, right

Fig.2: Distribution of the numbers which the subjects reported in the die roll

Fig. 2 displays the relative frequency of the numbers which the subjects reported in the dice rolling task, on the one hand cumulated and on the other binomial with bar plots. In both, Fig. 2 (a) and (b), the solid red line can be seen as a control function, because it shows the uniform distribution of a fair dice with the probability 1/6. This distribution should occur when all subjects have reported their performance honestly and truthfully. But as Fig. 2 (a) indicates,



the cumulative distribution function of the participants in the Donation\_after treatment is clearly shifted to the right, and thus stochastically distorted compared to the function of the subjects in the Donation\_first treatment, which is almost identical to the uniform distribution (Fair dice). In Fig. 2 (b) the difference becomes even clearer. Subjects in the Donation\_after treatment reported to a noticeable degree fives and sixes, and revealed first-order stochastic dominance in these values. They reported rolling on average 4.1, while subjects in the Donation\_first treatment reported on average 3.6. A non-parametric two-sample Mann-Whitney test ( $z = 1.774$ ,  $p\text{-value} = 0.076$ ) shows a statistically significant difference between the performance of the two treatment groups.<sup>7</sup> Therefore the hypothesis that subjects in the Donation\_first treatment behaved less honestly than subjects in the Donation\_after group, can be rejected at a 10-percent significance level. In the light of the above, I consider the following result, falling short of Hypothesis 1: Subjects who have the prior opportunity to donate to charity behave on average more honestly than subjects who first get to know the opportunity to donate later on.

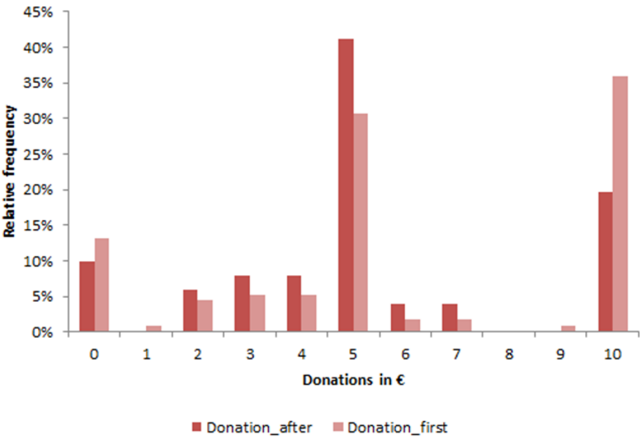


Fig.3: Distribution of donations: Treatment Donation\_after in dark red, left; Donation\_first in light red, right

#### 4.2 Donations

I continue with the results on the subjects' charitable givings to address the remaining hypothesis about subjects' willingness to donate discussed in the third section of the paper. Fig. 3 plots the relative frequency of the donation amounts the subjects chose to give to Doctors Without Borders if they had won the lottery jackpot. In the Donation\_first treatment more subjects donated their entire potential payoff to charity than in the Donation\_after treatment. But on the other hand, there are also more subjects in the Donation\_first treatment

<sup>7</sup> The table of the Mann-Whitney test is available in Appendix B, Table 2.

group who did not give any amount of money to charity. In the Donation\_after treatment most people gave exactly half of their potential jackpot. Generally there was a strong tendency in both treatment groups to donate either the minimum, maximum, or the middle. Whereas the Donation\_first subjects stochastically dominated the extremes on both ends, the Donation\_after subjects dominated nearly all other donation amounts. On average, Donation\_after subjects donated 5.2 euros out of 10 euros (maximum). In comparison, Donation\_first subjects donated 5.9 euros. Indeed, the difference is not statistically significant in a non-parametric two-sample Mann-Whitney test ( $z = -1.255$ ,  $p$ -value = 0.209).<sup>8</sup> Thus, the hypothesis that subjects in the Donation\_after treatment would give more to charity than subjects in the Donation\_first treatment, can neither be rejected nor confirmed at a suitable significance level. This means that while there is a relative high numeric difference between the average donations of the two treatment groups, and a finding that subjects in the Donation\_first treatment gave more to charity than Donation\_after subjects, no reliable statement related to Hypothesis 2 can be made. The mean difference which has been found could also have occurred by chance alone, and not by a systematic difference between the two groups.

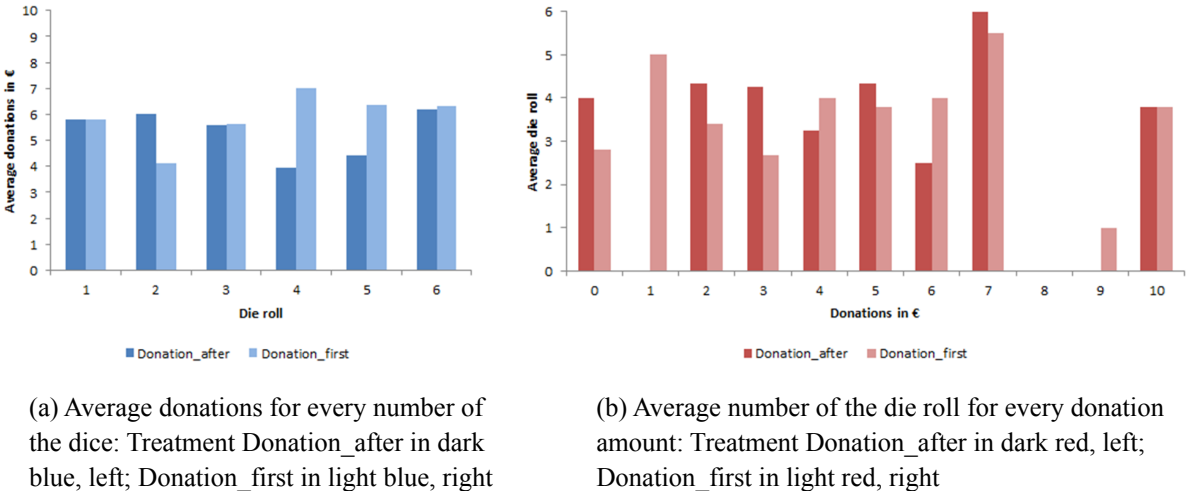


Fig.4: Bar chart of the two independent variables donations and outcome of the die roll

### 4.3 Moral Self-Licensing

After reviewing the results on dishonesty and donations separately, it is of prime importance to investigate whether or not both variables interact and influence each other in a certain manner. The aim of this paper is to prove a moral licensing effect in both treatment groups

<sup>8</sup> The table of the Mann-Whitney test is available in Appendix B, Table 3.

within the experimental setting, and thus historically-dependent moral choices of the subjects. To draw a conclusion from the main objective, it is necessary to target individuals that behaved differently than the rest of the subjects, and particularly strikingly in the extremes. These may be either extraordinarily high/ low reported numbers in the die roll, or very small/ large donations to charity. Fig. 4 (a) plots the average donations for every single number of the die roll for the two treatment groups Donation\_after and Donation\_first. At first glance, subjects in the Donation\_first treatment who reported high outcomes (fours, fives, and sixes), seem to have donated higher amounts as well. This behavior could be a first indication for moral self-licensing, because subjects that have donated large amounts to Doctors Without Borders, might have cheated and reported higher outcomes in the die roll by a licensed conscience. But this appearance deceives: there is no influence of the good deed in the form of a donation on the outcome of the die roll (dishonesty) nor is this the case the other way round. Within both treatment groups no significant differences appear comparing the average donations for every single number of the dice.<sup>9</sup> I also decomposed the average donations of the two treatment groups into three different clusters of high and low rolled numbers - but again, no significant differences occurred.<sup>10</sup> Fig. 4 (b) that shows the average outcomes of the die roll for all possible donation amounts, revealed also no distinctive features within the treatment groups. Subjects who gave nothing to charity reported similar performances in the die roll to subjects who donated their entire potential payoff. Anyway, there are no significant differences across all donation amounts or across the different treatments. In sum, there are no indications or trends that would confirm licensing effects within the Donation\_after and Donation\_first treatment.

Based on the findings from the previous sub-chapters, the exact opposite may be the case: looking at the previous results for donations and dishonesty in both treatment groups showed that Donation\_first subjects donated more to charity than Donation\_after subjects, and also reported significantly lower numbers in the die roll, thus behaving more honestly. Vice versa, Donation\_after subjects behaved less honestly, and gave less money. Those behavioral changes may correspond to Cojoc & Stoian's (2014) new proposed psychological mechanism of conscience numbing. They postulate that past violations of social norms numb one's

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<sup>9</sup> I controlled every difference of the donation means between the different numbers of the die roll within the treatment groups with the help of non-parametric two-sample Mann-Whitney tests, but no difference showed statistically significance on a suitable significance level. The various test outputs are available upon request.

<sup>10</sup> Fig.12 in Appendix C shows the different clusters and its average donations.

conscience, and make additional violations of social norms more likely. Hence, cheating and donating less can be seen as complements, and mutually dependent on each other. However, this effect can also not be proved, because the findings do not show clear evidence. As already mentioned, there is some indication, but differences between the treatment groups are not consistently significant, and could easily appear by chance. For this reason, again no clear answer can be given.

For further examination, Table 1 presents Tobit censored regressions of the subjects' donations (left part) and their reported performance in the die roll (right part). Using a Tobit censored model addresses the censoring from below and above in the dependent variable. This case occurs in both regressions: donations can only have values between 0 and 10 euros, while a die can only show values between 1 and 6. In contrast, ordinary least squares (OLS) regression will treat the upper limit of the variables as actual values. But when the variable is censored, such an approach can provide inconsistent estimates of the coefficients as the sample size increases.<sup>11</sup> In the columns (2) of both panels I also control for subjects' age and gender. Regressions on the subjects' charitable donations showed no significant effect of the outcome of the die roll, indicating that the reported number had no influence on the donation amount. The same can also be observed vice versa, thus indicating that the donation amount had no significant effect on the subject's performance in the die roll. Not all subjects who reported high numbers behaved dishonestly, so it is not possible to make a general statement about the interaction between dishonesty and charitable donations. But consequently these findings are again inconsistent with the moral self-licensing assumptions, and confirm also the absence of any licensing or numbing effects, because there is no significant interaction between the independent variables.

Before concluding, one additional result came to light. Although the experiment does not provide any evidence of licensing effects, subjects' donations and reported numbers of the die roll are nevertheless significantly influenced by the time of the donation itself. The Tobit censored regressions provide estimates for the effect of the times of the donation (`donation_first`) that are all statistically significant at a 10-percent significance level. Using the estimates in both columns (2), the effect of the donation date on the subjects' donations is positive (1.47), whereas the coefficient on the donation date for the reported numbers of the

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<sup>11</sup> See McDonald & Moffitt (1980), Long (1997), and Long & Freese (2006) for further information about problems that occur by using OLS regression with censored data.

die roll is negative (-0.62). These findings are also consistent with the results of the sub-chapters 4.1 and 4.2 that demonstrated the same direction of the effects within the Donation\_first treatment group.

**Table 1:** Tobit censored coefficients, standard errors in round brackets. \*, \*\*, and \*\*\* outline statistical significance at 10, 5, and 1 percent level. In the left part the dependent variable is donation and in the right part it is die\_roll. The dependent variable is described by the respective other variable, and the specifications in columns (2) control for age and gender. Donation\_first takes a value of 1 if the subject could donate and was informed about the opportunity to donate before the die roll, 0 if the subject was first able to potentially donate after the die roll. The panels in Table 1 apply for all 165 subjects in the experiment.

	(1) donation	(2) donation		(1) die_roll	(2) die_roll
<hr/>			<hr/>		
model			model		
die_roll	0.249 (1.09)	0.262 (1.16)	donation	0.0604 (1.34)	0.0638 (1.40)
donation_first	1.368* (1.69)	1.469* (1.83)	donation_first	-0.601* (-1.81)	-0.617* (-1.84)
gender		0.914 (1.17)	gender		-0.0975 (-0.30)
age		0.204 (1.30)	age		-0.0322 (-0.49)
_cons	4.626*** (4.04)	-0.554 (-0.15)	_cons	4.018*** (11.17)	4.777*** (3.15)
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sigma			sigma		
_cons	4.604*** (13.78)	4.550*** (13.78)	_cons	1.920*** (15.64)	1.918*** (15.64)
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N	165	165	N	165	165
R-sq			R-sq		
<hr/>			<hr/>		
t statistics in parentheses			t statistics in parentheses		
* p<0.10, ** p<0.05, *** p<0.01			* p<0.10, ** p<0.05, *** p<0.01		

## 5 Conclusions and Limitations

Cojoc & Stoian's (2014) conducted experiment showed that subjects that have information about a future opportunity to donate to a charitable organization behave less honestly, and also donate significantly less to charity. Their proposed novel mechanism conscience numbing appears to be rather stronger and outruns the moral licensing theory found in the psychology literature. My two stage experiment can be seen as an extension to their approach, but mainly focused on the usual moral licensing assumptions that were also affirmed by Gneezy et al. (2014), a paper created at the same time as the Cojoc & Stoian (2014) paper. I believed that actions speak louder than words, and that subjects that are not only provided with information about the opportunity to donate in the second stage, but could actively donate right at the beginning of the experiment, would feel far more licensed to behave dishonestly afterwards. Consequently, I assumed that licensing effects outweigh the others. My findings are

contradictory with that argument, and showed that subjects who have the prior opportunity to donate do not cheat more because of a licensed conscience. Also, subjects who can donate only after the unobserved die roll do not give more money to charity in order to cleanse their guilty feelings. In general, good and bad deeds do not interact, and there is no clear evidence for an exchange relationship in my experiment. Instead, the results may show a tendency for conscience numbing effects similar to the findings from Cojoc & Stoian (2014). The treatment groups seem to behave either completely ethically or unethically in both moral decisions. However, due to the lack of statistical significance in some results, the overall validity of the effect is missing. Nevertheless, future research should be endorsed to not investigate ethical behaviors separately. Moral decisions are in general far too complex to be analyzed in isolation, and there might be relevant links and significant interactions between ethical and unethical behavior that could be important for policies or institutions. To understand what causes people to deceive in a particular situation or moral dilemma, is crucial for making the right policy recommendations to decrease dishonesty, and stop people trusting their lies in everyday life.

Finally, some limitations of this experiment must be addressed. Although the experiment offered a monetary incentive for its participants, the subjects' behavior may have been distorted. Because of the experimental setup that only draws one winner of the lottery jackpot at the end of each session, the incentive was not as high as if every single participant could have received money. In a study such as this, dealing with a potential amount of money may result in different behaviors than if the subjects spent real tangible money. Secondly, the subject pool does not represent a cross section of the population at a certain time. In fact, the results are only valid for a student population that mostly differs in standard characteristics like age, social background and income. Also, the experimental design allows no conclusions about each individual's honesty. All findings are only based on average group behavior. It is not possible to subdivide the participants into honest and dishonest subjects. A design that can identify exactly who are the cheaters and who are not, or include a control group that is not able to deceive at all, may lead to more reliable statements about interactions between moral choices. These facts might explain the absence of licensing effects, and interactions between good and bad deeds. Future research might address these issues and reinvestigate the previously announced results using better incentives and an improved design.

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## Appendix

### A. Instructions, decision and questionnaire screens

Excerpts and examples of the most important screens from the experiment.

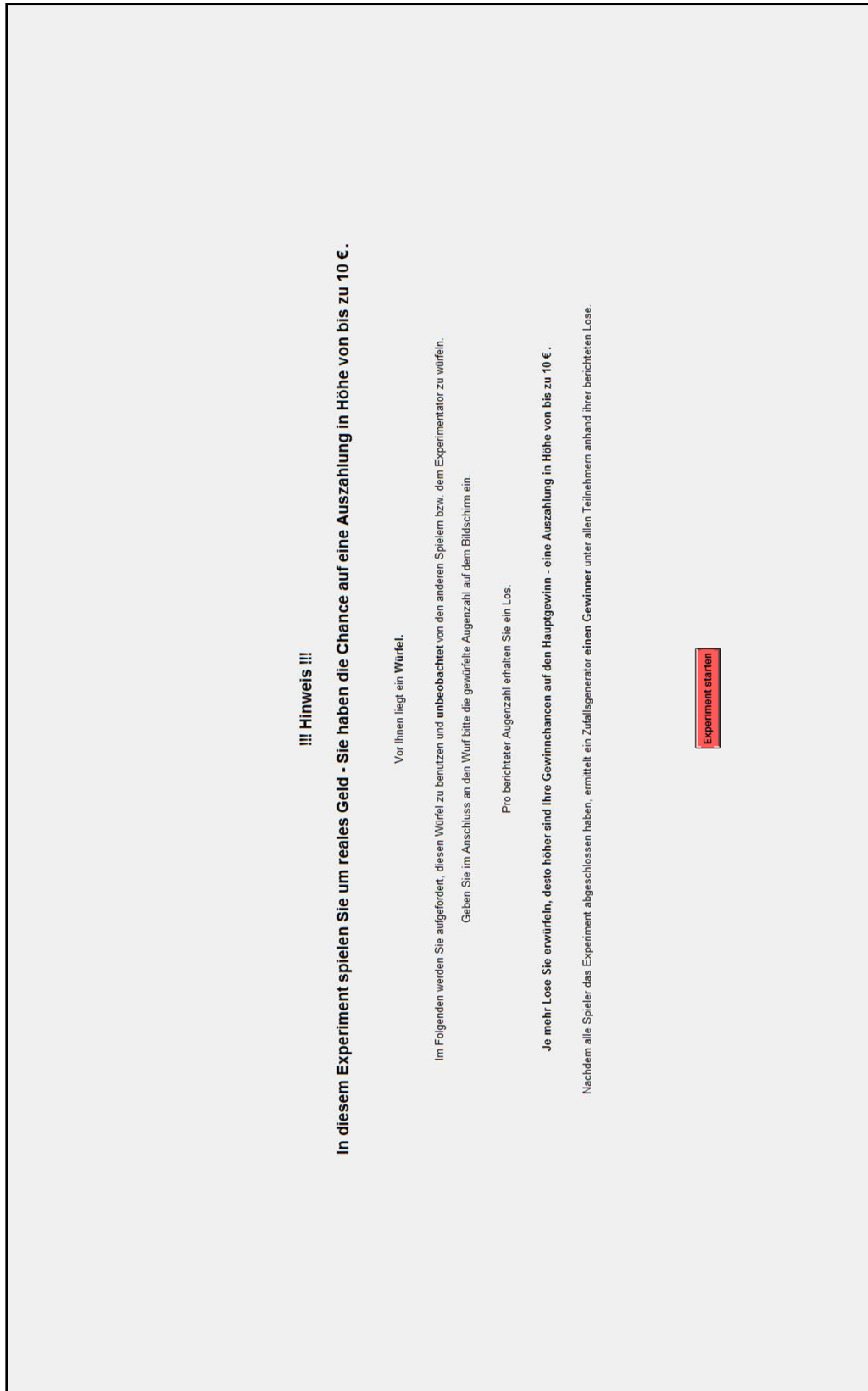
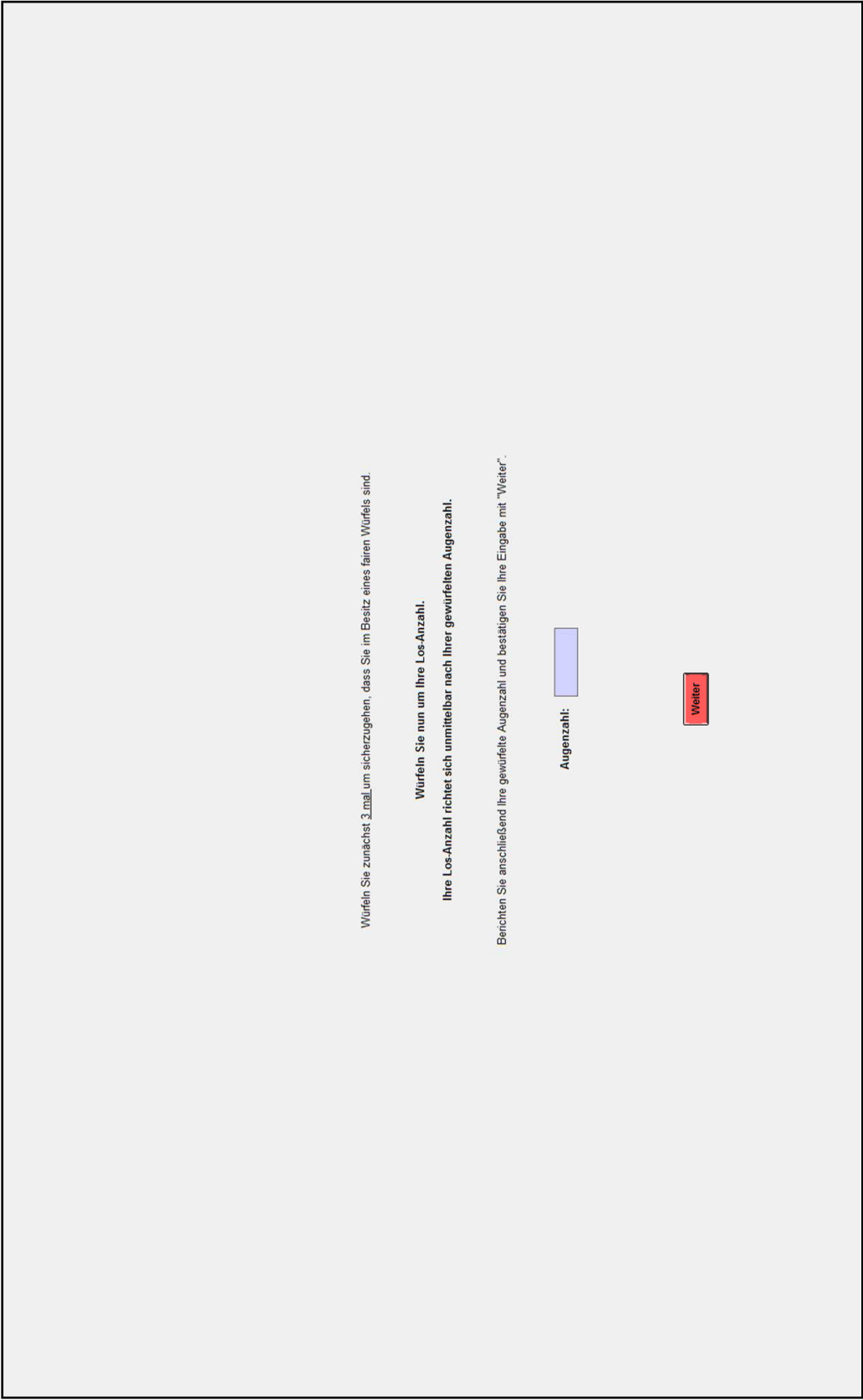


Fig.5: Instruction screen



**Fig.6:** Decision screen for the dice roll

Ihre Los-Anzahl: 6

Im Rahmen des Experimentes bietet sich Ihnen die einmalige Möglichkeit, einen Teil Ihres möglichen Gewinnes von 10 € an die karitative Organisation "Ärzte ohne Grenzen" zu spenden!

Sie dürfen dabei über die Höhe des Spendenbetrages frei entscheiden.

Die Spende ist nur zu entrichten, wenn Sie auch tatsächlich den Hauptgewinn von 10 € erhalten.

Entscheiden Sie sich jetzt!

Ja, ich möchte etwas von meinem möglichen Gewinn spenden.  
 Nein, ich möchte nichts von meinem möglichen Gewinn spenden.

Weiter

Fig.7: Donation decision screen

Ihre Los-Anzahl: 6

**Vielen Dank, Sie haben sich dazu entschieden etwas zu spenden!**

Ihr potentieller Gewinn beträgt 10 €, wie viel möchten Sie von diesem Betrag an die karitative Organisation "Ärzte ohne Grenzen" spenden?

Bedenken Sie dabei, dass der Betrag nur zu entrichten ist, wenn Sie tatsächlich den Hauptgewinn von 10 € erhalten.

Betrag:

Spendenbetrag in €, bitte auf eine Nachkommastelle angeben und mit einem "." trennen.

Fig.8: Donation screen

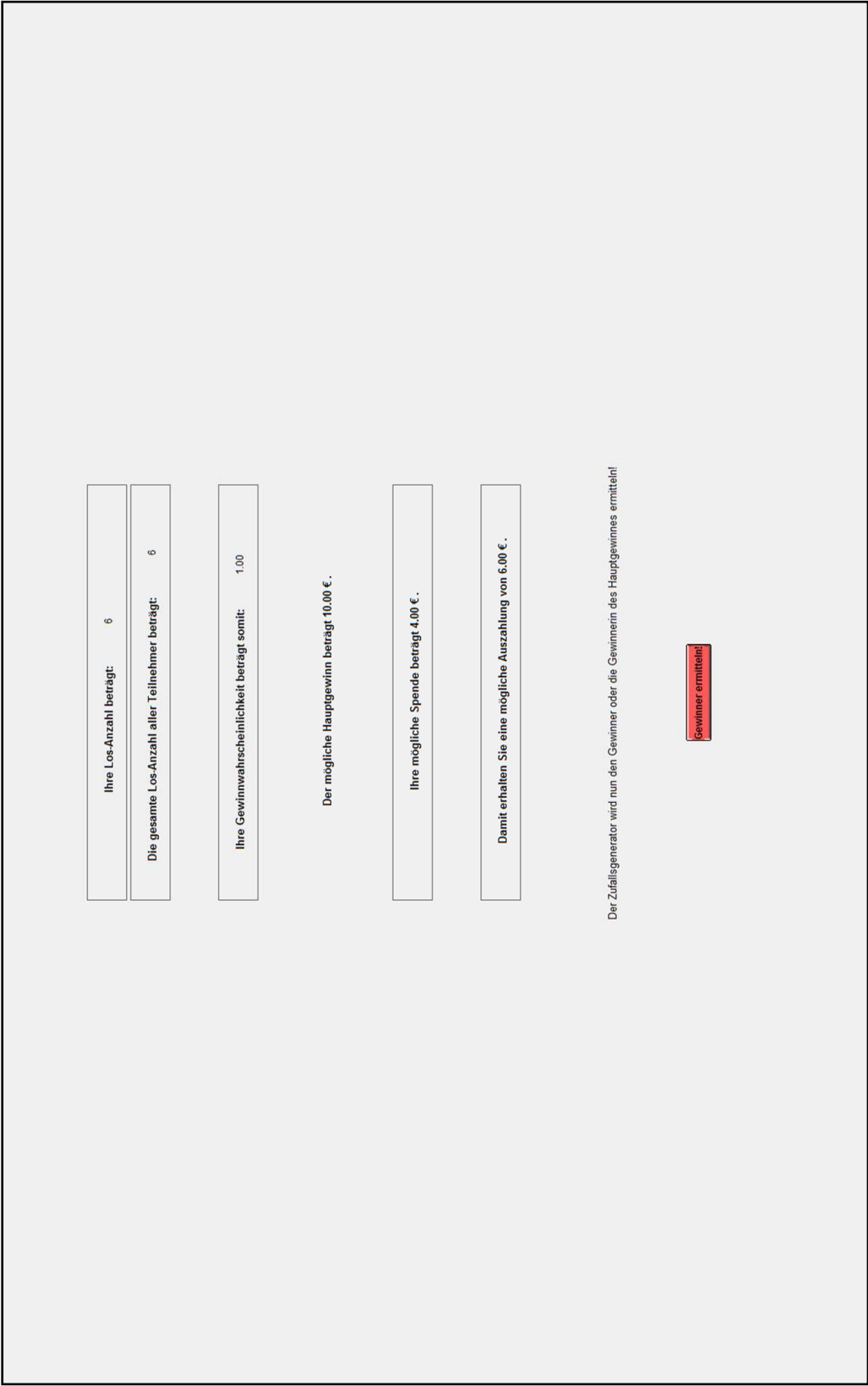
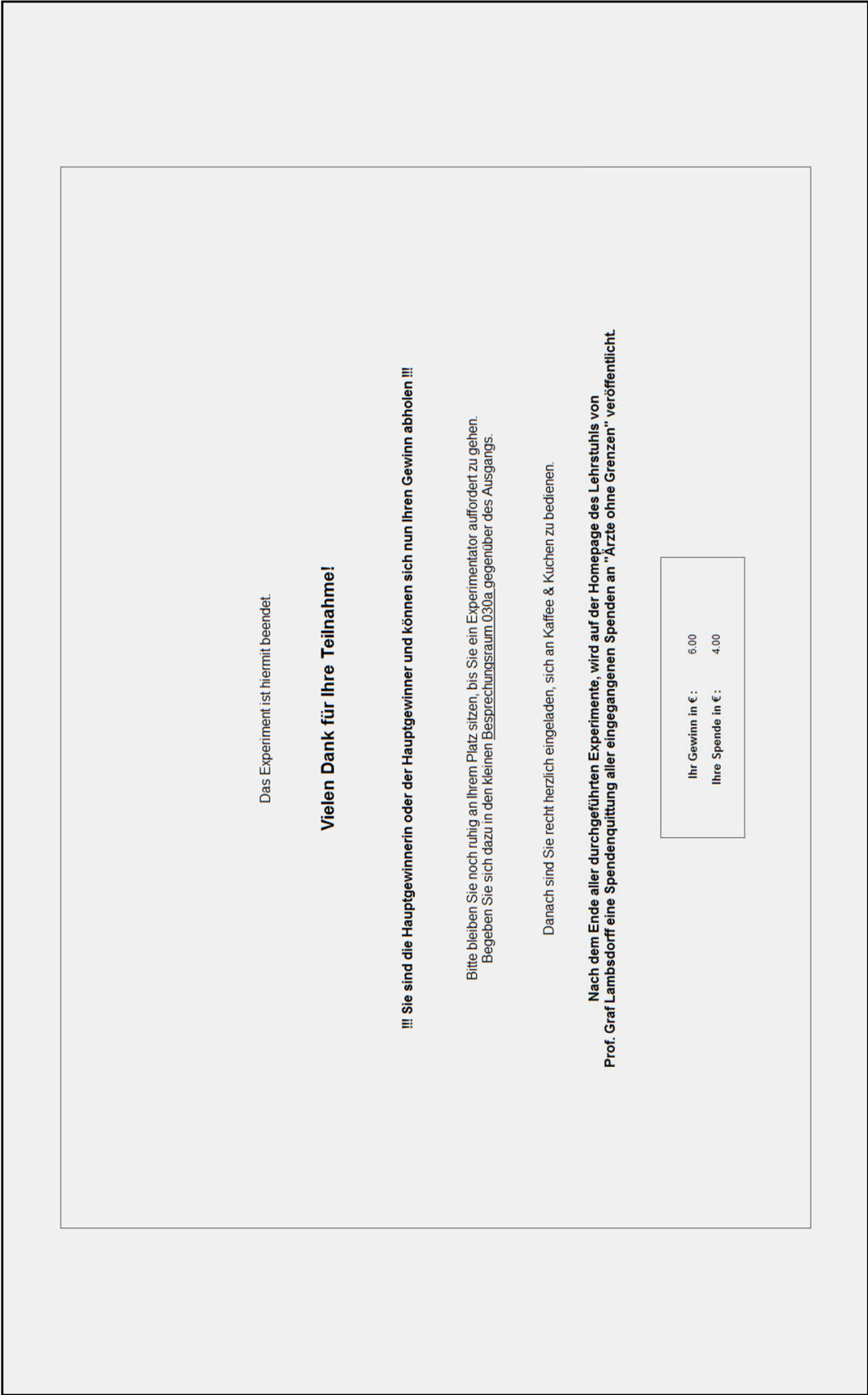


Fig.9: Performance- and potential outcome screen



**Fig.10:** Winning screen

## Fragebogen

Bitte beantworten Sie zum Abschluss die nachfolgenden Fragen. Ihre Angaben werden anonym ausgewertet und haben keinen Einfluss auf das Ergebnis.

Geschlecht	<input type="radio"/> männlich <input type="radio"/> weiblich
Alter:	<input type="text"/>
Studiengang:	<input type="radio"/> BWL/WL <input type="radio"/> Governance and Public Policy <input type="radio"/> Kwiw/European Studies <input type="radio"/> Medien und Kommunikation/Sprache und Text <input type="radio"/> Informatik/Internet/Computing <input type="radio"/> Lehramt <input type="radio"/> Rechtswissenschaft <input type="radio"/> Sonstige
Angestrebter Abschluss:	<input type="radio"/> Bachelor <input type="radio"/> Master <input type="radio"/> Staatsexamen <input type="radio"/> Promotion <input type="radio"/> Einen anderen Abschluss
Bitte geben Sie Ihre Platznummer ein.	<input type="text"/>
Haben Sie bereits früher an einem ähnlichen Experiment teilgenommen?	<input type="radio"/> ja <input type="radio"/> nein
Wenn Sie alle Fragen beantwortet haben, können Sie fortfahren, indem Sie auf 'Experiment beenden' klicken.	
<a href="#">Experiment beenden</a>	

Fig.11: Questionnaire screen

## B. Tables

**Table 2:** Two-sample Mann-Whitney test for the die roll in the Donation\_after and Donation\_first treatment

Two-sample Wilcoxon rank-sum (Mann-Whitney) test			
donation_f~t	obs	rank sum	expected
0	51	4728.5	4233
1	114	8966.5	9462
combined	165	13695	13695
unadjusted variance	80427.00		
adjustment for ties	-2438.94		
adjusted variance	77988.06		
Ho: dieroll(donati~t==0) = dieroll(donati~t==1)			
z = 1.774			
Prob >  z  = 0.0760			

**Table 3:** Two-sample Mann-Whitney test for the donations in the Donation\_after and Donation\_first treatment

Two-sample Wilcoxon rank-sum (Mann-Whitney) test			
donation_f~t	obs	rank sum	expected
0	51	3889.5	4233
1	114	9805.5	9462
combined	165	13695	13695
unadjusted variance	80427.00		
adjustment for ties	-5537.91		
adjusted variance	74889.09		
Ho: donation(donati~t==0) = donation(donati~t==1)			
z = -1.255			
Prob >  z  = 0.2094			

**Table 4:** Wilcoxon signed-rank test for the donations in the Donation\_change treatment

Wilcoxon signed-rank test			
sign	obs	sum ranks	expected
positive	2	93	93
negative	2	93	93
zero	44	990	990
all	48	1176	1176
unadjusted variance	9506.00		
adjustment for ties	-0.13		
adjustment for zeros	-7342.50		
adjusted variance	2163.38		
Ho: donation_change = donation_prechange			
z = 0.000			
Prob >  z  = 1.0000			



C. Figures

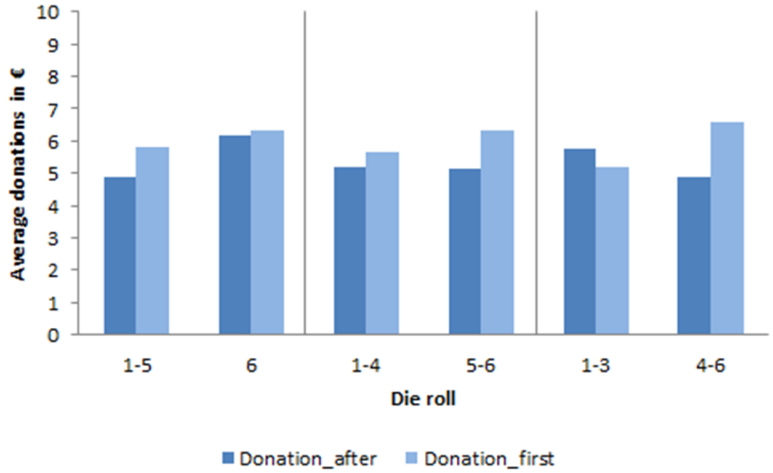


Fig.12: Average donations clustered in high and low numbers of the die roll: Treatment Donation\_after in dark blue, left; Donation\_first in light blue, right