

University of Passau

Faculty of Business Administration

and Economics

Chair of Economic Theory



# **Lab and Field Experiments: Corruption, Conflict & Cooperation**

## **Consequences (or their lack) of the Code**

**Experimental evidence on a bottom-up versus a top-down  
implementation of Codes of Ethics**

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## **Abstract**

There is scientific evidence, that mechanisms which have been put in place from the bottom-up, yield better results than those which have been put in place from the top-down. This evidence ranges from numerous disciplines, such as sanitation programs in the developing world, or ethical conduct programs in big companies. This seminar paper shows the impact of bottom-up versus top-down effects of implementing a code of ethics on subsequent contribution rates in a common public goods game. The results indicate, that for this sample the manner of how the code is implemented has no significant effect on contributions rates. Nevertheless, the code itself makes up for a significant difference in contributions. Participants chose the altruistic code in almost 90 percent of the time and male participants seem to be more responsive to leaders.

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## List of Abbreviations

FT Follower Treatment

LT Leader Treatment

CoE Code of Ethics

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# 1 Introduction, Existing Literature and Experiments

Is a code of ethics (CoE) an adequate institution for preventing contributions from decreasing in a finitely repeated public goods game? And, more importantly, does the manner in which this code is implemented matter for contribution rates? This seminar paper assesses the impact of a top-down introduction versus a bottom-up introduction of a CoE on contribution rates in a subsequent public goods game. This section provides a short overview of the existing literature and experiments.

Public goods experiments are probably among the most researched experimental designs, which exist. Therefore, I will only name some of the studies which I find most introductory for my experiment. First of all, there seem to be some observations, which are replicated constantly in the lab. The first one is that there is no significant evidence of free-riding in single-period games (Andreoni, 1988; Marwell & Ames, 1981). It has also been shown by these authors, that contributions are on average between the pareto-efficient and the free-riding rate<sup>1</sup>. The second one is that contribution rates decrease towards the free-riding equilibrium with each period in a repeated game. This has been observed with participants who knew which period would be the last (Isaac, et al., 1984; Isaac & Walker, 1988), as well as with random termination (Isaac, et al., 1985). Lastly, exact free-riding is observed seldom. Andreoni (1988) wondered whether these observations could be explained by strategies or learning. His results indicate that it is neither. He argued that there must be something else, such as altruism, social norms, or even bounded rationality. All of which have been found to affect human behavior even in the lab (Camerer, 2003). In 2010, Fischbacher and Gächter investigated the role of social preferences and beliefs about others' contributions for the dynamics of free-riding in public goods games. They conclude, that institutions are needed in order to prevent contributions from decreasing. Such institutions can take the form of rewards or punishment, communication, or, as I suggest with my design, the CoE. Gächter and Renner (2014) examine the effect of a leader. In their experimental design, leaders are the first ones to contribute. Their contribution is observed by their subjects. The authors assess the effect of leading by example on the provision of public goods and find a significant effect. Finally, as shown by d'Adda et al. (2017) leaders can influence the ethical conduct of followers by prominent statements, i.e. the tone at the top.

I contribute to this literature by providing experimental evidence on the impact of a CoE on contribution rates in a finitely repeated public goods game, which, to the best of my knowledge,

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<sup>1</sup> A contribution of zero.



has not been done so far. I show that there are significant differences in contribution rates depending on whether the altruistic or the egoistic code is chosen. Furthermore, results indicate that there is no significant effect of the bottom-up versus top-down implementation of the CoE. Nevertheless, the probability to free-ride is smaller if the altruistic code is implemented from the bottom-up. Lastly, male participants seem to be more respondent to the leader.

The next section sheds light on the experimental design. Section three introduces the expectations and hypothesis, followed by the experimental procedure in section four. Section five presents the results, followed by a discussion in section six. Section seven concludes.

## 2 Experimental Design

In my experiment, participants had to play a standard public goods game (Andreoni, 1988) after having to choose either an altruistic or an egoistic CoE depending on their preferences (Fischbacher & Gaechter, 2010). Participants were randomly assigned to groups of three persons<sup>2</sup> (Riyanto & Roy, 2017) and were randomly re-matched after each period, following Andreoni (1988). Participants played for five periods<sup>3</sup>. There were two treatments: the follower and the leader treatment. In the follower treatment (FT) *all* group members had to choose between the two different codes.<sup>4</sup> Here, the code was decided upon by a two thirds majority vote, representing the bottom-up character of this treatment. In the leader treatment (LT) one group member was randomly selected to be the *leader* in the first period and remained in his\*her role throughout the experiment. Those who were ordinary subjects also kept their roles but were still re-matched after each period. In other words, the leader had different subjects in each period. Only the leader was presented with the two codes to choose from and he\*she decided upon the code for the whole group in a top-down manner. Subsequently, all participants in both treatments had to agree to the chosen code before proceeding. In this agreement stage all group members saw, which code would be theirs for the present period. This is when those in the FT could, to some extent, draw conclusions about their group members. If they chose the egoistic code but the altruistic one was adapted for the group, they should have known what the other two chose and hence, what their preferences might be. The subjects in the LT saw which preferences their leader had. However, subjects did not know that there was an egoistic and an altruistic choice. Thereafter, participants in both treatments played a public goods game

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<sup>2</sup> Usually public goods game literature suggests at least four people in a group, however, three persons seemed reasonable in order to get a majority on the vote with two codes of ethics

<sup>3</sup> Usually public goods game literature suggests ten periods, but this could not be done due to time restrictions which resulted from two experiments being played in each session

<sup>4</sup> For detailed instructions and experimental procedure see Appendix.

(Andreoni, 1988). Their initial endowment was 20 *thaler* which they could either keep or spent for the provision of a public good. The payoff function for all participants looked as follows:

$$\text{Payoff} = (20 - \text{Contribution to Public Good}) + 1.5 * \text{Sum of all Contributions}/3$$

The payoff is determined by the share of the endowment participants contribute to the public good. Each token, which is contributed gets multiplied by the efficiency factor 1.5. The resulting amount is divided equally among group members. The payoff maximizing and therefore game-theoretical solution is to contribute zero, i.e. to free-ride, to the public good. The pareto-efficient solution is to provide the total endowment.

### 3 Hypothesis

Altruism or solidarity are probably more expected social norms in most societies than egoism. One reason might be that human beings are social beings and those who do not play well with others are excluded from social fabric (Camerer, 2003). Following the herd usually seems right to us and we do not want to endanger our positive self-image, even less so, if the incentives only consist of coffee and snacks. The setting of this experiment somehow relates to John Rawls veil of ignorance. When participants choose their code, they do not know what position they will be in after the current period, thus ensuring that they rather choose the altruistic code, as it might be the one they associate with a just society. For leaders in the LT reasoning might be different. In order to maximize their profit, they could think of choosing the altruistic code in order to lure their subjects into contributing while they themselves choose the free-riding solution. In any case, people socialized in a democracy with social safety nets, unions and strong rights of workers might be more inclined to follow those norms they themselves chose as their own, than those forced upon them. Thus, I hypothesize:

**Hypothesis 1:** The share of altruistic codes should be higher for both treatments.

**Hypothesis 2:** Contributions by leaders who chose the altruistic code should be close to the free-riding solution, i.e. if the desire for profit maximization is larger than the prevalence of social norms.

**Hypothesis 3, i.e. The treatment effect:** If the altruistic code is chosen, contributions should be higher in the FT. If the egoistic code is chosen, contributions should be lower in the FT. Put differently, any reaction to contributions should be more pronounced in the FT because

participants who jointly decided upon a given code should be more inclined to act according to this than participants who had a code forced upon them.

**Hypothesis 4:** Consequently, there should be less free-riding in the follower treatment, if the altruistic code is selected.

## 4 Experimental Procedure

The experiment was conducted computer-based at the University of Passau during the last two weeks of June 2018 and included 157, mostly student, participants. 76 of which took part in the FT and 81 in the LT. All instructions can be found in the appendix. Participants were randomly recruited from the campus by asking whether or not they are interested in taking part in a short experiment. The sessions included two different experiments by a seminar colleague and myself and lasted between 20 and 30 minutes. The experiment was conducted in German. We took turns on whose experiment was run first. This did not however, have an impact on the results. As the experiments were performed as part of a seminar, there were no monetary incentives. However, we provided coffee and snacks and asked participants at the beginning of each session to imagine real money as their payoff. Experiments were programmed and performed using the z-tree software (Fischbacher, 2007). There were no trial periods but comprehension questions, which had to be answered correctly by all participants before they were assigned to their groups and the actual game started. At the end of the experiment participants answered some demographic questions regarding gender, age, number of semesters and their course of studies. 54.8 percent of participants were female, and age ranged between 18 and 54 years with an average of 22.68 years. The most frequent fields of study included business administration and cultural business studies.

## 5 Results and Analysis

*Figure 1* gives a graphical intuition of the treatment effect. It shows average contributions for each period, and each treatment, separately. Only in the first period, mean contributions in the FT exceed those in the LT. For all other periods it is the other way around. The differences however, are not large and also not statistically significant, with a p-value of 0.32 according to the Mann-Whitney-Test. As a robustness check, I conducted a linear regression, controlling for

gender and age. The results do not change. The coefficient for the treatment effect stays insignificant (Table 4).<sup>5</sup>

Figure 1 - Average Contributions and Free-Riding Rates in both Treatments



**Hypothesis 1.** Participants in both treatments chose the altruistic CoE in an overwhelming frequency (Table 1). In the FT the average frequency was 89.47 percent. In the LT it was 88.69 percent. So, in each treatment in almost nine out of ten cases, the altruistic code was chosen. Still, the share of altruistic codes in the FT decreased slightly but constantly over all periods. This means of course, that the share of egoistic codes increased. Further analysis showed that there is a negative correlation between changing from the altruistic to the egoistic code and contributions, but there is a strong positive correlation between this change of the code and free-riding (Figure 1). In the LT, the highest, (3<sup>rd</sup> Period) as well as the lowest, (5<sup>th</sup> Period) average contribution is associated with the highest share of altruistic codes. Apart from a peak in period three contributions decrease as well and the share of free-riders is equal to the FT in the last period.

Table 1 - Percentage of Altruistic Codes Chosen for each Treatment

	Period 1	Period 2	Period 3	Period 4	Period 5	Mean
Follower	96.05%	89.47%	88.16%	85.53%	88.16%	89.47%
Leader	92.59%	81.48%	92.59%	85.19%	92.59%	88.69%

$n_F = 76; n_L = 81; L = 27^6$

<sup>5</sup> Regression tables 4-7 can be found in the appendix

<sup>6</sup>  $n_F$  stands for the number of participants in the FT,  $n_L$  for those in the LT and  $L$  for the number of leaders

**Result 1.** The altruistic code dominates both treatments. However, an increasing number of egoistic codes in the FT is associated with decreasing average contributions and increased free-riding. Participants in the LT seem to be less responsive to the altruistic code.

**Hypothesis 2.** *Table 2* shows the mean contributions by leaders, who chose the altruistic code. It exceeds the average contribution of their subjects in each period. This difference in average contributions between subjects and leaders is significant on the 0.01 significance level. This leads to the conclusion that leaders, in general, took their job quite seriously and did not maximize their profit by trying to use the altruistic code as bait. Although leaders’ behavior could not actually be observed by group members, they tried to lead by example. The regression shows that changing the type to leader has a significant positive impact on contributions (*Table 5*).

*Table 2 - Average Contributions by Leader and Subjects if the Altruistic Code was chosen for each Period*

	<b>Period 1</b>	<b>Period 2</b>	<b>Period 3</b>	<b>Period 4</b>	<b>Period 5</b>
mean contribution subjects	11.26	11.52	11.66	10.59	10.06
mean contribution leaders	11.40	14.00	14.24	13.26	11.96

**Result 2.** Leaders did not behave as rational profit-maximizers, but rather intrinsically lead by example.

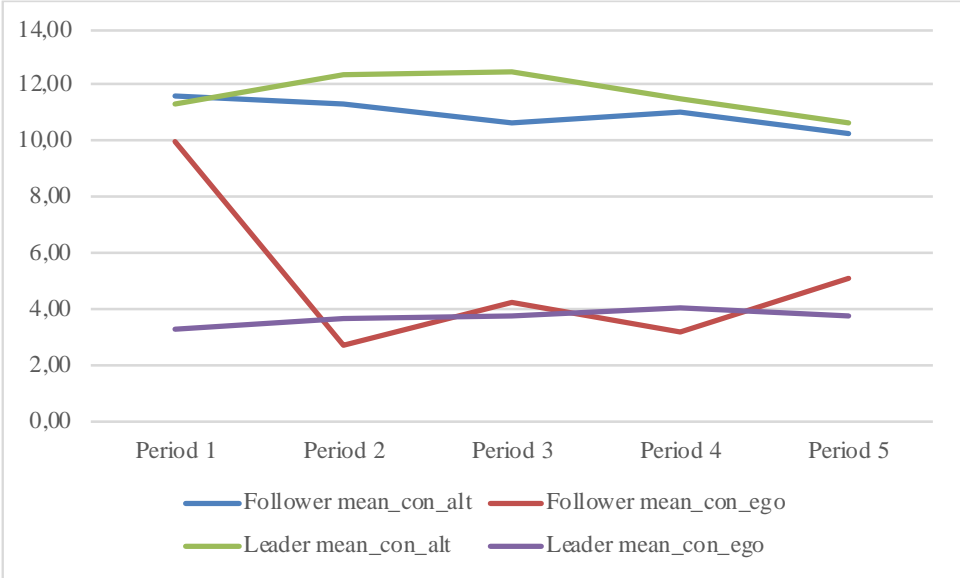
**Hypothesis 3.** If the assumption, that a bottom-up implementation of the CoE is more successful than a top-down implementation, the data should show higher contributions for the altruistic code and lower contributions for the egoistic code in the FT. Interestingly, this is not the case, but the other way around. The mean contribution for the altruistic code is 11.00 in the FT compared to 11.66 in the LT. If the egoistic code is chosen it is 4.33 in the FT versus 3.8 in the LT. The difference in mean contributions for both treatments, if only the altruistic code is considered, is also not statistically significant according to the Mann-Whitney-Test, with a p-value of 0.26. Furthermore, the difference in mean contributions between the altruistic and the egoistic code in the FT compared to the same difference in the LT, is not statistically significant either.<sup>7</sup> Note that, the code itself had a significant impact on mean contribution rates. The Mann-Whitney-Test shows that they are significant on the 0.01 percent significance level for both treatments. *Figure 2* gives a graphical intuition on the matter. Once more, conducting a regression supports these results. A change from the altruistic to the egoistic code is associated

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<sup>7</sup> Applying a chi<sup>2</sup> test of difference between coefficients, after running two separate regressions for FT and LT with Contribution as the dependent variable and a dummy for an altruistic code as the independent variable.

with a statistically significant and economically large negative effect on contributions (Table 6).

Figure 2 - Average Contributions by Code and Treatment



**Result 3.** There is no significant impact on contribution rates, which is determined by whether the CoE is implemented in a bottom-up or a top-down manner, i.e. there is no treatment effect. Nevertheless, the choice of the code had a significant impact.

**Hypothesis 4.** In the FT, if the altruistic code is chosen, the average rate of free-riding throughout all periods is 12.37 percent, ranging from 10.53 percent in period one to 13.16 in period five (Table 3). If you look again at Figure 1, total free-riding in the FT increases to 19.75 percent. It seems that this increase is due to the increasing rate of free-riding if the egoistic code is chosen. This rate increases from 1.32 percent in period one to 7.9 percent in period four. In the LT however, if the altruistic code was selected, the rate of free-riding increases from 2.47 percent in period one to 17.28 percent in period five. Yet total free-riding in this treatment also

Table 3 - Percentage of free-riders in both Treatments by Code

		Period 1	Period 2	Period 3	Period 4	Period 5
Follower	Altruistic	10.53%	13.16%	13.16%	11.84%	13.16%
	Egoistic	1.32%	5.26%	5.26%	7.9%	6.6%
Leader	Altruistic	2.47%	2.47%	4.94%	8.64%	17.28%
	Egoistic	3.7%	6.17%	2.47%	6.17%	2.47%

reaches 19.75 percent in period five. In the LT, the increase in free-riding if the altruistic code is chosen makes up for most of the total free-riding rate in this period. The Mann-Whitney-Test shows that these differences are significant on the 0.05 percent significance level. Using a logit

regression for binary outcomes, with a dummy variable for free-riding as the dependent variable, shows that the change from the altruistic to the egoistic code increases the probability to free-ride in both treatments (*Table 7*).

**Result 4.** If the altruistic CoE is chosen from the bottom-up, there is a lower probability of free-riding.

**A somewhat unexpected result.** Male participants seem to react stronger to the existence of a leader. The data shows that male contributions in the leader treatment are higher than females' in each period except the last. Male contributions in the LT are also higher than female contributions in the FT in each period except the first and the last. These differences are however not statistically significant on any reasonable significance level. Male contributions in the last period however, are those which are closest to the free-riding equilibrium. Still, these differences are not statistically significant. Nevertheless, there seems to be a trade-off between following the leader and winning the game, indicating that male participants are more opportunistic than female participants.

## 6 Discussion

How can these results, or the lack of them be explained? As to why there is not much variation between the altruistic and the egoistic code, there might be more than one correct answer. First of all, social norms are always important when looking at human behavior (Camerer, 2003). As explained before, altruism in our society seems to be much more prevalent than egoism. However, it might be a somewhat different story because this subject pool is to some extent special. It included only German-speaking students of the University of Passau. Students live, work and study here in a confined space. Therefore, news about being non-cooperative and egoistic in this society might spread fast, leading to the exclusion of selfish persons. Despite anonymity in the lab this might have been prevalent in participants minds while playing. Another problem might have been the non-monetary incentives. People could probably imagine taking a hit to their positive self-image by being egoistic, but if so, they might at least want to make their sacrifice worth it and be afterwards able to have a nice meal with some wine to wash away the memory of their temporarily lost integrity. Additionally, participants might not have understood the experiment. They might not have been able to calculate the profit maximizing equilibrium. It has been shown by (Margolis, 1984), (Sugden, 1984), (Frank, 1985), that bounded rationality is a common problem in public goods games and the experimental economics literature. The comprehension questions however, should have ensured that this is

not, to a greater extent, the case, and the increasing number of free-riders in both treatments rather suggest, that playing only for five periods was not enough time for all participants to learn the incentives. There is at least some small evidence towards this assumption. In one of the first sessions, the experiment was conducted for ten periods, which together with the other experiment just took too long and was therefore altered to only five henceforth. Nevertheless, when performing a Mann-Whitney-Test comparing mean contributions for both treatments, the p-value changes from 0.21 to 0.17 when this session is included. This is of course far from statistically significant, but it yields some intuition that five periods might have been too little. The intrinsic motivation of leaders can be explained by basic psychological needs as they have been found by (Ryan & Deci, 2000), namely competence, autonomy, and relatedness. All of which can be applied to leaders in this experiment. The general absence of the intended treatment effect probably also has numerous reasons. Bounded rationality, not enough periods, or a lack of variation between the two codes are some of them. Furthermore, the design might be responsible. In order for group members to get a feeling of affiliation, the random rematch was definitely a problem. This, and the social punishment via exclusion, as might be closer to reality, should be included in experimental designs for further research.

## 7 Conclusion

It has been shown that the number of altruistic codes dominates this lab experiment thereby providing very little variation between the two codes. The actual treatment did not affect contribution rates while the choice of the code itself had a significant effect. Free-riding levels did increase to almost 20 percent in the last period of both treatments, average contribution rates however, did not decrease towards the free-riding equilibrium. Leaders who chose the altruistic code did not maximize their profit but led by example. If the altruistic CoE is chosen, free-riding becomes less likely, indicating that it might be an institution worth looking into for further research in public goods experiments. A somewhat unexpected finding showed that male participants seemed to react stronger to the existence of a leader, which also should be considered and explored further by future researchers.

*21.671 Characters*



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## Appendix

The corresponding regression results.

*Table 4 - Treatment Effect on Contribution*

VARIABLES	(1) Contribution	(2) Contribution	(3) Contribution
Treatment	0.485 (0.983)	0.430 (0.857)	0.555 (1.123)
sex		0.330 (0.656)	0.661 (1.323)
age			0.294*** (5.113)
Constant	10.30*** (29.04)	9.815*** (12.03)	2.578 (1.584)
Observations	785	785	785
R-squared	0.001	0.002	0.034

t-statistics in parentheses  
 \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

The regression of contribution on treatment shows no significant results in any specifications.

*Table 5 - The effect of being Leader or Subject if the altruistic Code is chosen in the LT*

VARIABLES	(1) Contribution	(2) Contribution	(3) Contribution
Type	1.929*** (2.727)	1.903*** (2.680)	2.182*** (3.194)
sex		-0.351 (-0.502)	0.412 (0.603)
age			0.585*** (5.624)
Constant	11.01*** (26.97)	11.60*** (9.405)	-2.866 (-1.012)
Observations	360	360	360
R-squared	0.020	0.021	0.101

t-statistics in parentheses  
 \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

The regression of the dummy type, with zero indicating a subject and one indicating a leader, on Contribution shows significant results in all specifications.

Table 6 - The effect of the Code on Contribution

VARIABLES	(1) Contribution	(2) Contribution	(3) Contribution
Decision	-7.484*** (-9.564)	-7.481*** (-9.490)	-7.465*** (-9.628)
Decision_Leader	-7.128*** (-9.220)	-7.127*** (-9.209)	-7.006*** (-9.198)
sex		0.0150 (0.0315)	0.337 (0.713)
age			0.283*** (5.217)
Constant	18.64*** (21.57)	18.61*** (15.80)	11.61*** (6.550)
Observations	785	785	785
R-squared	0.108	0.108	0.138

t-statistics in parentheses  
 \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

The regression of Decision and Decision\_Leader on Contribution shows significant results for all specifications.

Table 7 - Logistic Regression on the probabilities to free-ride depending on the Code

VARIABLES	(1) free_ride
Decision	2.073*** (7.642)
Decision_Leader	1.665*** (6.183)
Constant	-3.985*** (-11.99)
Observations	785

Robust z-statistics in parentheses  
 \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

The logit-regression of Decision and Decision\_Leader shows that there is a significant effect of changing from the altruistic to the egoistic code on the probability to free ride.

In the following I will be present the instructions and screens seen by participants. The instructions were originally written in German. First, I report the instructions read aloud to all participants in the room during a session:

*Thank you for your willingness to participate in two short experiments. Before the first experiment starts, some general explanations in advance: With the experiments we want to gain knowledge about human behavior. The participants in the experiments are all here in the room and participate in the same experiments. All participants are anonymous and cannot agree among themselves. Your decisions and data will also be evaluated anonymously. Please be quiet during the experiments and do not speak to your neighbors. Please note that waiting times may occur during the experiments. Once you have left a screen, it cannot be called up again. Since the experiments take place within the framework of a Master's seminar, we are unfortunately unable to pay out the prizes in cash. Instead, they are rewarded with hot coffee and tasty snacks. Nevertheless, try to imagine, and behave as if you are playing for real money. The procedure of the first experiment is explained on the following page. Please read the instructions carefully and raise your hand if you have any questions. A game master then comes to you. You can now begin the first experiment: To do this, click on 'Start experiment'*

Following, I report the instructions specific to my experiment, more specifically, the LT:

## Welcome to the Experiment!

This experiment consists of 5 rounds. Your hypothetical payoff is the sum of the thalers earned in all rounds, converted into euros. The conversion of the thaler into euros is done as follows:

**20 Thaler = 1 Euro**

At the beginning of each round you will be randomly divided into groups of 3 participants each. Consequently, you will play in different group constellations in each round.

This experiment consists of two parts.

## Part 1

At the beginning of the experiment, a **so-called "leader" is randomly determined for each group**. The latter then chooses a so-called **"Code of Ethics"** for her group. There are two options to choose from. **The leader will retain his role throughout all rounds.**

This Code of Ethics is intended as a guide to help your group play the following game.

Once the leader has chosen the Code of Ethics for her group, all players, including the leader, must agree to it for the experiment to continue.

## Part 2

In this part of the experiment, you play a decision game with the members of your group, in which each group member decides simultaneously. Each group member receives an **initial endowment of 20 thalers**. You can then decide how many thalers you want to keep and how many you want to contribute to a common group pot. All thalers in the group pot are **multiplied by a factor of 1.5** and then divided equally among all group members.

Your income is calculated accordingly:

$$(20 - \text{contribution to group pot}) + 1.5 * \text{group pot}/3$$

### Example calculation:

Suppose you keep your **complete initial endowment of 20 thalers**, so you do not contribute to the group pot, while your **group members each contribute 5 thalers and 7 thalers** to the group pot.

$$\text{Your income: } (20 - 0) + (1,5 * (5 + 7)) / 3 = 20 + 6 = 26$$

Now, the game starts with comprehension questions

**Verständnisfragen**

Hier noch einmal die Formel zur Berechnung des Einkommens:  
 $(20 - \text{Beitrag zum Gruppentopf}) + 1.5 * \text{Gruppentopf}/3$


**Frage 1:** Angenommen Sie tragen 10 Taler zum Gruppentopf bei. - Wie viele Taler haben Sie übrig?  15  
 10  
 5

**Frage 2:** Ihre beiden Gruppenmitglieder tragen ebenfalls jeweils 10 Taler zum Gruppentopf bei. - Wie viele Taler befinden sich im Gruppentopf?  30  
 19  
 0

**Frage 3:** Angenommen die Anzahl der Taler im Gruppentopf, multipliziert mit dem Multiplikator beträgt 45. - Wie groß ist Ihr Anteil?  12  
 15  
 25

**Frage 4:** Wie hoch ist nun Ihr Einkommen?  10  
 20  
 25

**Frage 5:** Können Sie am Experiment teilnehmen ohne dem von Ihrer Gruppe gewählten Code of Ethics zuzustimmen?  Ja  
 Nein

Wenn Sie einen **Taschenrechner** brauchen, klicken Sie bitte hier: 

**Experiment Starten**

In the next stage participants received their roles and leaders had to choose the CoE for their group. Subjects did not see this screen, but a waiting screen in the LT. In the FT, all group members saw this screen and were able to choose.

Sie sind der Leader Ihrer Gruppe! Bitte Wählen Sie den Code of Ethics für Ihre Gruppe zwischen den folgenden Auswahlmöglichkeiten:  Gemeinsam sind wir stark  
 Wenn jeder an sich denkt ist an jeden gedacht.

**Auswählen**

All group members had to agree to the chosen code in the next stage in both treatments.

Hiermit stimme ich dem Code of Ethics meiner Gruppe zu: Wenn jeder an sich denkt ist an jeden gedacht.  Ich stimme zu

**Zustimmen**

Then, all group members proceeded into the public goods game.

Ihre Anfangsausstattung 20

Welchen Betrag möchten Sie zum Gruppetopf beitragen? Bitte geben Sie nur ganzzahlige Werte zwischen 0 und 20 an.

**Ok**

They were shown their contribution, the sum of all contributions, the size of the group pot after it has been multiplied by the efficiency factor, their share of the group pot, their payoff for the present round and their total payoff. Additionally, they were informed, that groups will be re-matched before the next round begins.

Die Gruppen werden nun neu zugeteilt.

Eigener Beitrag:	3.0
Die Summe aller Beiträge:	3.0
Größe des Gruppentopfes nach Multiplikator:	4.5
Ihr Anteil am Gruppentopf beträgt:	4.5
Ihr Einkommen in dieser Runde beträgt:	21.5
Ihr Einkommen insgesamt beträgt:	21.5

Weiter