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Do Discriminatory Pay Regimes Unleash Antisocial Behavior?*

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Abstract

In this paper, we analyze how pay-regime procedures affect antisocial behavior at the workplace. In a real-effort experiment we vary two determinants of pay regimes: discrimination and justification of payments by performance. In our *Discrimination* treatment half of the workforce is randomly selected and promoted and participate in a tournament (high-income workers) whereas the other half receives no payment (low-income workers). Afterwards, antisocial behavior is measured by a Joy-of-Destruction game where participants can destroy canteen vouchers. The data show that low-income workers destroy significantly more vouchers than high-income workers. Destruction behavior is driven by workers who receive payments that are not justified by performance. When all payments are justified, that is in our *Competition* treatment where all workers participate in a tournament, the difference vanishes. By using a treatment with random payments, we show that unjustifiably-paid workers destroy less when they had equal opportunities to receive a high payment, i.e., when they were not discriminated by the pay regime.

JEL Codes: C91, D03, J33, J70, M52
Keywords: antisocial behavior; discrimination; experiment; joy of destruction

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1 Introduction

Antisocial behavior at the workplace describe actions which bring harm to an organization, its employees, or its stakeholders (Griffin and Lopez, 2005). The occurrence of antisocial behavior is rare (Charness et al., 2013) and may lead to substantial efficiency losses. Empirical evidence corroborate this and report that US firms lose about $50 billion each year because of white collar crime, i.e., fraud and theft (Coffin, 2003).[1] This emphasizes the importance for management to create workplace environments that mitigate antisocial behavior.

In the organizational economics literature it is argued that antisocial behavior at the workplace can be unleashed if there is a trigger, a so-called *frustrator* (Giacalone and Greenberg, 1997). Such *frustrators* can lead to experienced work dissatisfaction and therefore increase workers' engagement in antisocial activities. Examples for these triggers are controversies with superiors (Geddes and Baron, 1997), coworkers (Skarlicki and Folger, 2004), or perceived unfairness in an organization (Neuman, 2004).

Perceived unfairness may arise from institutional aspects such as pay regimes. One widely used example are bonus schemes. Generally, these pay regimes generate income inequality which can lower the well-being of workers (Fehr and Schmidt 1999; Card et al. 2012; Bracha et al. 2015). Besides that, a fair bonus scheme would require perfect monitoring of workers' performance. However, pay procedures are often obscure and discriminatory since work processes are complex and monitoring of effort and ability is imperfect (Berger et al. 2013). UK data show that more than one-third of financial professionals believe that bonuses given to top earners are unjustified and cause resentment in the office (CIMA, 2016).[2] We argue that discriminatory pay regimes, i.e., depriving workers of the opportunity to receive a bonus, might serve as a *frustrator*. In particular, if (perceived) high performance is not rewarded, workers might become resentful.

This paper investigates if discriminatory pay regimes lead to more pronounced antisocial behavior among co-workers compared to non-discriminatory pay regimes. Especially "unjustifiably-paid" workers, i.e., workers with a high (perceived) performance who receive no compensation may feel frustrated. Finally, we examine if a discriminatory pay regime lowers prosocial actions towards co-workers (Buser and Dreber 2015; Grosch et al. 2017). To investigate the link of discriminatory pay regimes and antisocial behavior, we conduct a real-effort experiment. In the experiment, we vary procedures in pay regimes and subsequently

[1] Similarly, Disselkamp (2004) reports that German firms bear costs of €50 billion because of inner dismissals, conflicts in the workplace, and high drop-out rates reflected in the number of staff on sick leave.

[2] The importance of procedural fairness is also emphasized in experiments, i.e., the redistribution decisions of spectators are affected by the processes of income generation (Konow 2000; Cappelen et al. 2007; Cappelen et al. 2013; Akbaş et al. 2016).

measure worker's engagement in antisocial (and prosocial) actions. In the *Discrimination* treatment, half of the participants are randomly selected and receive a zero payment. The remaining half of participants compete for bonuses. Here, relative performance within the group of promoted workers determines payments, i.e., the 50% best-performing subjects of the promoted workers receive €15, whereas the 50% least-performing participants from this group receive €5. By contrast, in the control treatment *Competiton* all payments are justified by performance and there is no discrimination – *all* workers participate in a competition for bonuses. The competitive pay regime is characterized by transparency of payments in accordance to subjects' relative performance. More precisely, workers who rank in the first quartile receive €15, workers who rank in the second quartile receive € 5, and the 50% worst ranked workers earn nothing. After subjects are informed about their payment from the real-effort task, we measure antisocial behavior in a "Joy-of-Destruction (JoD)" game (Abbink and Sadrieh 2009; Abbink and Herrmann 2011). Workers who received no payment are paired with a worker from the paid group. Both subjects receive six canteen vouchers and simultaneously decide how many canteen vouchers of their paired player they want to destroy.

Experimental evidence demonstrates that people in JoD games enjoy harming others although this action does not increase own monetary benefits (Abbink and Sadrieh, 2009; Abbink and Herrmann, 2011). Moreover, inequality-averse subjects in these settings often burn money to equalize incomes (Zizzo 2003; Fehr 2016) and are willing to pay for it (Zizzo and Oswald, 2001). Fehr (2016) finds that subjects burn money to retaliate sabotage behavior. In our set-up, inequality in payments is kept constant across treatments. Still, individual inequality aversion might partly explain why subjects destroy. We collect baseline measures on individual inequality aversion (Blanco et al., 2011) before the crux of the experiment to examine this channel. However, we believe that the source of inequality which emerges from a discriminatory or a non-discriminatory pay regime affects fairness perceptions and thus encourages antisocial behavior. After the JoD game, we implement a sequential prisoner's dilemma game to test if a discriminatory pay regime dampens prosocial behavior.

As expected, we find that low-income workers destroy a larger fraction of vouchers than high-income workers. Inequality aversion only has explanatory power for non-discriminatory pay regimes. Antisocial behavior is most pronounced in the *Discrimination* treatment compared to the control treatments with non-discriminatory pay regimes. Interestingly, inequality aversion cannot explain the large destruction level under a discriminatory pay regime. Here, the treatment effect is entirely driven by workers who receive an unjustified payment. With another control treatment called *Random* we are able to disentangle the effect from discrimination and unjustified payments. Only when unjustified payments result from a discriminatory payment procedure, workers become particularly resentful and engage in antisocial behavior. Moreover, we find that discrimination crowds out prosocial behavior. That is, workers show lower levels of cooperation under a discriminatory pay regime compared to a non-discriminatory pay regime.

The findings of this paper may inhere interesting implications for organizational economics and the choice of appropriate incentives. To emphasize this we test for external validity and examine how different Big-5 personality traits (Costa and McCrae, 1989) link up to our measure of antisocial behavior. This is motivated by empirical studies which demonstrate that "neuroticism" and "agreeableness" are important predictors for antisocial behavior (see for meta-analyses Jones et al., 2011; Miller and Lynam, 2001).[3] It has been shown, that workers with high scores in this trait engage in antisocial actions to a higher extent. Our data suggest that observed behavior in the JoD game is a valid proxy for antisocial behavior at work, i.e., "neuroticism" and "agreeableness" can partly predict destruction behavior in our JoD game.

2 Experimental design

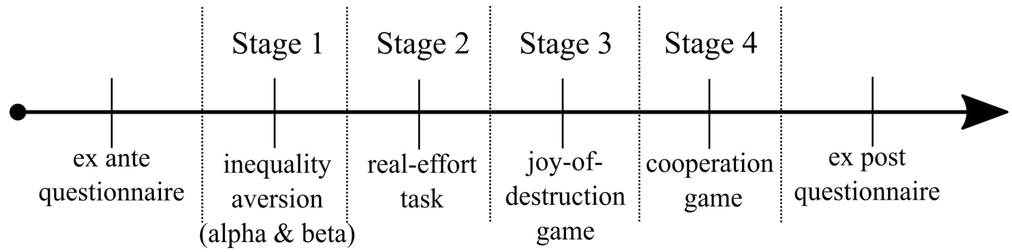
2.1 Experimental framework

The experiment consists of a short pre-survey, the main part with four stages, and an ex-post questionnaire. The sequence of actions is illustrated in Figure 1. In stage 1, we collect baseline measures on inequality aversion.[4] Afterwards in stage 2, subjects engage in a real-effort task under one of three treatments that used discriminatory or non-discriminatory pay regimes. The third stage captures antisocial behavior with a "Joy-of-Destruction" (JoD) game (Abbink and Sadrieh, 2009). Here, we measure how (non-)discriminatory pay regimes affect antisocial behavior. For measuring spillover-effects on cooperative behavior, we apply a sequential prisoner's dilemma game (Blanco et al. 2014) in the final stage. The session ends an ex-post questionnaire. The instructions can be found in the Appendix.
In what follows, we first discuss the experiment and then recap the surveys.

[3]For instance, the trait "neuroticism" measures emotional instability and the level of experiencing anger and anxiety.

[4]Additionally, we capture social value orientation (SVO) before the two games on inequality aversion. After the last stage of the experiment, we implement a die rolling game. We weave in SVO and the die rolling game to use this data for another study on social preferences and cheating behavior (Grosch and Rau, 2017).

Figure 1: experimental sequence



Stage 1: Inequality Aversion (α and β) and Social Value Orientation

To measure inequality aversion, we apply the method of Blanco et al. (2011) and implement two different games. The first one is to measure β, aversion to advantageous inequality, and the second one serves to elicit α, aversion to disadvantaged inequality (see Fehr and Schmidt 1999).

For measuring β a modified dictator game is implemented. The dictator is confronted with 21 pairs of competing payoff distributions. One option, in which the dictator receives 20 tokens and the recipient 0 (20,0), is kept constant. The other payoff distribution holds equal payoffs starting from (1,1), (2,2) etc. rising to (20,20) for dictator and recipient. Dictators have to decide for a switching point at which they prefer equal outcomes to being ahead. Participants' β varies between -0.025 and 1 and increases with the level of aversion of being ahead. After decisions are made, one of the 21 decisions is randomly drawn for payment and one participant of a dyad is randomly selected for the role of the dictator who determines payoffs.

To measure the parameter α that captures the acceptance of disadvantageous inequality, we ask the responder in an ultimatum game for the minimum acceptable offer. First, participants in the role of the proposer are given 20 tokens and make an integer offer of x tokens to the responder, keeping 20 tokens - x tokens to themselves. Responders have to indicate which minimum first-mover offer they would accept. The lowest amount that can be accepted is 0 tokens for herself and 20 tokens for the other participant. This amount determines an individual's parameter α ranging from 0 to 4.5. The higher the parameter, the more a person dislikes disadvantageous inequality. For calculating payments, we randomly draw one of the 21 possible payment allocations and randomly select one participant in each dyad for the role of the proposer and respondent respectively. If the minimum acceptance level exceeds the offer, both earn nothing. Otherwise, the randomly drawn payment allocation is implemented.

In the two inequality games, we apply an exchange rate of 1 token = €0.15. Across the games at stage 1, we use stranger matching and strategy method. Participants are always informed about exchange rates from experimental currency to real currency at the beginning of each game.

Stage 2: Real-effort task

During this stage, subjects work on a real-effort task in which we exogeneously vary the pay regime. The task is to individually count zeros in 5 x 9 matrices consisting of random numbers of zeros and ones for eight minutes. Participants know that after the completion of the task half of the participants will be assigned to group A and half will be assigned to group B. Participants A receive €15 or €5, whereas participants B receive a zero payment. Information about group assignment and payment is done by distributing envelopes with money (if any) and a card with a written 'A' or 'B' enclosed. To summarize, there are three different payment groups: half of the workforce receives zero, 25% earns €5 and 25% earns €15. The pay regime, i.e., how participants are assigned to the groups, is our treatment variable whereas the payment distribution among participants is kept constant across treatments.
In three treatments, we vary two determinants of pay regimes in the real-effort task: *(i) discrimination* to receive a bonus and *(ii) justification of all payments* by performance. Under discrimination, half of the workforce is deprived of the opportunity to earn a bonus. We define justified payments as a regime where better-performing workers receive at least as much payoff as an equivalent-performing worker. These two channels are switched on and off in the different treatments. A brief overview can be found in Table 1. We elaborate on the design details of the *Discrimination* treatment and the two control treatments in the following paragraphs.

Table 1: Summary of treatments

Treatment	non-discriminatory	all payments justified
Discrimination	x	x
Competition	✓	✓
Random	✓	x

In *Discrimination*, we create a pay regime with neither equal opportunities nor justified payments for all workers. Participants are randomly assigned to either the role of a type-A or a type-B worker. Type-B workers receive €0. Their performance is ignored when determining the payoffs and therefore they are discriminated in this pay regime. In contrast, type-A workers are ranked within group A based on their total number of correctly solved matrices. The workers ranking in the upper half of the distribution receive €15 and workers ranking in the lower half receive €5.

In contrast to the *Discrimination* treatment, all participants are treated equally and all payments are justified in the control treatment *Competition*. In this treatment, a performance ranking among *all* participants is executed. The ranking determines the assignment to group A or group B and the respective payments. Participants ranked in the first quartile of the distribution earn €15, participants ranked in the second quartile of the distribution earn €5. They are assigned to group A. The ones who are either ranked in the third and fourth quartile receive a zero payment and are assigned to group B.

To control for the impact of receiving an unjustified payment under a non-discriminatory pay regime, we run another control treatment called *Random*. In this treatment, the assignment to groups A and B is imposed randomly as well as the ranking within group A. Consequently, workers are paid independent of their performance. Still, each worker has similar chances to receive a bonus or not and thus this pay regime is non-discriminatory. However, not *all payments are justified* since some workers are not paid in accordance with their individual performance. The treatment comparison of unjustifiably-paid workers between *Random* and *Discrimination* enables us to disentangle the effects from discrimination and unjustified payments.

Stage 3: Joy of Destruction (JoD)

We modify the joy-of-destruction game by Abbink and Sadrieh (2009). At the beginning of this stage, each participant is virtually endowed with six canteen vouchers.[5] A participant B is matched with a participant A. Type Bs are informed about the exact payment (5€ or 15€) of the matched partner in the previous stage. Type As are informed that they are matched with a type B. Every participant (type A and B) then decide simultaneously how many vouchers between 0 and 6 they want to destroy from the matched participant.[6] Decisions are entered "virtually" on the screen and destruction is free of cost. Subjects know that a random parameter, which destroys vouchers with 50% probability, is implemented. In this case the computer randomly destroys 1–6 vouchers (subjects knew that all levels were equally likely). In the other 50% of the cases the participant's decision determines the number of vouchers destroyed. The implementation of the random component reduces moral costs since mean actions can be hidden under the guise of a possible random event (Abbink and Herrmann, 2011). In real life, antisocial actions such as stealing from or bullying coworkers

[5]Students at the university hold a student identity card. This id card is used for paying meals at the university's canteen and can be loaded up with credit. With one of our vouchers participants could top up their credit by €1.

[6]Subjects know that destroyed vouchers would become useless for both subjects. To explain the mechanism, we applied the wording "you can remove vouchers."

can not be traced back to one particular person in many cases. Only at the end of the experimental session, we inform participants about the number of devalued vouchers.

Stage 4: Cooperative behavior

We use a sequential-move prisoner's dilemma (Blanco et al., 2014) to measure cooperation. All participants (independent of their type) are matched in dyads and receive no information about the matched partner. The first mover makes a binary decision and chooses between cooperate or not cooperate. The second mover responds either with cooperation or defection. If both defect, both players receive a payoff of 10 Tokens. If both cooperate, they receive 14 Tokens each. If the first mover cooperates and the second mover defects, the first mover earns 17 Tokens and the second mover earns 7 Tokens (for a game-tree illustration see instructions in the appendix). In this game we apply the strategy method: each participant makes one decision in the role of the first mover, as well as two decisions (based on the two possible decisions made by the first mover) in the role of the second mover. For determining payments in this game one participant in each dyad is randomly selected into the role of the first mover and the other participant is selected into the role of the second mover. We apply an exchange rate of 1 token=€0.20.

Questionnaires

At the very beginning of the session, participants fill out a short pre-survey in which we collect baseline measures on subjects' mood and risk preferences.[7] After the experimental session, participants are asked about their fairness perceptions of the pay regime among other questions about the experiment. Additionally, we capture character traits by query BIG-5 character traits (Costa and McCrae, 1989) and conduct post-experimental questionnaires.[8] Finally, socio-demographic features such as age and study program are recorded.

2.2 Experimental procedures

We collected the experimental data from June to August 2016. In total, 252 students from the University of Göttingen took part in overall 13 sessions. In each session, we had 16 to 24 participants. The experiment was programmed and conducted in z-Tree (Fischbacher, 2007). Subjects from various fields of studies were recruited with ORSEE (Greiner, 2015).

[7] For this purpose, we ask subjects to classify them based on their risk preferences on a scale between 1 (not prepared to take risks) and 10 (fully prepared to take risks) (Dohmen et al. 2012).

[8] We collect data on a measure for acceptance of hierarchies called "social dominance orientation" (Pratto et al., 1994).

The sessions lasted approximately 90 minutes and subjects earned €17 (ca. $16) on average.

2.3 Hypotheses

In this section we derive our hypotheses. The real-effort framework is characterized by bonus payments which lead to income inequality between (high-income) type-A and (low-income) type-B workers. Hence, type-B workers who are matched with type-A workers may suffer a utility loss because they particularly dislike disadvantageous inequality (e.g., Fehr and Schmidt 1999; Card et al. 2012). Experiments studying antisocial behavior report that subjects burn money to equalize incomes (e.g., Fehr 2016; Zizzo 2003, 2004). In our JoD game, if type-B workers code the income of the real-effort task and the value of the vouchers on a single mental account, they might try to catch up to type-A workers by burning vouchers. If other-regarding motives matter, the level of destroyed vouchers should depend on type-B's level of aversion towards disadvantageous inequality.

Hypothesis 1:
(a) Type-B workers destroy significantly more vouchers than type-A workers.
(b) The destruction level depends on the degree of type B's aversion towards disadvantageous inequality.

Giacalone and Greenberg (1997) argue that workers engage in antisocial behavior if they are dissatisfied. Worker dissatisfaction may be induced by perceived injustice in the workplace (Neuman, 2004). We vary an institutional aspect, discrimination of the pay regime, that potentially serves as a *frustrator*. In the *Discrimination* treatment, type-B workers are the ones that are discriminated by a random promotion mechanism. Therefore, they might be particularly frustrated. In contrast, *Competition* is characterized by equal opportunities for all workers. Moreover, no unjustified payments can occur. Hence, we expect that the difference in destruction levels between type Bs and type As is more pronounced in *Discrimination* than in *Competition*. We expect that being discriminated and being deprived of the chance to receive a bonus, serves as a strong *frustrator*, especially for workers who received unjustified payments.

Hypothesis 2:
(a) The difference in destruction levels between type B and type A is more pronounced in discriminatory pay regimes compared to non-discriminatory pay regimes.
(b) Unjustifiably-paid workers destroy more than justifiably-paid workers.

Beliefs about sentiments of co-workers might differ depending on the pay regime. Discrimination of part of the workforce can lead to resentment within an organization (CIMA, 2016). Such an atmosphere of grudge might affect the willingness to cooperate with co-workers. Based on that, we deduce our third hypothesis.

Hypothesis 3:
Workers are less cooperative under a discriminatory pay regime compared to workers under a non-discriminatory pay regime.

3 Results

This section first reports the main results on destruction levels in the *Joy-of-Destruction Game* (JoD). Afterwards, we focus on potential mechanisms such as inequality aversion and the impact of unjustified payments under a discriminatory pay regime vs. a non-discriminatory pay regime. Finally, we examine whether discrimination leads to ongoing spill-over effects on cooperative behavior. When applying non-parametric tests we always report two-sided $p - values$ throughout.

3.1 Main results

Table 2 presents summary statistics on subjects' decisions in our treatments. It overviews workers' average *destruction levels* and how often they decided to burn vouchers (*destruction frequency*). The table also reports the average *performance* in the real-effort task, that is the amount of correctly solved matrices.
Overall, the results show that on average type B destroys more vouchers (1.33) than type A15 (0.87) and type A5 (0.65). The same pattern is supported by the data on the destruction frequency, i.e., subjects destroy more often in *Discrimination* than in non-discriminatory pay regimes. In what follows, we merge the data on destruction levels of A5 and A15 types as they do not significantly differ between each other in any of the treatments.[9] Turning to pay regimes, the results confirm our expectations that antisocial behavior strongly depends on discrimination of workers. The highest level of vouchers is destroyed in the *Discrimination* treatment (1.23), it decreases down to 1.00 in *Random* where subjects have at least equal

[9]Data on destruction levels: all treatments, Mann-Whitney test, $p > 0.457$; data on destruction frequency: all treatments χ^2-tests, $p > 0.500$.

Table 2: Summary statistics on destructive behavior and performance in the treatments

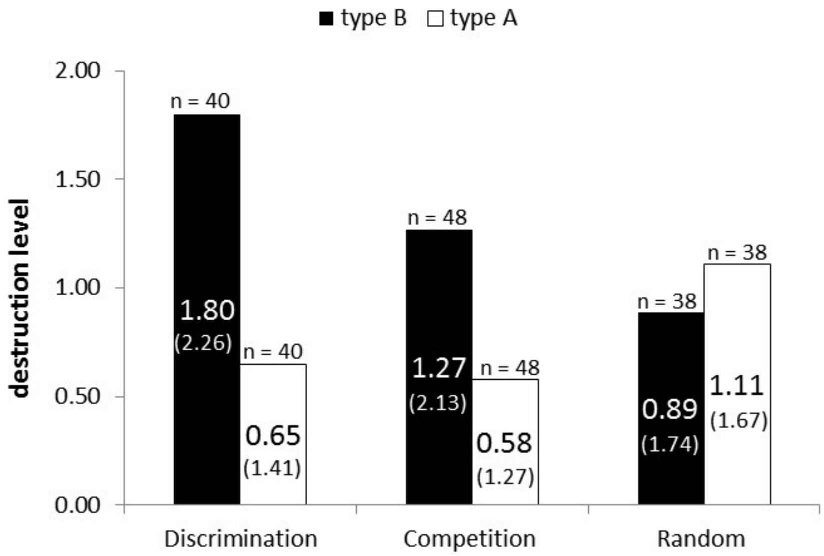
	Discrimination	Competition	Random	All data
destruction level				
Type B	1.80	1.27	0.89	1.33
Type A5	0.70	0.42	0.89	0.65
Type A15	0.60	0.75	1.32	0.87
All data	1.23	0.93	1.00	1.04
destruction frequency				
Type B	0.50	0.31	0.29	0.37
Type A5	0.20	0.21	0.32	0.24
Type A15	0.25	0.25	0.42	0.30
All data	0.36	0.27	0.33	0.32
performance (RE task)				
Type B	30.65	24.60	23.58	26.21
Type A (A5 & A15)	29.43	36.69	25.29	28.58
Type A5	23.85	32.96	25.53	27.83
Type A15	35.00	40.42	25.05	34.06
All data	30.03	30.65	24.43	28.58

opportunities, and is lowest in *Competition* (0.93).[10] Regarding the performance in the real-effort task, we find no difference between *Discrimination* (30.03) and *Competition* (30.65). In *Competition*, type assignment is dependent on performance by design and therefore type-B workers perform significantly worse than type-A workers (Mann-Whitney test, $p < 0.001$). In the *Discrimination* treatment however, due to random assignment to groups A and B, type-B workers have a similar performance as type-A workers (Mann-Whitney test, $p = 0.751$). Therefore, we claim that indeed that part of the workforce is discriminated in the *Discrimination* treatment. Not surprisingly, subjects' performance is lowest (24.43) in the *Random* treatment where subjects' remuneration is independent of their performance.

Generally, we find that type-B workers destroy significantly more (1.33) than type-A workers (0.76) (Mann-Whitney test, $p = 0.050$) confirming Hypothesis 1a. Our main interest is if discrimination serves as a *frustrator* and triggers antisocial behavior which is presumably most pronounced among discriminated type-B workers. Figure 2 displays the average level of destroyed vouchers in the treatments and standard deviations in parentheses from type-A and type-B workers. In *Discrimination*, type-B workers destroy significantly more vouchers (1.80) than type A workers (0.65) (Mann-Whitney test, $p = 0.009$). In contrast, in the non-

[10] These results are robust when focusing on destroy frequencies. The destruction frequency in *Discrimination* (36%) is higher than in *Competition* (27%) ($\chi2(1) = 3.202,\ p = 0.074$) and *Random* (33%) ($\chi2(1) = 3.607,\ p = 0.058$).

Figure 2: Destruction levels and frequencies of type A and type B



discriminatory *Competition* treatment no significant differences can be observed between the destruction levels of type Bs (1.27) and type As (0.58) (Mann-Whitney test, $p = 0.198$). Similarly, in *Random* the destruction level of type Bs (0.89) is insignificantly lower than the destruction level of type As (1.11) (Mann-Whitney test, $p = 0.463$).[11] This confirms Hypothesis 2a, i.e., the difference between antisocial behavior of type-B and type-A workers is more pronounced in *Discrimination* compared to non-discriminatory pay regimes.

To summarize, the results show that a discriminatory pay regime leads to more pronounced antisocial behavior between type-B and type-A workers than non-discriminatory pay regimes. This is in line with our expectation that discrimination at the workplace serves as a *frustrator* and ultimately evokes resentment and antisocial behavior. The non-existence of behavioral differences between type As and type Bs in a random pay regime suggests, that indeed discriminatory pay regimes and not only the presence of unjustified payments cause the results.

Result 1:

(a) Type-B workers destroy significantly more vouchers than type-A workers under a discriminatory pay regime.

(b) In non-discriminatory pay regimes, such as Competition and Random, there is no differ-

[11] These results are robust when focusing on destroy frequencies. In *Discrimination* type-B workers destroy significantly more often (50%) than type-A workers (23%) ($\chi^2(1) = 6.545$; $p = 0.011$). No differences can be observed between the destruction frequencies of type As (32%) and Bs (23%) in *Competition* ($\chi^2(1) = 0.844$, $p = 0.358$) and *Random* (type A: 29%; type B: 37%) ($\chi2(1) = 0.002$, $p = 0.963$).

ence in antisocial behavior between type-A and type-B workers.

In the next sections we will analyze the mechanisms of destruction behavior. In particular, we will examine the impact of inequality aversion and test Hypothesis 1b. Furthermore, we test Hypothesis 2b. That is, we analyze the effect of receiving an unjustified payment. Moreover, we compare unjustifiably-paid workers under a discriminatory pay regime with unjustifiably-paid workers in a non-discriminatory pay regime. This way, we can further disentangle the effect of discrimination per se from the effects of resulting unjustified payments. We conclude this section by linking personality traits to antisocial behavior.

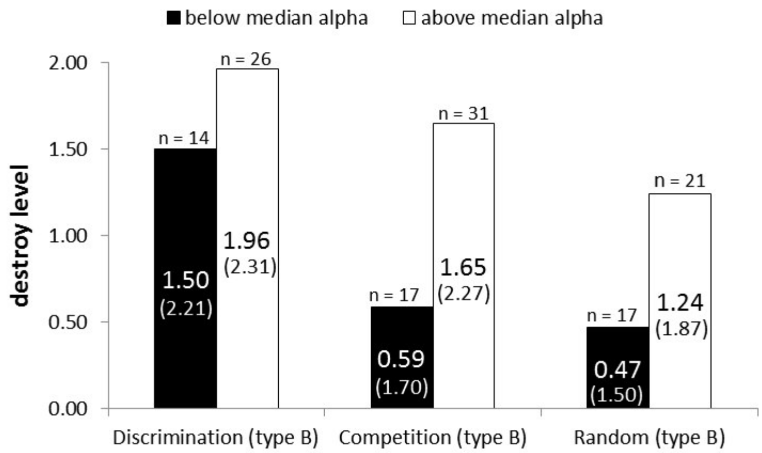
3.2 Mechanisms: inequality aversion

A potential source for workers' destruction of vouchers may be inequality aversion. In this respect, we will test Hypothesis 1b and analyze whether type-B workers use a single mental account for monetary earnings and the value of vouchers. If they do, inequality-averse type-B workers may try to catch up to the total income of type-A workers by burning their vouchers. Type Bs are always behind type As in respect of incomes. A reduction of the income inequality may work if Bs burn more vouchers than their counterpart.[12] Figure 3 depicts type Bs destruction levels conditioned on their aversion to disadvantageous inequality (α); standard deviations in parentheses. The diagram conditions subjects on the median alpha of the whole data set (0.93). We distinguish between type-B subjects with an above/below median alpha.

Overall, type-B subjects with an above-median alpha averagely destroy more than workers with a below-median alpha. In the control treatments (*Competition*, *Random*) Spearman's rank correlation coefficients find significant positive correlations between workers' aversion to disadvantageous inequality and destruction levels (*Competition:* $\rho = 0.281$, $p = 0.053$; *Random:* $\rho = 0.389$, $p = 0.016$). In *Competition*, highly inequality-averse subjects destroy significantly more vouchers (1.65) than subjects with a low inequality aversion (0.59) (Mann-Whitney test, $p = 0.050$). Similarly, in *Random* workers characterized by high alphas clearly remove more vouchers (1.24) than workers with low alphas (0.47) (Mann-Whitney test, $p = 0.054$). This correlation does not exist in *Discrimination*, where destruction levels of high-alpha (1.96) and low-alpha subjects (1.50) do not significantly differ (Mann-Whitney test, $p = 0.543$). We therefore only find support for Hypothesis 1b in the non-discriminatory

[12]Note that if Bs are matched to A5s they could equalize incomes by destroying all of their vouchers. However, equalizing incomes also requires that A5s do not destroy more than one voucher from type B if A5s do not. Catching up to A15-workers is never possible for type-B workers.

Figure 3: Destruction levels of type Bs conditioned on aversion to disadvantageous inequality



control treatments but not in *Discrimination*. Thus, antisocial behavior is obviously not (solely) triggered by inequality aversion when discrimination is at hand.[13]

Result 2:
(a) Workers' inequality aversion determines destruction levels in non-discriminatory pay regimes.
(b) Inequality aversion does not predict destruction levels under a discriminatory pay regime.

The previous analyses have shown that type-B workers destroyed vouchers particularly in the *Discrimination* treatment. Here, inequality aversion cannot explain the differences in destruction levels between worker types. Next, we focus on an alternative explanation for type-B workers' antisocial behavior. *Discrimination* allows for unjustified payments resulting from the random promotion mechanism. In the subsequent section, we examine the effect of receiving a zero payment unjustifiably compared to a justified zero payment. Moreover, we test if type-B workers become more antisocial if the unjustified payment results from discrimination rather than from a totally random payment procedure.

3.3 Mechanisms: unjustified payments

There can be unjustifiably-paid workers in the *Discrimination* and the *Random* treatment. The idea of a potential mechanism is that high-performing type Bs (who are aware of

[13]Focusing on beta we find that this measure proxies prosociality. That is, subjects with higher beta destroy significantly less in *Discrimination* ($\rho = -0.316$, $p = 0.047$) and *Competition* ($\rho = -0.250$, $p = 0.086$) but not in *Random* ($\rho = 0.076$, $p = 0.651$).

this) become frustrated when informed about receiving a zero payment. When comparing unjustifiably-paid workers from these two treatments, it is interesting to test if workers feel more frustrated under a discriminatory vs. a non-discriminatory pay regime. To address this, we compare the behavior of unjustifiably-paid workers in *Discrimination* with unjustifiably-paid workers in *Random*. To identify unjustifiably-paid workers, we classify workers based on their precision in the real-effort task, i.e., the share of correct answers. Workers receive no feedback on their absolute performance. Therefore, we use the precision in the task as a proxy for (perceived) ability assuming that workers who rarely make mistakes exert high effort, are eager to concentrate and can assess their performance well. As a consequence of the simple task, high-ability workers should then be aware of their high performance. For the precision measure, we use an indicator variable which takes on the value 1 if type-B workers have a precision which is above the median of correctly solved puzzles (83.90%).[14] Indeed, we find a significant positive correlation between workers' precision and their belief about belonging to the 50% best subjects in their session (Pearson's correlation coefficient, $\rho = 0.132$, $p = 0.036$).[15] Therefore, conditioning subjects on their work precision serves as a valid proxy of "perceived high performance". In *Discrimination*, type-B workers with an above-median precision achieve a significantly higher performance (34.35) than workers with a low precision (25.65) (Mann-Whitney test, $p < 0.001$). The performance of high-precision type-B workers is significantly higher compared to all type As in this treatment (29.43) (Mann-Whitney, test $p = 0.038$). Hence, we can argue that these type Bs received an "unjustified payment". The performance of low precision type-B workers is significantly lower as compared to type As (Mann-Whitney test, $p = 0.051$). Thus, these workers received a "justified payment." In *Random* we find similar results for high/low precision type-B workers which we classify as unjustifiably/justifiably paid.[16]

Figure 4 displays destruction levels of subjects with unjustified/justified payments based on our classification (standard deviations in parentheses). A noticeable finding is that destruction level is highest (2.39) for unjustified workers in *Discrimination*. These subjects destroy significantly more than type Bs with a justified payment in *Competition* (1.27) (Mann-Whitney test, $p = 0.045$). The data reveal a highly significant difference when comparing

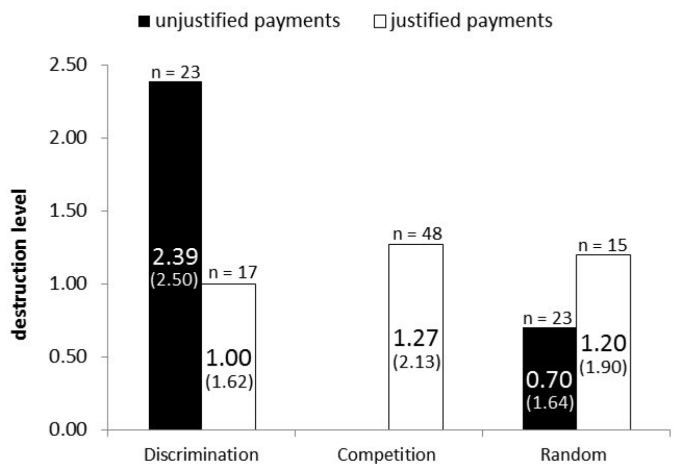
[14]The calibration is based on subjects' precision in our control treatments *Competition*, and *Random*.

[15]We asked all subjects about their belief of their relative performance right after they participated in the real-effort task. At this stage they were not informed on the payment they would receive. The belief elicitation was incentivized, i.e., subjects had to guess in a ranking to which quartile their performance belongs. Subjects received €0.50, if they correctly guessed their quartile.

[16]Type-B workers with an above average high precision achieve a performance (28.22) which is significantly higher compared to low-precision types' (16.47) (Mann-Whitney test, $p < 0.001$) and slightly lower than all type As (Mann-Whitney test, $p = 0.083$). Whereas, low-precision type Bs achieve a performance which is significantly lower compared to all type As (Mann-Whitney test $p < 0.001$).

type Bs' destruction levels in *Discrimination* to the destruction levels of all (justifiably-paid) subjects in *Competition* (0.93) (Mann-Whitney test, $p = 0.007$). When focusing on unjustifiably-paid workers in a non-discriminatory pay regime, that is the *Random* treatment, we find that destruction levels are significantly lower (0.70) than in *Discrimination* (Mann-Whitney test, $p = 0.051$).

Figure 4: Destruction levels under "unjustified payments" and "justified payments"



No treatment effect can be observed in the destruction levels of justifiably-paid subjects between *Discrimination* and *Random* (Mann-Whitney test, $p = 0.898$). We conclude that it is not only the receipt of an unjustified payment which frustrates workers per se. Instead, workers become antisocial when unjustified payments result from discriminatory pay regimes.

Result 3:
(a) Unjustifiably-paid workers behave more antisocially than justifiably-paid workers.
(b) Unjustifiably-paid workers destroy more vouchers under a discriminatory pay regime compared to a non-discriminatory pay regime.

3.4 Regression analyses

In the previous analyses, we found that inequality aversion can only explain workers' motivation to destroy in non-discriminatory pay regimes. Furthermore, the analysis revealed that unjustified payments trigger antisocial behavior in discriminatory pay regimes.

To better understand the functional interplay of discrimination, unjustified payments and individual inequality aversion we now conduct ordered Probit regressions on destruction levels (Table 3). The dependent variable of our models corresponds to the number of destroyed vouchers (0-6). The regressions include treatment dummies (*Discrimination*,

Table 3: Treatment effects on destruction behavior of type B

	destruction level of type-B workers				
	(1)	(2)	(3)	(4)	(5)
Discrimination	0.435*	0.771**	0.192	-0.201	-0.229
	(0.259)	(0.379)	(0.463)	(0.817)	(0.847)
Random	-0.082	0.121	-0.281	-0.721	-0.802
	(0.280)	(0.383)	(0.437)	(0.827)	(0.843)
Unj. Discrimination			0.973**	1.749**	1.786**
			(0.493)	(0.850)	(0.837)
Unj. Random			0.782	0.189	0.175
			(0.513)	(0.824)	(0.844)
Inequality Aversion					
Alpha	0.184***	0.176***	0.183***	0.175	0.162
	(0.063)	(0.063)	(0.065)	(0.108)	(0.106)
Beta	-0.798**	-0.794**	-0.986**	-1.366	-1.385
	(0.358)	(0.363)	(0.386)	(0.873)	(0.863)
Matching with type A					
Matched A15		0.649*	0.675*	0.707*	0.705*
		(0.386)	(0.397)	(0.408)	(0.404)
Matched A15 × Discrimination		-0.588	-0.299	-0.309	-0.271
		(0.520)	(0.633)	(0.646)	(0.650)
Matched A15 × Random		-0.348	1.039	1.003	0.175
		(0.560)	(0.658)	(0.704)	(0.844)
Matched A15 × Unj. Discrimination			-0.453	-0.354	-0.399
			(0.702)	(0.757)	(0.752)
Matched A15 × Unj. Random			-2.411***	0.189	-1.990
			(0.881)	(0.842)	(0.880)
Pseudo R^2	0.053	0.064	0.103	0.115	0.117
Obs.	126	126	126	126	126
Inequality-Aversion Interactions	NO	NO	NO	YES	YES
Covariates	NO	NO	NO	NO	YES

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Random) which are positive for the corresponding treatment. The omitted treatment is the *Competition* treatment where all payments are justified. All regressions control for subjects' aversion to disadvantageous inequality (*Alpha*) and advantageous inequality (*Beta*). Model (2) analyzes the effect of the matched type A on B's decision to destroy, i.e., *Matched A15* is a dummy which is positive (zero) for a type A15 (A5). The model also adds interactions between *Matched 15* and the treatment dummies. In Model (3) we incorporate dummies which analyze the effect of receiving unjustified payments in *Discrimination* (*Unj. Discrimination*) and *Random* (*Unj. Random*). We refer to our classification applied in Section 3.3 i.e., the dummies are 1 (0) for an above-median (below-median) precision in the task. The regression also controls for interaction effects of unjustified payments when matched with a certain type A. Model (4) analyzes interactions between the inequality-aversion parameters, the treatment dummies, and the unjustified dummies. Due to space limitations we report these interactions in the Appendix. None of these interactions are significant.

Models (1)–(2) show that type-B workers who received an unjustified payment in *Discrimination* destroy significantly higher levels than all type-B workers in *Competition*. By contrast, *Random* is never significant, i.e., no treatment effects can be found between the destruction behavior of low-income workers in *Random* and *Competition*. Model (2) finds that the treatment effect between *Discrimination* and *Competition* is robust when controlling for the income of matched type As. Generally, subjects destroy moderately more vouchers from type-A workers who earned €15. However, the interactions of *Matched A15* with *Discrimination* and *Random* are both insignificant. Thus, only type Bs in *Competition* destroy more from A15s. This is emphasized by a Pearson's rank correlation coefficient between destruction level and *Matched A15* which is only significant in *Competition* but not in *Discrimination* and *Random*.[17]

A conspicuous finding in Model (3) is that the treatment dummy *Discrimination* becomes insignificant as soon as we control for the impact of unjustified payments. At the same time, *Unj. Discrimination* is significant and positive. Hence, the treatment effect reported in Models (1) and (2) is obviously driven by type-B workers who received an unjustified payment in *Discrimination*. By contrast, we find no significant difference between unjustifiably-paid workers in *Random* and all type-B workers in *Competition*, i.e., *Unj. Random* is insignificant. This again confirms our previous results of Section 3.3. Turning to the interactions with type As, we find that the significant effect of unjustifiably-paid type Bs is independent of the matching type, which we conclude from the insignificant interaction *Matched A15* × *Unj. Discrimination*. By contrast, *Matched A15* × *Unj. Random* is negative and highly

[17]Competition: $\rho = 0.267$; $p = 0.067$; Discrimination: $\rho = 0.112$; $p = 0.490$; Random: $\rho = 0.184$; $p = 0.268$.

significant. Thus, unjustifiably-paid type-B workers in *Random* who are matched with A15, destroy significantly less than all other type-B workers.

Focusing on inequality aversion, we generally find in Models (1)–(3) that type Bs who are averse to disadvantageous inequality destroy more as *Alpha* is positive and significant. At the same time, workers who are averse towards advantageous inequality destroy less, i.e., *Beta* is negative and significant. Importantly, this pattern vanishes in Model (4) where we interact the inequality-aversion parameters with the treatment dummies and the dummies of subjects who received unjustified payments. The treatment effect between unjustifiably-paid workers in *Discrimination* and *Competition* is robust;, that is positive and significant. Model (5) highlights that the latter finding also holds when controlling for covariates such as *female*, *age*, and *economics students*. None of these covariates is significant. This confirms the results we observed in Section 3.2. In *Discrimination* workers' antisocial behavior is not motivated by inequality aversion. Instead, unjustified payments matter.

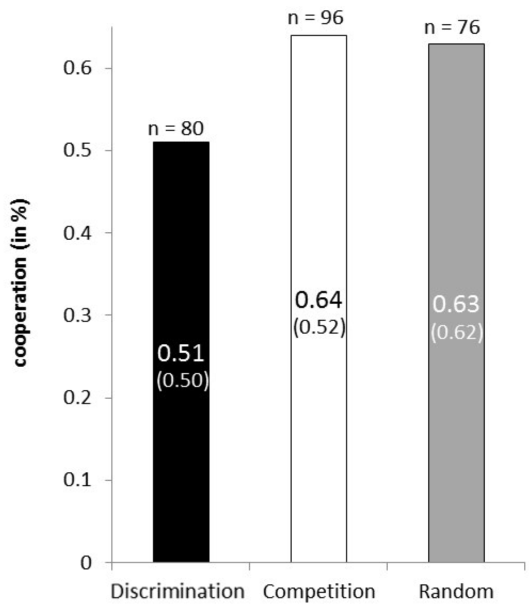
3.5 Effects on cooperation

Our main results demonstrated that discrimination leads to more pronounced differences in antisocial behavior compared to non-discriminatory pay regimes. In this section, we will test Hypothesis III and assess if discrimination affects cooperative behavior as well. Cooperative behavior is measured by using a sequential prisoner's dilemma game which we played after subjects made their decisions in the JoD. Therefore, these results might be interpreted as longterm consequences on cooperative behavior and the work climate in general. Figure 5 reports first-mover cooperation levels (standard deviations in parentheses).
It can be seen that average cooperation rate is not significantly different in the non-discriminatory pay regimes, i.e., 64% of the subjects cooperate in *Competition* and 63% of the subjects cooperate in *Random* ($\chi 2(1) = 0.003$, $p = 0.959$). In contrast, in *Discrimination* workers show a lower degree of cooperation (51%). The difference is weakly significant ($\chi 2(1) = 3.330$, $p = 0.068$). No treatment differences can be found for second-mover cooperative behavior.[18]

Result 4:
After experiencing a discriminatory pay regime, workers show lower cooperation levels compared to non-discriminatory pay regimes.

[18] In *Discrimination* 65% of the second-movers are cooperating, 66% in *Competition*, and 68% in *Random*.

Figure 5: Share of cooperating subjects (in %) across treatments



3.6 Post-experimental questionnaire

After the experimental session, we conducted an ex-post questionnaire where subjects had to rate their fairness perception of the payment modalities in the experiments. Moreover, we asked subjects who destroyed vouchers for their motivations to destroy.

Fairness perception

To elicit the fairness perceptions of payment regimes we asked participants: "How fair have you perceived your payment from stage 2 in the experiment (counting task)? Decide on a scale from 1 to 10, whereas 1 signifies very unfair and 10 represents very fair. With the values in between you can grade your answer."

We find in all treatments that type-A workers report a higher degree of perceived fairness (*Discrimination:* 7.13; *Competition:* 7.54; *Random:* 6.97) as compared to type-B workers (*Discrimination:* 3.45; *Competition:* 4.96; *Random:* 3.74). Mann-Whitney tests between reported levels of type As and Bs are highly significant (all comparisons $p < 0.001$). No treatment differences can be found between the reported levels of type As (all comparisons $p > 0.277$). Turning to type-B workers we find that subjects in the *Discrimination* treatment report a significantly lower perceived fairness than in *Competition* (Mann-Whitney test, $p = 0.002$) and *Random* (Mann-Whitney test, $p = 0.020$). Hence, the reported perceptions indicate that type-B workers in *Discrimination* might experience highest *frustration.* This is in line with our previous findings that low-income workers become more antisocial under discriminatory pay regimes compared to non-discriminatory pay regimes. The significant lower level of perceived fairness in *Random* may be due to the fact that workers could be disappointed when having no influence on their payments.

Stated reasons to destroy

All participants were asked about their reasons to destroy or not to destroy. We adjusted the selection of answers for the two different actions. The reason that the payment was perceived as unfair was majorly stated by 36% of type-B workers under *Discrimination*. In the competitive environment, the majority of participant Bs (38%) justified their decision by referring to the existence of the random destroy parameter as an excuse. Hence, those subjects argued that even if they would not have destroyed vouchers, it could have happened that the computer destroyed vouchers from the matched partner. In all treatments, 30% of As and Bs explained to not having destroyed vouchers because they were satisfied with their performance.

To learn more on the external validity of our findings, we now investigate if destroying vouchers in the JoD game may be a proxy for antisocial behavior in the field in the next section.

3.7 Personality traits and destructive behavior

Heterogeneity in personality traits can be a motive of destructive behavior. We proxy different dimensions of personality with a reduced version of the widely used measure called Big-5 or NEO Five Factor Inventory (Costa and McCrae, 1989). Meta-analyses from empirical studies have demonstrated that the traits conscientiousness, agreeableness and neuroticism can be linked to antisocial behavior at the workplace (Jones et al., 2011; Miller and Lynam, 2001). Based on these studies, we briefly describe the traits and the predicted effect for antisocial behavior in the following paragraph.

Persons that score high in conscientiousness have increased control over themselves and act planned rather than spontaneously (Caspi et al., 2005). Our hypothesis is therefore that the more conscientious people are the less they will destroy. We predict a similar effect for the trait agreeableness, as it reflects kindness, empathy and trusting behavior. We expect a negative relationship for the trait neuroticism since a high score suggests emotional instability and a tendency to experience anger and anxiety.

Table 4 presents ordered probit regressions on the impact of Big-5 personality traits on destructive behavior for type-B workers. The dependent variable is the amount of vouchers destroyed of the matched partner and ranges from zero to six. Spearman's rank corre-

Table 4: The effect of personality traits on antisocial behavior

	destruction level of type-B workers			
	(1)	(2)	(3)	(4)
BIG-5 neuroticism	0.026**	0.030**		
	(0.013)	(0.013)		
BIG-5 agreeableness			-0.046**	-0.055***
			(0.018)	(0.019)
BIG-5 conscientiousness			-0.014	-0.012
			(0.017)	(0.017)
Random	-0.224	-0.236	-0.291	-0.327
	(0.280)	(0.278)	(0.279)	(0.283)
Discrimination	0.424*	0.480*	0.436	0.493*
	(0.253)	(0.265)	(0.278)	(0.288)
Pseudo R^2	0.017	0.048	0.036	0.048
Observations	126	126	126	126
Covariates	NO	YES	NO	YES

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

lation coefficient tests reveals that the trait *neuroticism* is correlated with *agreeableness* ($\rho = -0.271$, $p < 0.001$). Therefore, we run separate regressions for these character traits. We include treatment dummies in all regressions and control for age, gender and economics student in model specifications (2) and (4). In all four Models, we include treatment dummies.

Regressions (1) and (2) confirm that higher emotional stability (lower score in *neuroticism*) leads to more destructive behavior. Higher ranks in the traits agreeableness lead to significantly less destruction in the JoD game. Also higher ranks in conscientiousness lead to less antisocial behavior in our set-up but not significantly. All personality effects are in line with our hypotheses. This way we suggest that destruction behavior in our experimental set-up may be indeed comparable to antisocial behavior in companies (Jones et al., 2011; Miller and Lynam, 2001).

Result 4:

The Big-5 personality traits neuroticism and agreeableness predict destructive behavior in the JoD game.

4 Conclusion

In this paper, we analyzed the impact of discrimination at the workplace on employee frustration and ultimately on employees' engagement in antisocial behavior. Generally, we find that a substantial fraction of workers engages in antisocial behavior which is in line with other experiments in this area (e.g., Abbink and Sadrieh 2009; Abbink and Herrmann 2011; Charness et al. 2013; Fehr 2016). In a discriminatory pay regime half of the low-income workers destroy vouchers of a high-income coworker. Moreover, low-income workers destroy the highest number of vouchers under a discriminatory pay regime compared to low-income workers under a non-discriminatory pay regime. Interestingly, we find that low-income workers behave just as high-income workers as soon as equal opportunities among the workforce are guaranteed. More precisely, a competitive pay regime seems to make low-income workers accept their payment as they engage less in antisocial actions and show more cooperative behavior compared to workers in a discriminatory pay regime. The questionnaire showed that workers in a competition report a higher perceived fairness of the payment regime compared to workers under a discriminatory pay regime.

At first, this insight may be surprising as competitive-market structures are often opposed to cooperative behavior (Buser and Dreber 2015; Goette et al. 2012; Grosch et al. 2017). We contribute to this literature in showing that a discriminatory pay regime can be even worse in terms of (anti-)social interactions between coworkers than a competitive pay regime. In this respect, competitive-market structures may work as a transparent remuneration mechanism mitigating antisocial behavior of low-income workers. The reason is that all workers in such a pay regime face equal opportunities for job promotions or bonuses.

A closer look reveals that in non-discriminatory pay regimes, antisocial behavior can be partly predicted by individual social preferences in form of aversion to disadvantageous inequality (Zizzo 2003). More precisely, low-income workers who are highly inequality averse destroy more vouchers from a high-income worker in a regime without discrimination. Remarkably, in a regime with discrimination inequality aversion is not the driving factor. Here, especially unjustifiably-paid workers, that is workers who received a lower payment than deserved by performance, become more antisocial than justifiably-paid workers. Using a stylized control treatment called *Random* without discrimination but possible unjustified payments, allows us to disentangle the effect of unjustified payments from discrimination. The comparison to the *Random* treatment reveals that only unjustified *and* discriminated low-income workers engage in more antisocial actions. As soon as equal opportunities are guaranteed, low-income workers with an unjustified payment do not destroy more than justifiably-paid workers.

We are aware that we report the findings of a stylized laboratory experiment. To strengthen external validity, we successfully linked personality traits, i.e., the Big-5 personality traits, in our analysis with subjects' destructive actions. Taken together with the insights from empirical studies on the impact of personality traits on antisocial behavior (Hershcovis et al., 2007; Jones et al., 2011; Miller and Lynam, 2001) we demonstrate that destructive behavior in our experiment may be similar to antisocial behavior in real life.

Our findings contribute to managerial economics and the design of fair procedures in pay regimes to mitigate worker frustration. A large strand of literature emphasizes that workers' intrinsic motivation is sensitive to the inappropriate use of financial incentives (e.g., Gneezy and Rustichini 2000; Benabou and Tirole 2003; Bowles and Polania-Reyes 2012). We draw on this and show that employees do not only respond negatively to the "wrong" use of financial incentives per se. Instead, we emphasize the importance of the appropriate design of pay institutions and highlight that intransparent pay regimes may cause antisocial behavior. Due to the fact that antisocial behavior often raises high costs, these insights may help to achieve higher workplace efficiency.

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A Appendix

Inequality-aversion interactions for Table 3

	destruction level of type-B workers				
	(1)	(2)	(3)	(4)	(5)
Inequality Aversion					
Alpha	0.184***	0.176***	0.183***	0.175	0.162
	(0.063)	(0.063)	(0.065)	(0.108)	(0.106)
Beta	-0.798**	-0.794**	-0.986**	-1.366	-1.385
	(0.358)	(0.363)	(0.386)	(0.873)	(0.863)
Alpha x Unj. Base				-0.163	-0.152
				(0.242)	(0.242)
Beta x Unj. Base				-1.018	-1.068
				(1.199)	(1.203)
Alpha x Unj. Random				-0.127	-0.0998
				(0.204)	(0.203)
Beta x Unj. Random				1.243	1.012
				(1.136)	(1.182)
Pseudo R^2	0.053	0.064	0.103	0.115	0.117
Obs.	126	126	126	126	126
Covariates	NO	NO	NO	NO	YES

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

B Appendix (Experimental Instructions)

Introduction

Welcome to the experiment. We are glad that you made time for participating today. Participants earn at least €5 today. Depending on your decisions and the decisions of the other participants, you may earn additional money during the experiment. We guarantee your anonymity during and after the experiment. Please do not talk to other participants and switch off your mobile phone. The experiment contains a small questionnaire, the experiment with four phases and a concluding questionnaire. You will get instructions at the beginning of each phase. Please look at your display now and answer the following questions.

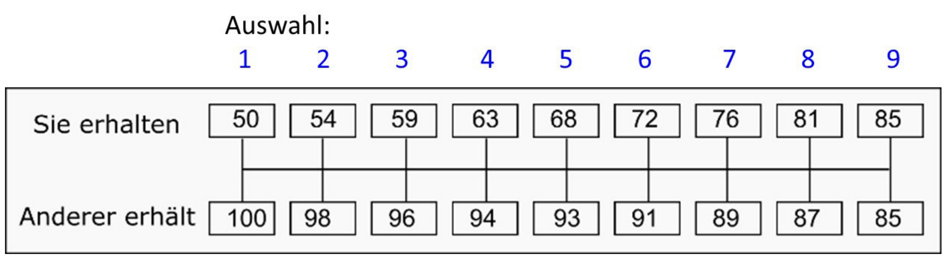
Phase 1

Phase 1a [Social value orientation]

We will now start with the instructions for phase 1. It contains three parts: 1a, 1b and 1c. Please press "ok" and we will start with the instructions for phase 1a. Here, the computer will randomly match you with another participant. Then, you and the matched participant will simultaneously face multiple decisions. The identity of you and the matched partner will not be revealed during or after the experiment. Decisions will be made in Tokens with an exchange rate of 1 Token = 0.02 Euro. You will face six different decision sets. The decision sets hold different payoffs for you and the matched participant. Below you can see a possible example. Your personal payoff is displayed in the upper row "Sie erhalten" ("You receive"). The payoff of the matched participant is displayed in the lower row "Anderer erhaelt" ("Other receives"). You can choose between nine different allocations of Token between you and the other participant. In each of the six situations, you have to choose one of the nine possibilities.

We describe two examples based on the decision set below: If you chose 2, you would receive 54 Token. The matched participant would receive 98 Token.

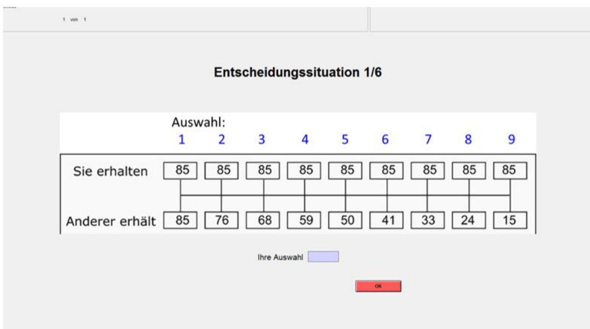
If you chose 6, you would get 72 Token. The matched participant would get 91 Token.

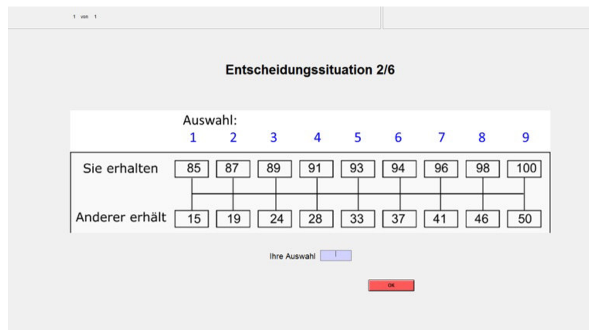


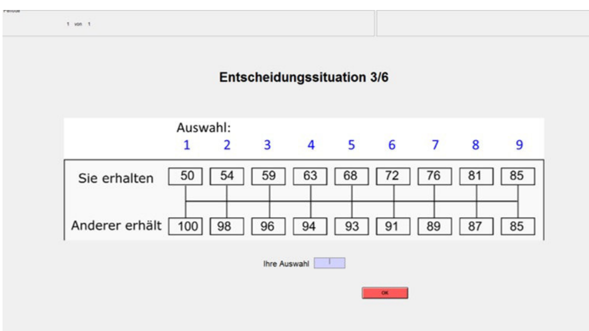
Role of A and B: The person in role A decides actively about money allocations. The person in role B is passive and has to accept A's decision. Each participant will decide in role A. At the end of the experiment, the computer will randomly assign you role A or role B (equally for the matched participant). If you get assigned to role A, your active decision determines the payoffs and the matched participant has to accept the allocation. Similarly, if you get assigned to role B, the matched participant is active (and you are passive) and his/her decision determines the payoffs.

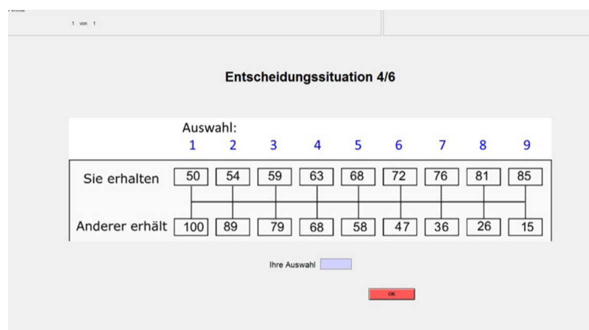
Payoff: At the end of this phase the computer randomly draws one of the six decision sets for payment. Moreover, the computer randomly assigns role A and role B within the dyads. At the end for payment, Tokens will be converted to Euro. We will inform you about the chosen decision set and which role (A or B) was assigned to you at the very end of the experiment. Furthermore, you will learn about the resulting payoff of phase 1a. Please raise your hand if you have any questions. If that is the case, we will come to your cabin to answer your question in private. After all participants finished reading and all questions are answered, we will start with decision-making in phase 1a.

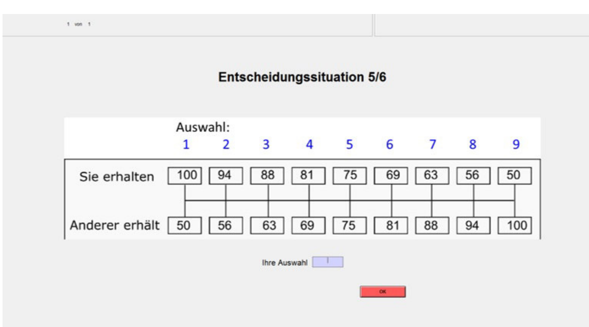
Decision-making

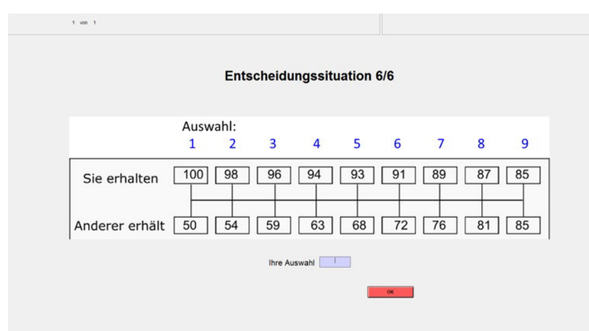












[Translation: Sie erhalten = You receive; Anderer erhält = Other person receives; Ihre Auswahl = Your choice]

Phase 1b [Inequality aversion (beta)]

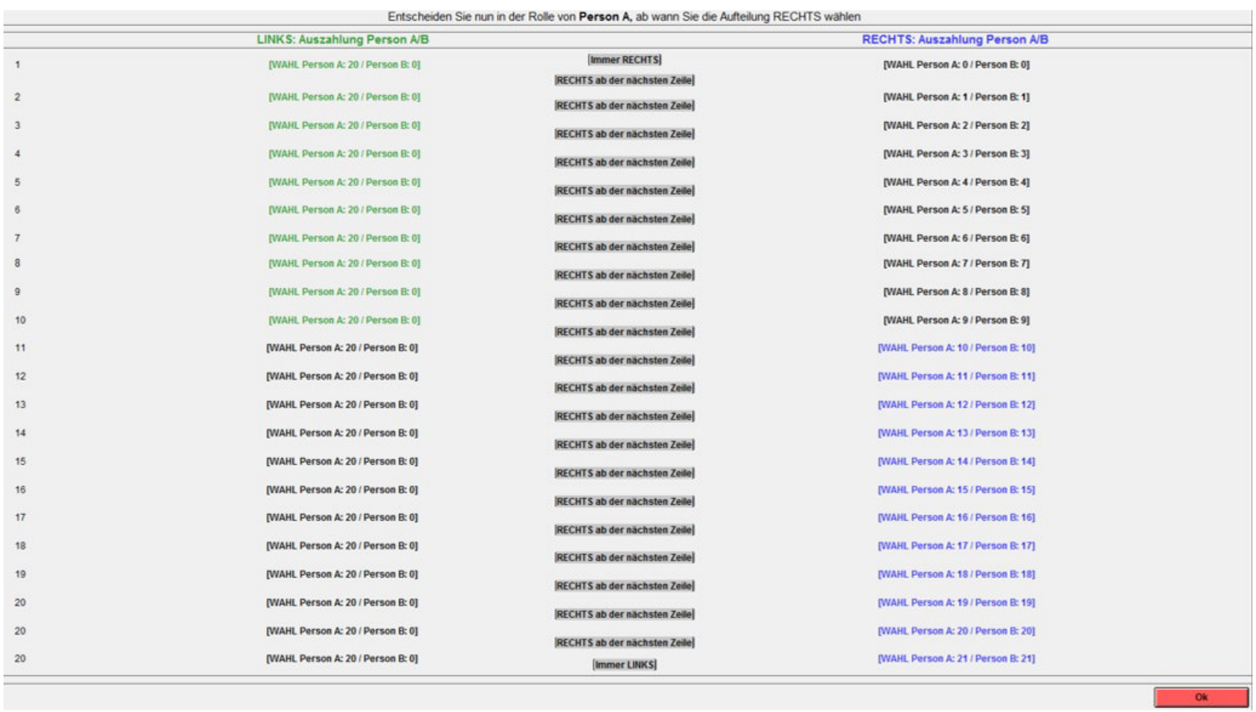
We will now start with the instructions for phase 1b. In this phase the computer will randomly match you with another participant. Afterwards you and the matched participant will simultaneously face multiple decisions. The identity of the matched partner will not be revealed during or after the experiment. Your decisions will be made in Token. The exchange rate is 1 Token = 0.15 Euro. In this phase the person in role A will choose between two possible distributions of Token between him-/herself and another person in role B. There are 22 decision situations. Please read the following sections carefully before making your decision.
The decision sets will be displayed in a table. Below you can see an example which is an excerpt from the table. You will decide in role A. For the problem displayed below the choice of LINKS [Translation: links = left] results in an outcome of 20 Token for yourself. The choice of RECHTS [Translation: rechts = right] results in an equal outcome for you and participant in role B of 5 Token each.]

The decision problems will be displayed in a table encompassing 22 decision sets. Below you can see a screen shot of the table.
One single decision is relevant for all 22 decision situations: As you can see below the left distribution is always the same for each of the 22 situations. You earn 20 Token and person B receives 0 Token. The distributions on the right are always distributions with equal payment of you and person B. By clicking on RECHTS AB DER NÄCHSTEN ZEILE RECHTS [Translation: rechts ab der nächsten Zeile = right from the next row on) you can decide from which distribution onwards you would prefer to choose distributions on the right. This means you decide for LINKS in all previous lines. The decision from LINKS to RECHTS automatically influences all 22 decision situations.] After clicking the button the lines will be colored accordingly: All decisions you chose LINKS will be marked green and all decisions you chose RECHTS will be marked blue.

Roles A and B: The person in role A has to decide between two possible distributions of Token between him-/herself and person B. The person in role A can decide actively, whereas the person in role B is passive and has to accept the decision of A. Each participant decides in role A. At the end of the experiment the computer will randomly assign the roles A and B within the dyads. If you get assigned to role A, your decisions will determine the outcome. The matched participant will be in role B in this case and has to accept your chosen distribution. If you are assigned to role B, the matched participant acts as person A and his/her decision will be implemented. You have to accept this decision in this case.

Payoff: The computer will randomly draw one of the 22 decision sets at the end of the phase. The drawn decision set is the one that will be relevant for your payoff in this phase. Furthermore, the computer will select if your own decision (role A) or the matched participant's decision will determine the payoffs. For payment, Tokens will be converted to Euro. We will inform you about the chosen decision situation at the end of the experiment. In addition, we will inform you if you were randomly assigned to role A or role B. Furthermore you will learn the resulting payoff for phase 1b. Please raise your hand if you have any questions. If that is the case, we will come to your cabin to answer your question in private. After all participants finished reading and all questions are answered we will start with phase 1c.

Decision-making



[Translation: Links: Auszahlung Person A/B = left: payoff person A/B; Rechts: Auszahlung Person A/B = right: payoff person A/B; immer rechts = always right; RECHTS ab der nächsten Zeile = right from the next row on forwards]

Phase 1c [Inequality Aversion (alpha)]

We will now start with the instructions for phase 1c. In this phase the computer will randomly assign a partner to you. Afterwards you and the matched participant will simultaneously face multiple decisions. The identity of the matched participant will not be revealed during or after the experiment. Your decisions will be made in Token. The exchange rate is 1 Token = 0.15 Euro.

In this phase all participants decide first as person A and afterwards as person B. Person A has to choose one of 20 possible distributions of Token between him-/herself and the assigned partner. Person B can either accept or reject the distribution person A will choose. If person B accepts the proposed distribution, this distribution will determine the payoffs. If person B rejected the distribution, both persons receive 0 Token. The computer will randomly select the two participants in a dyad into the roles of person A and B.

Please read all of the following sections carefully before making your decision. First you decide in the role of person A which share of 20 Token you want to offer person B. Afterwards you have to decide as person B which of the 20 possible distributions you accept and which money distributions you would reject. The decision problems will be displayed in a table. On the next screen we will show you the table. You will see 21 decision sets and you will decide from which distribution onwards you would accept the proposal of person A. After clicking the distributions will be colored accordingly.

One decision is relevant for all 21 situations: You can see below that on the left side all possible distributions of the 20 Token are displayed. If you decide to click on Annahme ab der nächsten Zeile [Translation: Annahme ab der nächsten Zeile = accepted distribution from next row onwards] from a particular distribution, this means you are willing to accept all subsequent distributions between person A and yourself. The accepted distributions will be marked green. All previous distributions (where you would get less Token) will be refused. Those are marked blue.

The computer decides randomly if you will be assigned to role A or role B. If you will be in role A you will determine the payoffs if person B accepted your proposed distribution. However, if person B rejected your proposed distribution you and person B get 0 Token. If you will be in role B, you are passive and the other person in role A will determine the payoffs - however, only if you accepted that particular distribution. If that money distribution was rejected according to your choice both you and person B get 0 Token. We will inform you about your role, the decision and your payoff in phase 1c. Please show up if you have any questions. If that is the case, we will come to your cabin to answer your questions. After all participants finished reading and all questions are answered we will start with phase 1c.

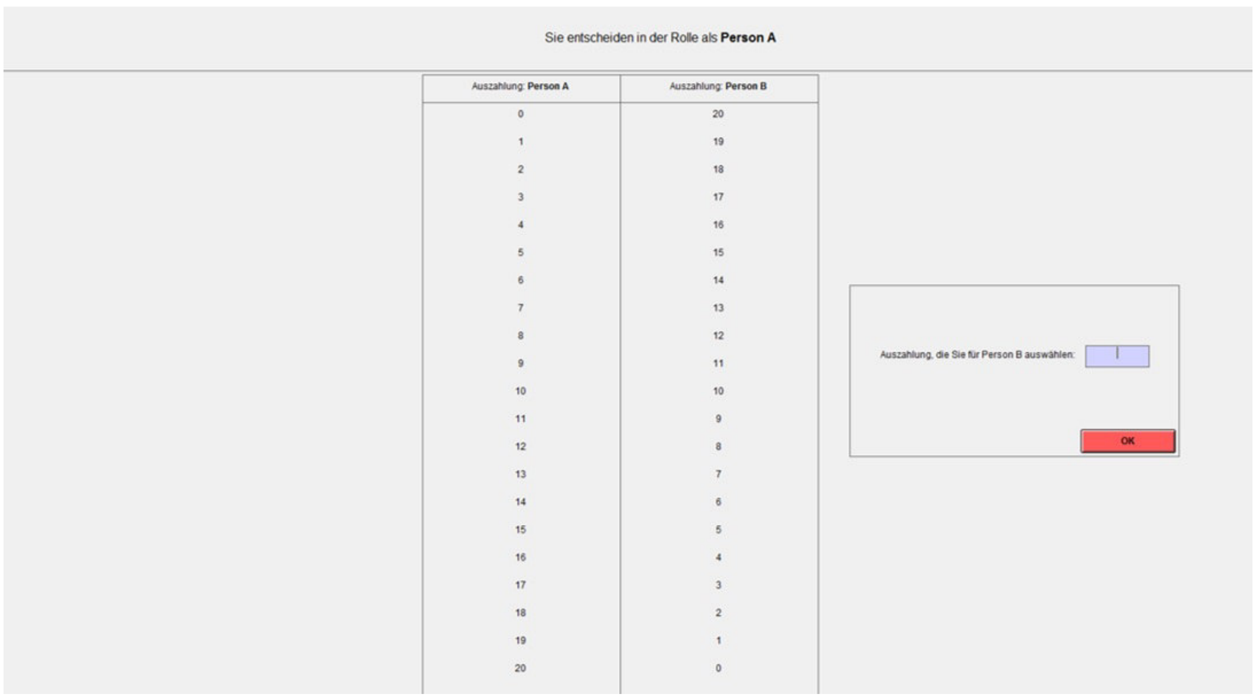
Decision-making

Entscheiden Sie nun in der Rolle von **Person B** ab welcher Zeile Sie annehmen würden

	ANNAHME: Auszahlung Person A/B		ABLEHNUNG: Auszahlung Person A/B
		Immer ANNEHMEN	
1	[ANNAHME Person A: 20 / Person B: 0]		[ABLEHNUNG Person A: 20 / Person B: 0] Beide Personen erhalten 0
		ANNAHME ab der nächsten Zeile	
1	[ANNAHME Person A: 19 / Person B: 1]		[ABLEHNUNG Person A: 19 / Person B: 1] Beide Personen erhalten 0
		ANNAHME ab der nächsten Zeile	
2	[ANNAHME Person A: 18 / Person B: 2]		[ABLEHNUNG Person A: 18 / Person B: 2] Beide Personen erhalten 0
		ANNAHME ab der nächsten Zeile	
3	[ANNAHME Person A: 17 / Person B: 3]		[ABLEHNUNG Person A: 17 / Person B: 3] Beide Personen erhalten 0
		ANNAHME ab der nächsten Zeile	
4	[ANNAHME Person A: 16 / Person B: 4]		[ABLEHNUNG Person A: 16 / Person B: 4] Beide Personen erhalten 0
		ANNAHME ab der nächsten Zeile	
5	[ANNAHME Person A: 15 / Person B: 5]		[ABLEHNUNG Person A: 15 / Person B: 5] Beide Personen erhalten 0
		ANNAHME ab der nächsten Zeile	
6	[ANNAHME Person A: 14 / Person B: 6]		[ABLEHNUNG Person A: 14 / Person B: 6] Beide Personen erhalten 0
		ANNAHME ab der nächsten Zeile	
7	[ANNAHME Person A: 13 / Person B: 7]		[ABLEHNUNG Person A: 13 / Person B: 7] Beide Personen erhalten 0
		ANNAHME ab der nächsten Zeile	
8	[ANNAHME Person A: 12 / Person B: 8]		[ABLEHNUNG Person A: 12 / Person B: 8] Beide Personen erhalten 0
		ANNAHME ab der nächsten Zeile	
9	[ANNAHME Person A: 11 / Person B: 9]		[ABLEHNUNG Person A: 11 / Person B: 9] Beide Personen erhalten 0
		ANNAHME ab der nächsten Zeile	
10	[ANNAHME Person A: 10 / Person B: 10]		[ABLEHNUNG Person A: 10 / Person B: 10] Beide Personen erhalten 0
		ANNAHME ab der nächsten Zeile	
11	[ANNAHME Person A: 9 / Person B: 11]		[ABLEHNUNG Person A: 9 / Person B: 11] Beide Personen erhalten 0
		ANNAHME ab der nächsten Zeile	
12	[ANNAHME Person A: 8 / Person B: 12]		[ABLEHNUNG Person A: 8 / Person B: 12] Beide Personen erhalten 0
		ANNAHME ab der nächsten Zeile	
13	[ANNAHME Person A: 7 / Person B: 13]		[ABLEHNUNG Person A: 7 / Person B: 13] Beide Personen erhalten 0
		ANNAHME ab der nächsten Zeile	
14	[ANNAHME Person A: 6 / Person B: 14]		[ABLEHNUNG Person A: 6 / Person B: 14] Beide Personen erhalten 0
		ANNAHME ab der nächsten Zeile	
15	[ANNAHME Person A: 5 / Person B: 15]		[ABLEHNUNG Person A: 5 / Person B: 15] Beide Personen erhalten 0
		ANNAHME ab der nächsten Zeile	
16	[ANNAHME Person A: 4 / Person B: 16]		[ABLEHNUNG Person A: 4 / Person B: 16] Beide Personen erhalten 0
		ANNAHME ab der nächsten Zeile	
17	[ANNAHME Person A: 3 / Person B: 17]		[ABLEHNUNG Person A: 3 / Person B: 17] Beide Personen erhalten 0
		ANNAHME ab der nächsten Zeile	
18	[ANNAHME Person A: 2 / Person B: 18]		[ABLEHNUNG Person A: 2 / Person B: 18] Beide Personen erhalten 0
		ANNAHME ab der nächsten Zeile	
19	[ANNAHME Person A: 1 / Person B: 19]		[ABLEHNUNG Person A: 1 / Person B: 19] Beide Personen erhalten 0
		ANNAHME ab der nächsten Zeile	
1	[ANNAHME Person A: 0 / Person B: 20]		[ABLEHNUNG Person A: 0 / Person B: 20] Beide Personen erhalten 0
		Nie ANNEHMEN	

Ok

Decision-making



[Translation: Sie entscheiden in der Rolle als Person A = You decide in the role of person A; Auszahlung Person A = payoff person A; Auszahlung, die Sie für Person B auswählen = Payoff, you choose for person B]

Entscheiden Sie nun in der Rolle von **Person B** ab welcher Zeile Sie annehmen würden

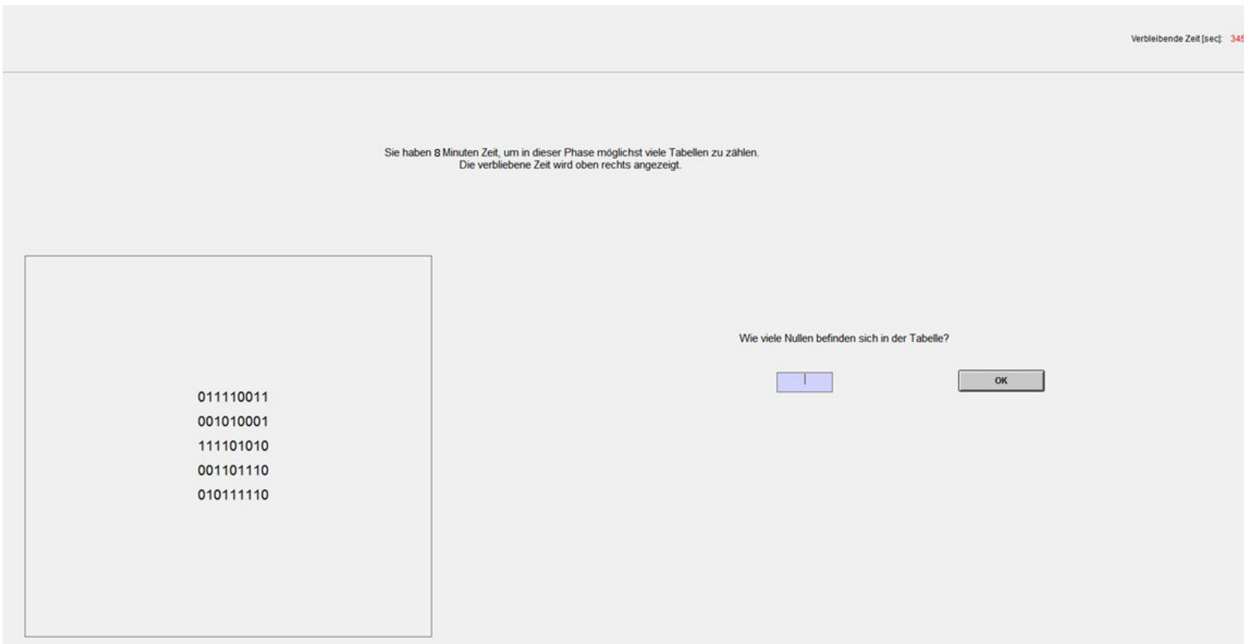
	ANNAHME: Auszahlung Person A/B		ABLEHNUNG: Auszahlung Person A/B
		[Immer ANNEHMEN]	
1	[ANNAHME Person A: 20 / Person B: 0]		[ABLEHNUNG Person A: 20 / Person B: 0] Beide Personen erhalten 0
		[ANNAHME ab der nächsten Zeile]	
1	[ANNAHME Person A: 19 / Person B: 1]		[ABLEHNUNG Person A: 19 / Person B: 1] Beide Personen erhalten 0
		[ANNAHME ab der nächsten Zeile]	
2	[ANNAHME Person A: 18 / Person B: 2]		[ABLEHNUNG Person A: 18 / Person B: 2] Beide Personen erhalten 1
		[ANNAHME ab der nächsten Zeile]	
3	[ANNAHME Person A: 17 / Person B: 3]		[ABLEHNUNG Person A: 17 / Person B: 3] Beide Personen erhalten 0
		[ANNAHME ab der nächsten Zeile]	
4	[ANNAHME Person A: 16 / Person B: 4]		[ABLEHNUNG Person A: 16 / Person B: 4] Beide Personen erhalten 0
		[ANNAHME ab der nächsten Zeile]	
5	[ANNAHME Person A: 15 / Person B: 5]		[ABLEHNUNG Person A: 15 / Person B: 5] Beide Personen erhalten 0
		[ANNAHME ab der nächsten Zeile]	
6	[ANNAHME Person A: 14 / Person B: 6]		[ABLEHNUNG Person A: 14 / Person B: 6] Beide Personen erhalten 0
		[ANNAHME ab der nächsten Zeile]	
7	[ANNAHME Person A: 13 / Person B: 7]		[ABLEHNUNG Person A: 13 / Person B: 7] Beide Personen erhalten 0
		[ANNAHME ab der nächsten Zeile]	
8	[ANNAHME Person A: 12 / Person B: 8]		[ABLEHNUNG Person A: 12 / Person B: 8] Beide Personen erhalten 0
		[ANNAHME ab der nächsten Zeile]	
9	[ANNAHME Person A: 11 / Person B: 9]		[ABLEHNUNG Person A: 11 / Person B: 9] Beide Personen erhalten 0
		[ANNAHME ab der nächsten Zeile]	
10	[ANNAHME Person A: 10 / Person B: 10]		[ABLEHNUNG Person A: 10 / Person B: 10] Beide Personen erhalten 0
		[ANNAHME ab der nächsten Zeile]	
11	[ANNAHME Person A: 9 / Person B: 11]		[ABLEHNUNG Person A: 9 / Person B: 11] Beide Personen erhalten 0
		[ANNAHME ab der nächsten Zeile]	
12	[ANNAHME Person A: 8 / Person B: 12]		[ABLEHNUNG Person A: 8 / Person B: 12] Beide Personen erhalten 0
		[ANNAHME ab der nächsten Zeile]	
13	[ANNAHME Person A: 7 / Person B: 13]		[ABLEHNUNG Person A: 7 / Person B: 13] Beide Personen erhalten 0
		[ANNAHME ab der nächsten Zeile]	
14	[ANNAHME Person A: 6 / Person B: 14]		[ABLEHNUNG Person A: 6 / Person B: 14] Beide Personen erhalten 0
		[ANNAHME ab der nächsten Zeile]	
15	[ANNAHME Person A: 5 / Person B: 15]		[ABLEHNUNG Person A: 5 / Person B: 15] Beide Personen erhalten 0
		[ANNAHME ab der nächsten Zeile]	
16	[ANNAHME Person A: 4 / Person B: 16]		[ABLEHNUNG Person A: 4 / Person B: 16] Beide Personen erhalten 0
		[ANNAHME ab der nächsten Zeile]	
17	[ANNAHME Person A: 3 / Person B: 17]		[ABLEHNUNG Person A: 3 / Person B: 17] Beide Personen erhalten 0
		[ANNAHME ab der nächsten Zeile]	
18	[ANNAHME Person A: 2 / Person B: 18]		[ABLEHNUNG Person A: 2 / Person B: 18] Beide Personen erhalten 0
		[ANNAHME ab der nächsten Zeile]	
19	[ANNAHME Person A: 1 / Person B: 19]		[ABLEHNUNG Person A: 1 / Person B: 19] Beide Personen erhalten 0
		[ANNAHME ab der nächsten Zeile]	
1	[ANNAHME Person A: 0 / Person B: 20]		[ABLEHNUNG Person A: 0 / Person B: 20] Beide Personen erhalten 0
		[Nie ANNEHMEN]	

[Translation: Entscheiden Sie nun in der Rolle von Person B ab welcher Zeile Sie annehmen würden = Decide now in the role of person B from which row on you would accept the distribution; Annahme: Auszahlungen Person A/B = acceptance: payoff person A/B; Ablehnung: Auszahlung Person A/B = rejection: payoff person A/B; Annahme ab der nächsten Zeile = acceptance from next row on; immer annehmen = always accept; immer ablehnen = always reject; Beider Personen erhalten = both persons receive]

Phase 2 [Real-effort task]

[Comment: The instructions for phase 2 were handed out on paper]

[**Treatment Baseline**] In this phase you will participate in a task. Your display will show matrices with the numbers 0 and 1. Below you can see an example:



[Translation: Sie haben 8 Minuten Zeit, um in dieser Phase möglichst viele Tabellen zu zählen. Die verbleibende Zeit wird oben rechts angezeigt. = You have 8 minutes in this phase to count matrices. The time that is left, is displayed on the top left of the screen.; Wie viele Nullen befinden sich in der Tabelle? = How many zeros are in the matrice?]

Your task is to count the zeros in each of those matrices. Please enter your result in the box below "How many zeros are in the matrix?". Afterwards a dialogue box saying "Please start now with the next matrix" will be displayed. Press "o". A new matrix will pop up. Your old result will still be in the result box. Please, simply delete it. You will have 8 minutes for this task.

Payoff of the task: After finishing the task, the computer will randomly select 12 participants (of 24). Those will be called participants A and rewarded according to the number of correctly counted tables. The other 8 participants are called participants B below and do not get a reward for this task. Participants A will be ranked according to their performance. The more tasks will be solved correctly the higher the ranking. The amount of payment for participants A is linked to the ranking: Ranks 1-6 receive €15 cash each and ranks 7-12 receive €5 cash each. The payment of the task will take place right after completion. All

24 participants will be handed in an envelope. If you are a participant A, the envelope will contain money.

- You receive €15 if your performance is ranked 1-6. Furthermore you get a card with a note that you are a participant A.
- You receive €5 if your performance is ranked 7-12. Furthermore you get a card with a note that you are a participant A.

If the computer randomly draws you as a participant B your envelope will not contain money, but a note that you are participant B.

[**Treatment: Competition**]
In this phase you will participate in a task. Your display will show matrices with the numbers 0 and 1. Below you can see an example:
(Translation: Sie haben 8 Minuten Zeit, um in dieser Phase möglichst viele Tabellen zu zählen. Die verbleibende Zeit wird oben rechts angezeigt. = You have 8 minutes in this phase to count matrices. The time that is left, is displayed on the top left of the screen.; Wie viele Nullen befinden sich in der Tabelle? = How many zeros are in the matrice?)
Your task is to count the zeros in each of those matrices. Please enter your result in the box below How many zeros are in the matrix?. Afterwards a dialogue box saying Please start now with the next matrix will be displayed. Press "ok". A new matrix will pop up. Your old result will still be in the result box. Please, simply delete it. You will have 8 minutes for this task.

Payoff of the task: After finishing the task the computer will calculate the ranking of all participants. The more tasks are solved correctly the higher the ranking. The participants on the first 12 ranks will be called participants and rewarded according to their ranking. The other 12 participants are called participants B.
The amount of payment for participants A is linked to the ranking: Ranks 1-6 receive €15 cash each and ranks 7-12 receive €5 cash each. The payment of the task will take place right after finishing. All 24 participants will get an envelope:
If you are a participant A, the envelope will contain money.

- You receive €15 if your performance is ranked 1-6. Furthermore you get a card with a note that you are a participant A.
- You receive €5 if your performance is ranked 7-12. Furthermore you get a card with a note that you are a participant A.

If the computer randomly draws you as a participant B your envelope will not contain money, but a note that you are participant B.

[Treatment: Random] In this phase you will participate in a task. Your display will show matrices with the numbers 0 and 1. Below you can see an example: [Picture comes here in original instructions. As examples were similar across treatments and to economize see for the example in treatment Baseline above]
Your task is to count the zeros in each of those matrices. Please enter your result in the box below How many zeros are in the matrix?. Afterwards a dialogue box saying "Please start now with the next matri" will be displayed. Press "ok". A new matrix will pop up. Your old result will still be in the result box. Please, simply delete it. You will have **8 minutes** for this task.

Payoff of the task: After finishing the task the computer will randomly select 12 participants (of 24). Those will be called Participants A below and rewarded *independently* of the number of tasks solved correctly. The other 12 participants are called Participants B and do not get a reward for this task.
To get the payoff for the participants A the computer creates a random ranking, which is *independent* of the number of tasks solved correctly. The amount of payment for participants A is linked to the ranking: Ranks 1-6 receive €15 cash each and ranks 7-12 receive €5 cash each. The payment of the task will take place right after finishing. Each of the 24 participants will get an envelope: If the computer selected you to be one of the participants A, the envelope will contain money.

- You receive €15 if your randomly assigned performance is ranked 1-6. Furthermore you get a card with a note that you are a participant A.
- You receive €5 if your randomly assigned performance is ranked 7-12. Furthermore you get a card with a note that you are a participant A.

If the computer randomly draws you as a participant B your envelope will not contain money, but a note that you are participant B.

...8 minutes pass by...
Do you think, you will become a participant A? Yes:_, No:_

[Oral information that envelopes will be distributed]

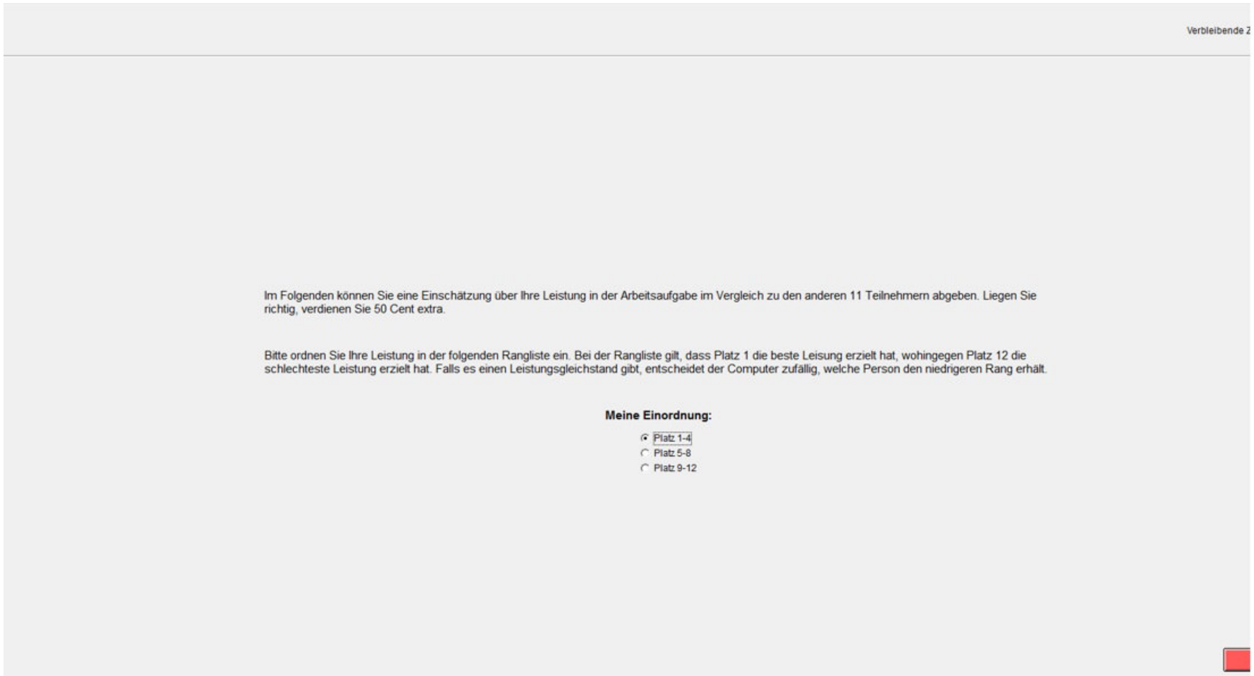


Figure 6: [Translation: In the following, you can give an assumption about your own performance compared to the other 11 participants. If you hit it, you receive €0.50 in addition.]

Phase 3 [Joy of destruction game]

Open your envelope now. Empty the envelope and put it aside. You learn now, if you have been assigned to group A or group B. Information regarding the assigned group, can be found on a laminated card, enclosed in the envelope. If you are a participant A, your ranking can be found on the card's back. Additionally, participant As will find their payment enclosed in the envelope. If you have screened the content of your envelope, press "ok" and we continue to the next phase.

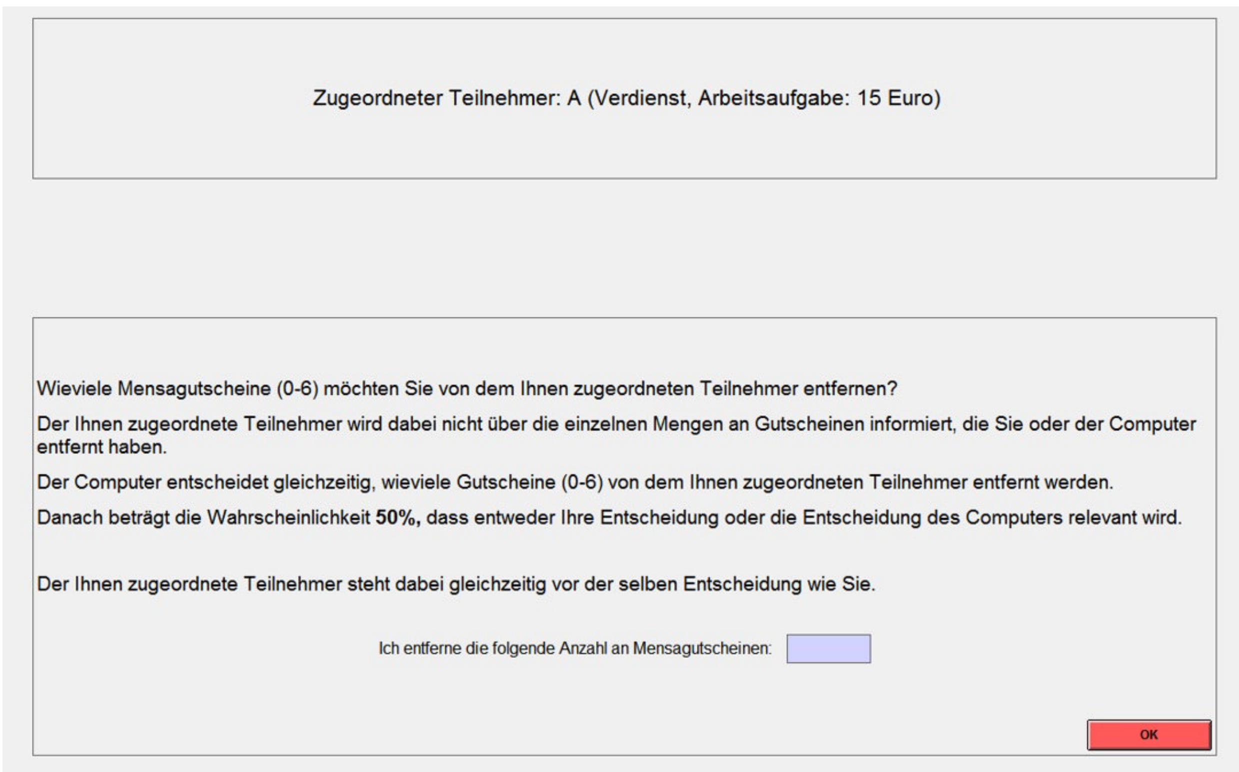
- In phase 3, all participants A and B receive 6 vouchers €1 for the canteen.
- The computer randomly assigns a participant A to a participant B. Complete anonymity is ensured during the experiment as well as after the experiment.
- Both participants decide at the same time, how many vouchers they want to remove from the other participant. Removed vouchers are invalid and will not be received by the participant who removed them. The following amounts of vouchers can be removed: 0, 1, 2, 3, 4, 5, 6.
- Participants B will be informed who much (€5 or €15) the matched participant earned in the counting task.
- Simultaneously the computer decides how many vouchers are removed from the participant assigned to you, as well. Number of vouchers is thereby selected randomly.

Following amounts of vouchers can be removed: 0, 1, 2, 3, 4, 5, 6. They all have the same probability to be selected.

- After you have confirmed your decision, with a probability of 50% either your decision or the computer's decision will become relevant.
- At the end of the experiment, will only learn about the remaining amount of vouchers that they will receive. Thereby, we do not let you know, if the vouchers have been removed by the other participant or from the computer.

Please press "OK" when you are done reading.

Decision-making



Zugeordneter Teilnehmer: A (Verdienst, Arbeitsaufgabe: 15 Euro)

Wieviele Mensagutscheine (0-6) möchten Sie von dem Ihnen zugeordneten Teilnehmer entfernen?

Der Ihnen zugeordnete Teilnehmer wird dabei nicht über die einzelnen Mengen an Gutscheinen informiert, die Sie oder der Computer entfernt haben.

Der Computer entscheidet gleichzeitig, wieviele Gutscheine (0-6) von dem Ihnen zugeordneten Teilnehmer entfernt werden.

Danach beträgt die Wahrscheinlichkeit **50%,** dass entweder Ihre Entscheidung oder die Entscheidung des Computers relevant wird.

Der Ihnen zugeordnete Teilnehmer steht dabei gleichzeitig vor der selben Entscheidung wie Sie.

Ich entferne die folgende Anzahl an Mensagutscheinen:

OK

[Translation: Zugeordneter Teilnehmer: A (Verdienst, Arbeitsaufgabe: 15 Euro) = Assigned participant: A (earnings, task: €15); lower box: How many canteen vouchers (0-6) do you want to remove? The assigned participant will not be informed if you or the computer has destroyed the vouchers. The computer will randomly destroy 0-6 vouchers. With a probability of 50% your decision will be implemented. Otherwise the computer's decision will be implemented. The assigned participant makes a similar decision at the same time. I remove the following amount of canteen vouchers:_____]

Phase 4 [Trust game]

We start with phase 4 now. In this phase, you are randomly assigned to another participant. The participants are called Person 1 and Person 2 during this phase. Your decisions will be made in Token. Thereby, the following exchange rate applies: 1 Token = 0.20 Euro

Your decision: In this phase, you have to decide in both roles (Person 1 and Person 2). Deciding as Person 1, you can choose either LINKS or RECHTS (see image below). In case you choose LINKS, Person 2 has to choose between LINKS and RECHTS, too. In case you choose RECHTS, the game directly ends and Person 2 does not have to choose.

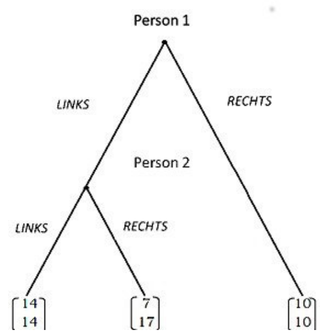


Image: The upper number presents the payment in Token for person 1. The lower number presents the payment in Token for person 2.
In case both persons choose LINKS, both persons receive 14 Token.
If person 1 chooses LINKS and person 2 chooses RECHTS, person 1 receives 7 Token and person 2 17 Token.
If person 1 chooses RECHTS, person 2 cannot choose and both persons receive 10 Token.
You will make your decision in the role of person 1 and person 2. In the last case, you have to decide if you choose LINKS or RECHTS, assuming that person 1 chose LINKS.

Payment: At the end of this stage, the computer will randomly match you with another participant from this room. Furthermore, the computer randomly assigns the two roles to the two persons in the dyad. You will only learn your role at the end but not with whom you were matched. After the matching and assignment of roles, the respective decisions of the two participants will be implemented. Hence, your payment might depend on the decision made by the participant that is matched with you, too.
Please show up if you have any questions. We will turn to you in private to answer any questions. After all participants finished reading, and in case there are no further questions, we will start with phase 4.

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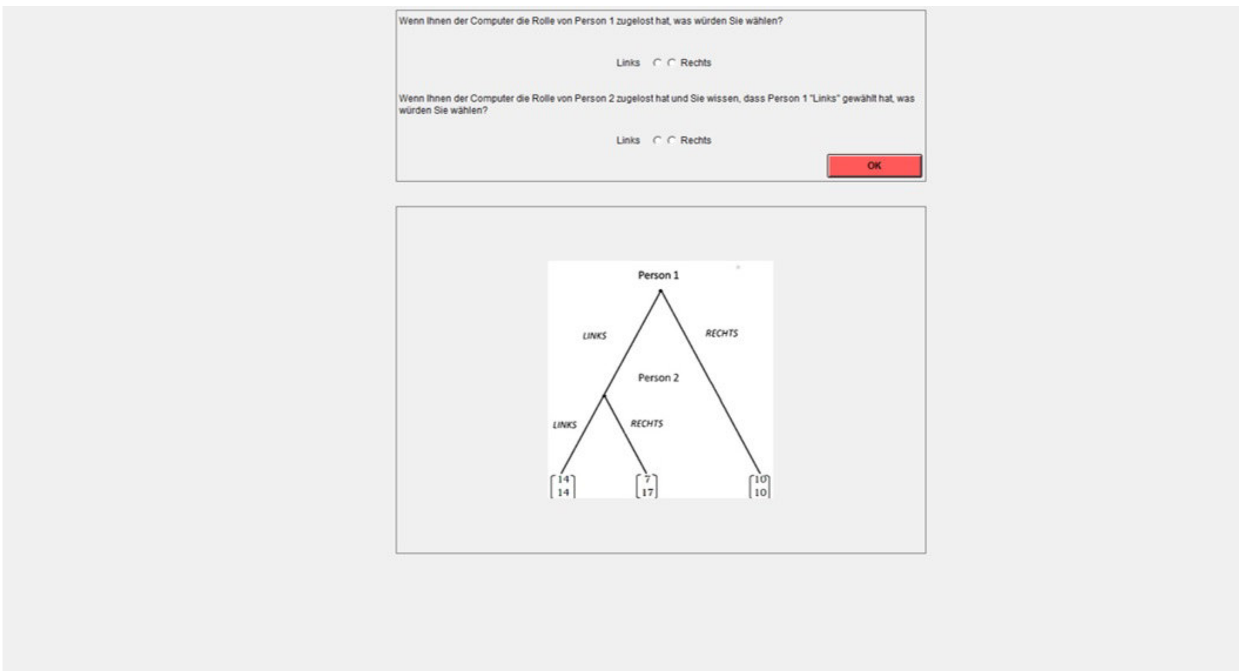

[Translation: If the computer assigned the role of person 1 to you, would you choose LEFT or RIGHT? If the computer assigned the role of person 2 to you and you know that person 1 had chosen LEFT, would you choose LEFT or RIGHT?]