Can a sense of entitlement increase stealing?

Christina Gravert
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September 1, 2012

Abstract

Are people more likely to steal when the payoff they deserve is determined randomly or when it depends on their performance in a difficult task? In this paper I investigate how the probability of stealing is affected by the way in which payoff is earned. After answering a short survey one group was asked to roll a die to determine their payoff, while the other group had three minutes to find matching numbers in a matrix task. Participants then paid themselves unobserved by the experimenter. I find that the participants who earned their payoff according to performance were three times more likely to take the (undeserved) maximum payoff than the participants in the random payment scheme. In contrast to previous findings in the cheating literature, stealing is an all-or-nothing decision rather than a trade-off between a slightly higher payoff and the desire to keep ones moral values intact. The results support the theory that unethical behavior is increased by a sense of entitlement, which is more pronounced when wealth depends on performance than on the roll of a die.

1 Introduction

With a small risk of getting caught it can be tempting for almost everyone to gain some money from over reporting business expenses, taking money from the coffee jar for buying a snack at the vending machine or bringing office supplies home for the kid’s schoolwork. While this might be no problem on the small scale it becomes problematic when millions of employees and taxpayers take a little extra. The US Chamber of Commerce estimates that employee theft costs businesses 40 billion dollars each year, ten times the annual value of street crimes in the US. According to a recent survey by Jack Hayes International retail employees steal 5.9 times the amount stolen by shoplifters (Jack L. Hayes International, Inc. 2012). For a typical organization this means losing 5 percent of its revenue to employee fraud (Association of National Fraud Examiners 2012). Increasing the number of in-store detectives and the fine for shoplifting might deter external criminals, but for many organizations such a tight supervision and hard punishment of their employees is neither desired nor feasible. In order for organizations to decrease employee fraud, they need to understand the mechanisms that drive this behavior. So the question is: In which situations are individuals most likely steal? In this paper I concentrate on a common self-serving mechanism, whereby stealing is justified by a sense of entitlement. An individual steals because

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he feels he deserves an additional compensation for his work, more than he receives from his employer by contract.

I use a simple experiment to find out whether it makes a difference on stealing if the deserved payoff was allocated by luck or if the participant needed to work for it by doing a search task. After filling out a survey students are randomized into two treatments, either the Random Income Treatment (RIT) where they roll an eight-sided die in front of the experimenter or the Performance Income Treatment (PIT) where they have three minutes to complete a matrix task by finding matching numbers, as found in Mazar, Amir & Ariely (2008). The outcomes are recorded openly to make transparent what the deserved payoff is. Afterwards students pay themselves privately by taking money from envelopes containing the maximum payoff and are asked to return any remaining coins in a second sealed envelope to a drop-off box. The difference between what they rightfully earned and what they payed themselves shows the level of stealing on an individual level.

Even in a very different context from stealing it has been observed that working for one's payoff, rather than receiving it as a windfall gain has made participants behave more selfishly due to a sense of entitlement. The feeling of entitlement is used as a justification for keeping their earnings. There are several papers in the experimental literature investigating the effect of earned versus randomly allocated money in relation to charitable giving in dictator games, either to another participant or to an outside charity (Hoffman, McCabe, Shachat & Smith (1994), Cherry, Frykblom & Shogren (2002), Cherry (2001), Ruffle (1998) and Oxoby & Spraggon (2008)). One of the first experimental papers on the difference between earned and unearned money is by Hoffman et al. (1994) where the authors measure self-regarding preferences in dictator and ultimatum games when the first-mover right is earned by scoring high on a general question test. They show that earning the right to divide the money between the two participants in the dictator game leads to lower allocations to the other party than when the money is freely provided. Also Erkal, Gangadharan & Nikiforakis (2011) find that participants in their experiment are less likely to distribute some of their payoff, when they have earned it in a real-effort encryption task which is set up as a tournament, rather than when they have received it based on pure luck. Part of this effect does however come from a self selection of self-interested individuals. Only the tournament winners are analyzed and they are most likely also the ones who have worked the hardest to earn the money. Nevertheless, this does not contradict that these individuals experience a stronger sense of entitlement or desert than the less successful participants.

In the charitable giving experiments, the dictators rightfully earn their share and are unwilling to part with it, while in my experiment the participants seem to experience a feeling of self-proclaimed entitlement, also for the share which they have not rightfully earned. I confirm the main hypothesis that participants steal more when they have to earn their payoff, that is working for their money creates a sense of entitlement, which is used as a justification stealing.

In addition to the justification for stealing through antecedent earnings behavior I am inter-
ested in the amount that is stolen. According to standard economic theory the temptation to steal should stay the same as long as the risk of getting caught and the punishment is unaltered. Moreover, an individual should always decide on the action which provides the highest utility (Becker 1968). So in a situation where there is no risk of getting caught individuals should steal to the full extent. This hypothesis is challenged by the idea of self-concept maintenance of being an honest person¹. The theory states that people lie and cheat just enough to satisfy their feeling of material gain without jeopardizing their positive opinion about themselves and thus making themselves feel guilty. This trade-off then leads to incomplete cheating. Mazar et al. (2008), Fischbacher & Heusi (2008) and Shalvi, Dana, Handgraaf & De Dreu (2011) find that when payoff depends on the outcome of a task, participants cheat to a lesser extent than feasible in the experiment. In Mazar et al. (2008) the participants take a 50-question test where they have the opportunity to increase the number of correct answers without getting caught. On average the participants increased their scores by only 20 percent of the maximum scope for cheating. Far less than the total payoff they could have gotten from the experiment. Fischbacher & Heusi (2008) use the reported outcomes from rolling a six sided die in private, where the participants are paid depending on what number they report, and compare it to the statistical distribution of the die. The distributions based on the reported rolls are skewed to the right with a large allocation at the second highest payoff, meaning that while some participants did lie about their outcomes, not all who lied, lied to the full extent, which would then have resulted in everyone reporting the most beneficial outcome. Shalvi et al. (2011) do a variation of the die experiment, but come to the same conclusions on incomplete cheating. In all three papers the participants can hide their actions behind the decisions of the others, as the authors can only draw inferences from the deviations from the control group average or from the statistical distribution. The participants do not need to feel guilty, since there is no way of telling whether the individual cheated or not. He could have just been lucky or very clever. My experiment measures stealing on a disaggregated level, thus providing further insight into the individual decisions. The subject can no longer hide behind the distribution of outcomes of the masses. I find that observing the individual decisions almost eliminates incomplete cheating, but it does not deter cheating in general.

Thus, taking away the opportunity of the individual’s actions staying undetected, even though there is no risk of punishment due to anonymity, and at the same time inducing selfish behavior by providing a justification for stealing through an increased feeling of entitlement drives the results closer to the predictions of the Becker Model - steal (and steal all), just as in the dictator games where earned wealth drives the donated share to 0. My results strengthen the explanation of increased self-interested behavior already found in the different context of charitable giving, in a situation of earned wealth, due to an exaggerated sense of entitlement. Also they question whether incomplete cheating in a situation where individual behavior cannot be observed is

¹Studies on lying aversion by Gneezy (2005), Erat & Gneezy (2012) and Lundquist, Ellingsen, Gribbe & Johannesson (2009) complement this research by providing further explanations for the desire of individuals to behave honestly.
really due to a trade-off between material gain and an honest self concept or more due to an unwillingness to look suspicious by standing out of the crowd.

The remainder of this paper is organized as follows. Chapter 2 describes the experimental design, chapter 3 gives the results found in the two experimental treatments and chapter 4 concludes and gives an outlook of organizational implications of the findings.

2 Experimental Design

The experiment was conducted in 2012 at Aarhus University in front of two canteens which mostly cater to Business and Social Science students. In order to attract students to participate in the experiment some posters were hung up around the canteens. The posters revealed nothing more than the time and place of the survey and that there would be some monetary compensation for taking part. Two booths were set up next to each of the two canteens\(^2\). In total 181 students participated.

The experiment took less than 10 minutes to conduct per person. It was carried out Wednesdays between 11 a.m. and 3 p.m. to ensure a large enough number of students walking by and to prevent any early morning or late afternoon biases, as well as end of the week effects. The first and second session were carried out in one day and the third session on a second day. Treatment varied according to the time that subjects arrived. All students arriving at a given time participated in the same treatment.

The experiment uses a natural frame often encountered at universities, where surveys are carried out, as not to increase suspicion about the research interest. Following the idea by Fischbacher & Heusi (2008), the students received half a page of instructions on all the steps of the payment process (experiment)\(^3\) and a survey on the canteen to fill out by themselves. The survey included 15 questions on the canteen and on some basic demographics of the student such as gender, type of study, department and nationality. The questions were chosen in a way to prevent any priming on the task to follow and were thus completely unrelated to any ethical or moral topics. The survey was conducted to collect some information on the participants and to make the experiment more plausible as a payment for the survey and not just a random payment of money for rolling a die. After filling out the survey the actual experiment started. The only difference between the two treatments is the way that the participants earned their payoff, everything else was kept exactly the same.

2.1 The Random Income Treatment (RIT)

To create a random payoff I used an eight-sided die\(^4\). After filling out the survey the participants entered one of the two private booths. They then rolled the die in front of the experimenter.

\(^2\)See the appendix for photos of the set-up.

\(^3\)The full instructions can be found in the appendix.

\(^4\)It was eight-sided to increase the variation and to match it with the possible payoffs in the matrix task. Less matrices would make the matrix task too short.
The number they rolled was noted by them under the supervision of the experimenter on the top of their instruction sheet, which was attached to their survey. This meant, it was not possible to cheat when recording the actual outcome. It is important to separate the possible act of cheating on the score from the act of stealing once they have received the payment envelope, otherwise results on stealing cannot be distinguished from cheating on the score.

After noting down the number rolled, they received an envelope (Nr.1) filled with eight 5 Danish Kroner (DKK) coins, totaling 40 DKK (around 8 US Dollars). This is the maximum payment possible. They earned one 5 DKK coin for every eye on the die. The payment scheme was clearly stated on their instruction sheet on the same page where they noted the number they rolled. After handing out the envelope, the experimenter left the booth and made it clear, that she was not going to come back, by referring to the instructions. She asked the participants to take out the coins they earned and to return the rest of the money to another envelope (Nr.2) stapled to the back of their survey. After sealing the envelope the subjects dropped the survey with the envelope into a large survey box on their way out. For a visualization of the process see figure 1. There was no further interaction between the experimenter and the participant after the first envelope with money was handed over.

The RIT was conducted twice. One time, the die was rolled openly not only for the experimenter to see, but also for other bystanders. The second time it was rolled in the booth only in front of the experimenter. The slight difference was introduced to test for peer effects due to other students observing the true roll of the die.

In order to make the envelopes look identical from the outside, fake coins (metal disks, which look very similar to the real coins, as suggested by Koch & Normann (2008)) were provided in the booths to fill up the second envelope to eight coins total. This way the participants had the possibility to take out all real coins without having to drop off an empty envelope. The sound of the envelope and survey being dropped into the box is always the same, as is the weight, so the risk of detection once the envelope is sealed, is non-existent. The participants could take out more coins than they earned in the task, while staying anonymous. The maximum amount they could steal was 40 DKK minus the amount they had already earned in the task.

There was no deception involved in any case. The participants could see from the provided instructions, that the experimenter is ceteris paribus able to tell from the number on the front of the survey and the remaining coins in the envelope stapled to the back of the survey, whether any coins were stolen, if the number rolled and the remaining coins do not add up to eight.

5See the appendix for instructions.
6100 percent of the second envelopes where returned.
7The disks were provided in large bowls, so that it was impossible to tell how many disks had been taken out by each participant.
890 percent of the people who cheated used the fake coins to hide their behavior. Three subjects dropped off empty envelopes.
2.2 The Performance Income Treatment (PIT)

In the performance income treatment the participants had to carry out a matrix task after filling out the survey. The test sheet, handed out by the experimenter once the participants entered a booth, consists out of eight sets of 12 three-digit numbers (see figure 2 for an example of a matrix).

<table>
<thead>
<tr>
<th>2.47</th>
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<th>5.38</th>
</tr>
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<td>5.72</td>
<td>3.85</td>
<td>8.51</td>
</tr>
<tr>
<td>5.92</td>
<td>7.17</td>
<td>6.15</td>
</tr>
<tr>
<td>2.33</td>
<td>1.68</td>
<td>4.95</td>
</tr>
</tbody>
</table>

Figure 2: Matrix Task

The participants had three minutes to find two numbers per matrix that add up to ten. This is a simple search task where the solutions are unambiguous once found, to make the right answers very transparent to the participant. After the three minutes the experimenter went back into the booth and checked the results\(^9\). The participant then noted the number of solved matrices on top of the instruction sheet and the payment proceeded just as in the random treatment, with 5 DKK per correct matrix. The experimental frame payoff scheme is thus the same as in the RIT.

\(^9\)The time was individually started by the experimenter using a stopwatch.
3 Results

The essential component of the experiment lies in the difference of the payment methods. Out of the 123 participating students in the two main treatments, 110 had the opportunity to cheat - the others rightfully earned the complete payoff of 40 DKK. For the analysis I drop these 13 participants, who did not have an opportunity to steal.

Figure 3 shows the fraction of participants who steal in each of the two treatments. It shows that close to every second participant (44 percent) in the PIT decided to take (some of) the undeserved surplus money in the envelope, while in the RIT less than every tenth participant (9 percent) takes more money than he earned. The difference is significant (Fischer exact p<0.01).

Result 1: In both treatments I observe stealing, but individuals are more likely to steal when they earn their payoff in the experiment compared to an allocation based on luck.

There are no statistically significant differences between men and women within the treatments. Both genders are more likely to steal in the PIT. Women tend to steal slightly less frequently than men in the RIT (4 percent compared to 13 percent), while in the PIT half of the women do it (50 percent compared to 43 percent of the men). The within gender differences are significant. However, the results for the women need to be treated with caution, as there are less women in the performance treatment than in the random treatment (see table 1). This seems to be due to natural variances in the sampling of subjects. The students were only told the type of exercise once they had agreed to taking the survey, so a self-selection based on the task is unlikely, but cannot be dismissed. Nevertheless, the results suggest that a sense of entitlement as a justification for stealing might be stronger for women than for men. Studies by Dreber & Johannesson (2008) as well as Erat & Gneezy (2012) show that women are less likely to lie, when it hurts the other side. It would be interesting to find out whether these social preferences can be overridden by a feeling of desert, making even women act more selfish than usually. A conservative estimate of the true treatment effect lies close to the effect found when only estimating
the effect with men, because I have the same number of men in both treatments.

Result 2: The results are robust to gender effects, the probability of stealing increases for both genders in the performance treatment.

<table>
<thead>
<tr>
<th></th>
<th>RIT</th>
<th>PIT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Women</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stole</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Did not steal</td>
<td>24</td>
<td>4</td>
</tr>
<tr>
<td>Mean roll/solved</td>
<td>3.7</td>
<td>3.6</td>
</tr>
<tr>
<td><strong>Men</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stole</td>
<td>4</td>
<td>17</td>
</tr>
<tr>
<td>Did not steal</td>
<td>28</td>
<td>23</td>
</tr>
<tr>
<td>Mean roll/solved</td>
<td>4.4</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stole</td>
<td>5</td>
<td>21</td>
</tr>
<tr>
<td>Did not steal</td>
<td>52</td>
<td>27</td>
</tr>
<tr>
<td>Stole (in percent)</td>
<td>0.09</td>
<td>0.44</td>
</tr>
</tbody>
</table>

In the second RIT the die roll was observed by some of the other participants standing in line, in contrast to the two previous treatments, where it was only observed by the experimenter. An additional 58 students participated in this RIT. I find that while stealing is still lower than in the PIT (22 percent compared to 44 percent) it is higher than than in the RIT where the die roll is only observed by the experimenter (9 percent). This finding can be explained with the argumentation of Shalvi et al. (2011), whereby seeing multiple possible outcomes of a die provides a justification for stealing. The authors argue that seeing the desired outcome even when the subjects know that it is not the right turn can serve as a justification to report the desired outcome.

In addition to the results between the treatment, I made a number of observations, which are independent of treatment. They concern the amounts stolen and whether stealing was more likely at some outcomes than at others. Remember that the outcomes for the die rolls are determined randomly by rolling the eight-sided die, while the outcomes in the performance treatment are determined by how many matrices the participants manage to solve in the time given. It is important for the analysis to have a similar earnings distribution in both treatments in order to compare their effect on stealing. Figure 4 compares the numbers rolled and the exercises solved (1 through 8). While the matrix task result distribution might appear slightly more uniform there is no significant difference in the distribution (Wilcoxon-Mann-Whitney p-value = 0.07). Moreover, the outcomes show some variation, so that for every outcome it is possible to observe stealing. The average value in the die treatment is 4.5, which is identical to the expected value.
of an eight-sided die. The average value for the matrices is slightly higher at 4.8.

Figure 4: Number of subjects who steal and who do not steal by eyes on the die and number of matrices solved

Figure 4 also shows how many stole or did not steal for each individual outcome from 1 to 8 for both treatments separately. These results suggest that there is no statistically significant relationship between the outcome and the probability of stealing (Fisher’s p = 0.32 and p = 0.46). The likelihood of stealing conditional on a certain outcome with the die or in the task has no pattern, it is always close to the average probability. Participants who do well above average are just as likely to steal as participants who do poorly, be it due to luck or to performance in the task. Also there is no difference between the treatments in this respect. Hence, the original rightfully obtained outcome has no effect on the decision to steal. On a first hunch, people usually think that the participants will be more likely to steal the worse they do rolling the die or in the matrix task. This could be, because they are angry or disappointed or because they were expecting to gain more. In my experiment I find no indication of this. This finding contradicts the idea, that disappointment (in your abilities or in your luck) leads to an unethical act. The results suggest that what drives the stealing is the process of exerting effort for a certain amount of time and thus feeling entitled to the maximum compensation, irrespectively of the actual outcome.

Result 3: The decision to steal is independent of the outcomes of the die roll or the number of matrices solved.

One could also argue that the decision to steal was taken before the actual experiment, just by reading the instructions and understanding, that there was a possibility to take all the money without getting caught. But first of all, this should lead to the same amount of stealing in both treatments, as the instructions were the same, which we see is not the case and secondly then the rational behavior in the matrix task would be to exert the lowest effort possible. Thus, we

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10 Further tests with clustering of outcomes and individual probit regressions have confirmed this.

11 The same pattern is visible in the second RIT, which strengthens these results p = 0.82.
should see more stealing at low outcomes in the performance treatment. Since this is not the case, it is plausible to assume, that the decision to steal is only made, once the participants have the actual money in their hands and feel like they earned it by trying hard\textsuperscript{12}.

When examining the amounts which people steal it becomes obvious that the decision to steal is an all-or-nothing decision. 85 percent of the participants, who steal, steal all of the money provided to them. One explanation for this is that stealing coins from an envelope is more salient than increasing the score on a test by one or two points. This could lead to a "what-the-hell" effect, since the participants are not able to maintain their honest self-concept anyway. In the cheating experiments of Mazar et al. (2008) and Fischbacher & Heusi (2008) few participants cheat to the full extent. In addition to the maintenance of a positive self-concept, they might also do this because they believe that they will not be identified as cheaters. Pretending to get 50 questions correct, when you actually only managed to solve 20 is rightfully suspicious. So even if there is no way of getting punished and the action can never be linked back to the individual, there seems to be a desire to appear consistent. Either you cheat by so little that it is not suspicious on the individual level, or you take all. Of the six participants who took less than the maximum amount four took only one additional coin and two took two additional coins. Since the participants needed to count the real coins in the envelope and then the fake coins to create a total of eight coins, I can be pretty sure, that taking additional coins, was not by mistake\textsuperscript{13}. These six might have been able to maintain their positive self-image while taking additional coins or they did not want to appear greedy, but for the majority it seems to be an either/or decision.

Result 4: Almost all of the participants who steal, steal to the full extent.

From the survey I can match basic characteristics to the stealing behavior of the students. Because of the homogeneity of the group, there are no significant results when regressing nationality, field of study or type of degree on stealing. Even though there is enough variation in the data on part-time jobs, I do not find a significant effect on stealing either way.

4 Conclusion

Some people are always honest and some would take every possibility to increase their material gain, but many people will only tell a lie, cheat on a test or steal some extra cash, when they can come up with a justification for their action. Only when they can justify it at least to themselves will they enact in a less honest behavior. One of these justifications is a sense of entitlement and with it a feeling of desert. A sense of entitlement can come from a birth right, a membership in an organization or even a psychological disorder such as narcissism, but mostly it is an earned

\textsuperscript{12} It could be that the participants enjoy test taking and therefore try to do well in the task, but since there was no official comparison with others, status reasons are not very probable as an incentive.

\textsuperscript{13} All the participants who were stealing used the correct number of fake coins, except the three individuals who handed off an empty envelope.
right, gained from working. This could explain why individuals are more willing to steal from the experimenter when they have earned their payoff, rather than when they won money in the experiment by rolling a die. They feel entitled to the maximum payment irregardless of their obtained outcome. Bad luck or low performance in the task had no influence on stealing. Moreover, no significant gender effects could be detected.

Understanding when people are more tempted to steal is crucial for designing policies that reduce dishonest behavior. As stealing is a large problem in organizations one could come up with bonus schemes or rewards which acknowledge the effort of employees. If their work is fully recognized by their superiors, using a sense of entitlement as a justification for fraud might loose its appeal. Many organizations already employ these measures such as employee of the month nominations or bonus payments because they are meant to work as incentives to work harder, but they might also work as a deterrence of employee fraud. Surely, more research is needed to investigate what leads to fraud and how it can be counteracted.

5 Acknowledgments

I thank Alexander Koch and Julia Nafziger for helpful comments on the experimental design as well as the participants of conferences at UCSD and Aarhus University for their input. I also like to thank Irena Schein, Tong Thi Hanh and Yasmin Lenz for their research assistance.

References

Association of National Fraud Examiners (2012), ‘Report to the nations on occupational fraud and abuse’.


A Instructions

Performance
Canteen Survey
Thank you for taking part in this survey to improve the university canteens.
All information will be kept confidential.
Please read the instructions carefully before filling out the survey!
Instructions:
1. Fill out the survey.
2. When asked, please sit at one of the two tables behind the portable walls.
3. You will be handed an exercise sheet by the instructor.
   a. On your exercise sheet you will find 8 matrices with 12 decimal numbers each.
   b. Find the two numbers that add up to 10 in each matrix and circle them.
4. You have 3 minutes for the task. It starts, when the instructor says: Go!
5. When the time is up, please stop working and write the total number of solved matrices in
   the box number of solved matrices on the front of the survey.
6. Wait for the instructor to come and check your results.
7. You will then receive an envelope with eight 5kr coins. When the instructor has left, take out
   the coins you have earned by solving the matrices.
8. Put the rest of the coins into the envelope labeled Extra coins attached at the back of the
   survey. Fill up the attached envelope to eight coins with the metal disks from the bowl on your
   desk.
   a. The instructor will not come back to collect the surveys.
9. On your way out, drop the survey with the attached envelope in the box marked: SURVEYS
10. Drop the exercise sheet in the box marked: RECYCLING

Your payment depends on the number of matrices you solved.

<table>
<thead>
<tr>
<th></th>
<th>5kr</th>
<th>5</th>
<th>25kr</th>
</tr>
</thead>
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<td>1</td>
<td>10kr</td>
<td>6</td>
<td>30kr</td>
</tr>
<tr>
<td>3</td>
<td>15kr</td>
<td>7</td>
<td>35kr</td>
</tr>
<tr>
<td>4</td>
<td>20kr</td>
<td>8</td>
<td>40kr</td>
</tr>
</tbody>
</table>

Random
Canteen Survey
Thank you for taking part in this survey to improve the university canteens.
All information will be kept confidential.
Please read the instructions carefully before filling out the survey!
Instructions:
1. Fill out the survey.
2. When asked, please sit at one of the two tables behind the portable walls.
3. Roll the 8-sided die to determine your payment.
4. Write down the number you rolled in the square number rolled at the top of this page.
5. The instructor will hand you an envelope with eight 5kr coins. Take out as many coins as the number you have rolled.
6. Put the rest of the coins into the envelope labeled Extra coins attached at the back of the survey. Fill up the attached envelope to eight coins with the metal disks from the bowl on your desk.
7. The instructor will not come back to collect the surveys.
8. On your way out, drop the survey with the attached envelope in the box marked: SURVEYS

Your payment depends on the number of matrices you solved.

<table>
<thead>
<tr>
<th></th>
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<td>7</td>
<td>35kr</td>
<td>20kr</td>
<td>8</td>
</tr>
</tbody>
</table>

B Set-up

Figure 5: Photos of the booths outside and inside
Thank you for taking part in this survey to improve the university canteens. All information will be kept confidential.

Please read the instructions carefully before filling out the survey!

Instructions:
1. Fill out the survey.
2. When asked, please sit at one of the two tables behind the portable walls.
3. You will be handed an exercise sheet by the instructor.
   a. On your exercise sheet you will find 8 matrices with 12 decimal numbers each.
   b. Find the two numbers that add up to 10 in each matrix and circle them.
4. You have 3 minutes for the task. It starts, when the instructor says: Go!
5. When the time is up, please stop working and write the total number of solved matrices in the box “number of solved matrices” on the front of the survey.
6. Wait for the instructor to come and check your results.
7. You will then receive an envelope with eight 5kr coins. When the instructor has left, take out the coins you have earned by solving the matrices.
8. Put the rest of the coins into the envelope labeled “Extra coins” attached at the back of the survey.
   Fill up the attached envelope to eight “coins” with the metal disks from the bowl on your desk.
   c. The instructor will not come back to collect the surveys.
9. On your way out, drop the survey with the attached envelope in the box marked: SURVEYS
10. Drop the exercise sheet in the box marked: RECYCLING

Payment:
Your payment depends on the number of matrices you solved.

<table>
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<tr>
<th>Matrices solved</th>
<th>Payment</th>
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</thead>
<tbody>
<tr>
<td>1 – 5k</td>
<td>1 – 5k</td>
</tr>
<tr>
<td>2 – 10kr</td>
<td>2 – 10kr</td>
</tr>
<tr>
<td>3 – 15kr</td>
<td>3 – 15kr</td>
</tr>
<tr>
<td>4 – 20kr</td>
<td>4 – 20kr</td>
</tr>
<tr>
<td>5 – 25kr</td>
<td>5 – 25kr</td>
</tr>
<tr>
<td>6 – 30kr</td>
<td>6 – 30kr</td>
</tr>
<tr>
<td>7 – 35kr</td>
<td>7 – 35kr</td>
</tr>
<tr>
<td>8 – 40kr</td>
<td>8 – 40kr</td>
</tr>
</tbody>
</table>
Questions
Please tick the boxes

Are you…?
- Male
- Female

What is your nationality?
- Danish
- Scandinavian other than Danish
- Other nationality

Where do you study?
- Arts
- Science and Technology
- Health
- Business and Social Science

Are you…?
- Degree program student
- Visiting student (Erasmus, exchange...)
- Other

Do you have a part-time job?
- Yes
- No

How happy are you with the canteen in general?
- Very happy
- Happy
- Neither/nor
- Unhappy
- Very unhappy

How often do you eat at the canteen per week?

<table>
<thead>
<tr>
<th></th>
<th>0 - 1</th>
<th>2 - 3</th>
<th>4 - 5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

How happy are you with the opening hours 8:00-15:30?
- The opening hours are good like this
- The canteen should open earlier
- The canteen should close later
- Both (Open earlier, close later)

How much do you usually spend per visit?
- less than 20kr
- 21-30kr
- 30-40kr
- more than 40kr
### How often do you buy...?

<table>
<thead>
<tr>
<th></th>
<th>Often</th>
<th>Sometimes</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lunch offer</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Salad</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Sandwich</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Hot/cold beverages</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Sweets</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

### When you buy sweets, how often do you buy...?

<table>
<thead>
<tr>
<th></th>
<th>Often</th>
<th>Sometimes</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chocolate</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Licorice</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Cookies</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Other</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

### When buying sweets is it often an impulsive, last-minute decision?

- ☐ Yes
- ☐ No

### What would you like to change in the provided selection?

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
<th>I don’t care</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less meat</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>More fish</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>More vegetables</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>More wholegrain</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>More organic food</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

### What describes you best?

- ☐ Vegan
- ☐ Vegetarian
- ☐ Vegetarian, but eat fish
- ☐ Eat meat
- ☐ Nothing applies

### If you have any comments on how to improve the canteen, please let us know!

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Thank you for your participation!

Please proceed with the experiment to determine your payment!
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