Stefan Vetter:

Delegation and Rewards

Munich Discussion Paper No. 2012-13

Department of Economics
University of Munich

Volkswirtschaftliche Fakultät
Ludwig-Maximilians-Universität München

Delegation and Rewards

Stefan Vetter*

This version: 25 March 2012

Abstract:

We study experimentally whether anti-corruption policies with a focus on bribery might be insufficient to uncover more subtle ways of gaining an unfair advantage. In particular, we investigate whether an implicit agreement to exchange favors between a decision-maker and a lobbying party serves as a legal substitute for corruption. Due to the obvious lack of field data on these activities, the laboratory provides an excellent opportunity to study this question. We find that even the pure anticipation of future rewards from a lobbying party suffices to bias a decision-maker in favor of this party, even though it creates negative externalities to others. Although future rewards are not contractible, the benefitting party voluntarily compensates decision-makers for partisan choices. In this way, both receive higher payoffs, but aggregate welfare is lower than without a rewards channel. Thus, the outcome mirrors what might have been achieved via conventional bribing, while not being illegal.

JEL classification: C91, D62, D63, D73, K42

Keywords: delegation, gift exchange, corruption, lobbying, negative externalities

*University of Munich, Department of Economics;

e-mail: stefan.vetter@lrz.uni-muenchen.de

Acknowledgements: I would like to thank Daniel Houser, Sebastian Strasser, Joachim Winter, and participants of the experimental brown bag seminar at the University of Munich for valuable comments and suggestions. Financial support of LMUexcellent is gratefully acknowledged. I kindly thank MELESSA for providing laboratory resources and valuable assistance while conducting the experiment.

1 Introduction

Corruption and bribery is a pervasive feature across all political systems. Politicians or public officials have to make decisions that potentially favor one party at the expense of another. For example, a politician may have to vote either for a consumer-friendly or an industry-friendly legislation, and a public official may have to decide which of two competing firms is successful in the bid for a public contract. Bribing a decision-maker can be an effective way not to end up as the losing party, but has one obvious disadvantage – it is illegal. Whether this is sufficiently deterrent for the involved parties depends on the risk of being caught and the resulting penalties for bribery, and varies over countries and political systems. In Western democracies with strong rule of law, at least, bribery carries the constant threats of revelation by free media, prosecution by independent courts, and a negative backlash from voters and consumers for both the briber and the bribee. So while corruption is a way of establishing a relationship for mutual benefit between a lobbyist and a decision-maker, usually at the expense of others, there might be an interest in finding alternative ways of achieving the same goal without entering illegality.

Our research question is whether conventional anti-corruption policies with a focus on bribery might be insufficient to uncover more subtle ways of gaining an unfair advantage. In particular, we wonder whether a mutually beneficial relationship can also be maintained by an implicit agreement to exchange favors at two distinct points in time. This question is motivated by the fact that there are few outright corruption cases of high-ranking public officials in Western democracies, while after their political career they frequently enter business relationships with parties who might have benefitted from their previous decisions. Given that each party has an existential interest to conceal corruption (or activities closely bordering on corruption), appropriate field data are not available. Thus, the objective of the present paper is to explore this research question experimentally.

In Western democracies there is a notable discrepancy between the monetary rewards of pursuing a political career during the years in office on the one hand, and the financial possibilities that can be exploited when a politician leaves office. A potential briber who refrains from bribing and instead establishes a relationship based on mutual gift-giving has various opportunities to reward a decision-maker after his political or administrative career, e.g. via honorariums for speeches or mandates, or by directly offering a position in the upper management level. A politician may anticipate this and proactively help the party which is more likely to reward him in the future. Of course, there are also legitimate reasons why a firm may seek the experience of a person who had an important role in the public service, such as personal contacts and expert knowledge. However, the line between both motives is thin and often blurred. Conducting an experiment offers us the possibility to create an environment where we can eliminate all plausibly legitimate reasons for such a business relationship and focus entirely on whether such a long-term co-operation can be established as a result of the decision-maker being "helpful" in the preceding step.

In our experiment, we first create a situation in which a decision-maker has to allocate points between two other participants, while his own payoff is unaffected. This reflects that - in the absence of illegal payments - a politician's income is fixed and not related to the decisions he takes. In the second stage, we introduce the possibility that other players reward the decision-maker for his choice. Knowing this, the decision-maker gets the option to delegate his decision right, such that one self-interested player can impose her preferred allocation. A decision-maker may expect that doing another party a favor by delegating his decision right increases his reward. However, this is not contractible and entirely depends on the reciprocal inclinations of the party to whom the decision was delegated. It is thus uncertain whether such an arrangement of mutual favor trading can be similarly effective as corruption.[1]

We find that even the pure anticipation of a future reward from a lobbying party suffices to bias a decision-maker in favor of this party, even though it creates negative externalities to others. The favored party frequently reciprocates and voluntarily compensates the decision-maker for his partisan choice. In this way, they both end up with a higher payoff, but aggregate welfare is lower than without a rewards channel. Thus, we find that the outcome mirrors one that could have been achieved via a conventional bribery relationship.

The paper proceeds as follows: in section 2 we provide a brief and selective survey of economic research on corruption, with a focus on experiments. Section 3 explains the experimental design and section 4 makes behavioral predictions. Section 5 presents the results and section 6 concludes.

[1] Note that the difference between these two settings is not only that the order of moves is reversed (the briber first pays the rewards, then the politician takes the decision) but also that the course of action is more consequentially in the case of bribery. Once a politician accepts a bribe, he already commits an illegal act. In contrast, a politician who implements the desired choice of a self-interested party can always claim that he found this option preferable himself.

2 Literature on corruption and gift-giving

By its very nature as an illegal activity, obtaining objective data on corruption at the individual level is virtually impossible when both the briber and the receiver of the bribe are reaping benefits from it. Furthermore, the observed occurrence of bribing is not a particularly informative indicator for corruption as it confounds the occurrence of bribing with the authorities' determination to crack down on corruption. A different scenario is when a person or firm is required to pay bribes to an official in order to receive a treatment it is actually entitled to. A prerequisite for this situation is that the rule of law is sufficiently weak for an official or politician to demand a bribe without being charged, and therefore we are more likely to encounter cases in developing countries. Svensson (2003) uses data on involuntary bribe payments reported by Ugandan firms and concludes that a firm's "ability to pay" and "refusal power" explain a large part of variation in bribes. A different line of research uses information on perceived corruption from business risk surveys and investigates its determinants in a cross-country comparison. Treisman (2000), for example, comes to the interesting conclusion that while a long exposure to democracy predicts lower perceived corruption for the countries in his sample, the current state of democracy does not.

In the situations described above, data for bribes are available because if they are paid involuntarily the entity which is forced to bribe may not have a need to conceal it. The focus of our paper, however, is on situations in which a bribe is paid voluntarily with the objective of gaining an unfair advantage. In this case, both sides commit an unethical and punishable act, and we should not expect that any of the two will admit this when asked in the context of a survey. Laboratory experiments offer the possibility of developing a better understanding of the underlying mechanisms when the relevant actors have no incentives for disclosure.

The experiment designed by Abbink et al. (2002) represents essential features of corruption, such as a reciprocal relationship between bribers and public officials, negative welfare effects, and penalties in case of detection. They show how scope for reciprocity can establish a bribery relationship and that negative externalities had no moderating effect, while introducing a penalty threat did prove effective in reducing corruption. Using the same design, Abbink and Henning-Schmidt (2006) investigate whether the framing of the game in corruption terms as opposed to neutrally framed instructions had an effect on the behavior of subjects, but found no treatment difference. In contrast, Barr and Serra (2009) find that subjects were significantly less likely to offer bribes when a corruption frame was applied. Interestingly, Lambsdorff and Frank (2010) show that when bribers can choose whether to call it a "bribe" or a "gift", around 20% of the subjects preferred the term "bribe" despite its morally negative connotation. Potters and Van Winden (2000) compare the behavior of students with professional lobbyists and find that the latter behave more in line with game theoretic predictions and earn more money. Büchner et al. (2008) conduct an experiment to study bidding behavior in public procurement auctions and show that bribes are actively and frequently used although they were framed in negative terms. Finally, Abbink (2004) reports that a change in the matching protocol from partners to strangers significantly reduces corruption activity, suggesting that a staff rotation policy might be a partial remedy.

Another related paper is the gift-giving experiment of Malmendier and Schmidt (2011). Their study is motivated by the excessive gift-giving practice of lobbyists in sectors such as the pharmaceutical industry, which is unconditional but clearly driven by the expectation of influencing the target group (i.e. medical doctors and other health care professionals). In their experimental setup a decision-maker acts on behalf of a principal and has to buy a product from one of two producers. One of the producers is randomly selected and receives the option to pass on a small gift to the decision-maker. Malmendier and Schmidt show that decision-makers are significantly more likely to choose the product of the very producer who made the gift, even when the other product has a higher expected payoff and even though most decision-makers fully understand that the sole purpose of the gift was to influence them. This is an interesting result because it shows that a producer doesn't have to go the illegal route of paying a bribe in order to gain an unfair advantage. Instead, it is possible to obtain a similar outcome by giving a seemingly unsuspicious gift. In our experiment we use a different design but follow a similar idea. By changing the order of moves we go one logical step further to see whether even the pure anticipation of a gift may result in favorable decisions for the potential gift giver and lead to outcomes that otherwise might have been achieved via bribing.

Finally, our paper is related to the experimental literature concerned with the strategic motives and benefits of delegating tasks or decisions, beginning with Fershtman and Gneezy (2001). This line of research has shown that by delegating a decision to an agent, a principal can also shift the responsibility for the outcome to the agent (see e.g. Bartling and Fischbacher, 2011, or Coffman, 2011). Hamman et al. (2010) show that a principal, who is reluctant to take a self-serving action, may use an agent to achieve an outcome which is less pro-social than if he had taken the decision himself. However, delegation can also help to increase efficiency. Hamman et al. (2011) find that the contributions in a public goods game are higher when the decision is delegated to an elected agent, and Charness et al. (forthcoming) show that workers who can choose their wages themselves have significantly higher effort levels. In the latter case, delegation might pay off because both sides can increase their earnings if workers reciprocate. This rationale for delegation is what we are interested also in our context. Delegating a decision right to a lobbying party may be beneficial for both if the lobbying party is reciprocally inclined.

3 Experimental Design

We use a novel design to investigate whether the possibility of being rewarded in the future induces an otherwise neutral decision-maker to favor a more powerful lobbying party at the disadvantage of another. In the main part of our experiment, subjects interact in groups of 3, with each group member in a different role. Player 1 is a decision-maker who is not directly affected by the decisions he takes, and can be seen as representing a public official or politician. Player 2 and Player 3 are directly affected by the decision of Player 1, but their interests are diametrically opposed. This reflects e.g. the conflicting interests between producers and consumers in the face of legislative changes. In the experimental design we incorporate that pressure groups are more influential, have easier access to politicians via lobbyists and thus an advantage in exerting direct influence compared to consumers. In our design, we model this by giving the decision-maker the opportunity to implement the outcome preferred by Player 2, but not the preferred outcome of Player 3.

The experiment consists of two distinct parts and is briefly summarized in Table 1. In the first ("preference elicitation") stage we elicit subjects' preferences for earnings distributions conditional on their role in the game. With the instructions for the first part subjects are informed that there will be a second stage afterwards in which their payoffs are to be decided, but they do not receive more information about it. In the second ("gift-giving") stage, the decision-maker has to decide whether he ex-post delegates his decision right to the more powerful lobbying party, i.e. Player 2. The other players have to decide whether, conditional on the outcome, they reward the decision-maker. The experimental instructions can be found in Appendix C.

Table 1: Summary of the experimental design

1. Stage:	- random assignment of roles (Player 1, Player 2, and Player 3); no information about the differences between roles - subjects are informed that there will be a second stage and that payoffs will be based on the decisions from the first stage - each subject makes 12 decisions about the distribution of earnings among players
2. Stage:	New information: Player 1 is the decision-maker For each decision situation - Player 1 decides if he wants to delegate the decision right such that the choice of Player 2 is adopted - Players 2 and 3 can reward Player 1 by transferring points; transfer decisions are made conditional on the implemented option (strategy method) - incentivized expectation questions
End of the experiment	Questionnaire on demographics, BIG5 traits and risk aversion

3.1 First Stage

In the beginning of the preference elicitation stage subjects are randomly assigned to one of the three roles in which they remain for the entire experiment. However, they are not matched into groups until the second stage, and instructions for the first stage are identical for all players and across treatments.

The purpose of the first stage is to elicit distributional preferences of subjects, in particular whether they are motivated by the equity and efficiency consequences of their choices. For this reason, subjects make a series of binary decisions between two payoff distributions. Option A, the equitable distribution, is the same in each round and corresponds to (100, 100, 100), which means that each player receives 100 points if this option is the one to be implemented. With Option B, the unequal distribution (100, p, q) Player 1 again earns 100 points, but the potential payoffs for Player 2 and Player 3 change in each round in a way that either $p<100<q$ or $p>100>q$. In each round p and q vary over the following dimensions:

(i) Advantage Player 2: whether Player 2 earns more than Player 3, or vice versa

(ii) Efficiency: whether the sum of all payoffs from Option B is larger, equal to, or smaller than 300 points (the total payoff from Option A)

(iii) Degree of inequality: whether the absolute gap between p and q is only 40 points (e.g. 120 vs. 80), or 120 points (e.g. 40 vs. 160)

Each subject makes 12 decisions. The respective payoffs under Option B are listed in Appendix A. In each session the order was randomized.

At this time, subjects know the role in which they remain also for the second part. In addition, they had been informed at the beginning that it will be determined only in the second part whose decisions will be payoff-relevant in which round. However, they receive no further information about the decision mechanisms, so they have no strategic incentive not to reveal their preferred distributions. In particular, subjects do not yet know that Player 1 is the decision-maker and that Player 2 is in a more advantageous position than Player 3.

A key feature of this setup is that Player 1 has no monetary incentive to bias his decision in favor of either Option A or B. This reflects the fact that an administrative or political decision-maker receives a fixed salary but no direct financial compensation for his decisions. This is in contrast to Players 2 and 3, who have an obvious interest to influence the outcome, but no decision rights.

3.2 Second Stage

In the beginning of the second stage, subjects receive a new set of instructions. They learn that they will see the previous decision situations again, and that Player 1 is the key player. In each round Player 1 decides whether he wants his initial choice between options A and B to be relevant for determining the payoffs. Alternatively, he can replace his choice with the initial choice of Player 2 (but not Player 3) from the first part. The choice has to be made without knowing the actual decisions of the others.[2] This setup introduces asymmetry between the self-interested players as it provides the decision-maker with an opportunity to do Player 2 a favor at the expense of Player 3, but not vice versa.[3]

Players 2 and 3 can reward the decision-maker by sending a transfer. As all subjects have identical instructions, this is common knowledge from the beginning of the gift-giving stage on. In each round the player(s) with the highest earnings can make a transfer to Player 1, which is elicited via the strategy method, i.e. conditional on the implemented option. If Option B is implemented, one of the two self-interested players earns strictly more and only he makes a transfer decision. Following Abbink et al. (2002) and Malmendier and Schmidt

[2] By taking the previously made decision of instead of asking Player 2 again, we want to ensure that Player 1 cannot justify favoring Player 2 by assuming that Player 2 would behave more pro-social if he knows that his decision determines the group outcome.

[3] We refer to Players 2 and 3 as “self-interested” players because they have something at stake already in the first stage, while Player 1 has by then no own financial interests by construction. However, this changes in the second stage when Player 1’s may very well be also guided by pure self-interest.

(2011), the transfer is multiplied by 3 to reflect that a bribe generally has a larger marginal utility for the receiver. If instead Option A is chosen, earnings are identical and both Player 2 and Player 3 make a transfer decision. Then the average transfer is multiplied by 3. In this way, the expected transfer of a decision-maker is identical across options, assuming Players 2 and 3 would always send the same amount.[4]

Transfers can range between 0 and 25 points. The upper limit is imposed to ensure that extreme outliers do not bias the econometric results. Sending an amount equal to the maximum of 25 corresponds to a substantial transfer of between 15 and 25 percent of Player 2's or Player 3's total earnings in a particular round. Therefore, it is unlikely that capping contributions at 25 imposes a strong restriction even on extremely reciprocally inclined subjects.

After each choice, subjects answer incentivized expectation questions about the other players' behavior. For each possible outcome, subjects in the role of Player 1 have to state their beliefs as to whether the other players have made a transfer. Player 2 and Player 3 have to state their beliefs about which option Player 1 has initially chosen and whether he has decided to stick to his initial decision or instead accepted the choice of Player 2. Each correct prediction is rewarded with 10 additional points. At the end of the experiment, subjects complete a short questionnaire with socio-demographic questions, a self-reported risk aversion question, and the compact BIG-5 module with 15 questions developed for the German Socioeconomic Panel.

Due to the tripled transfers to Player 1 this experiment bears resemblance to the popular trust game of Berg et al. (1995), but note that there are two crucial differences. First, our game introduces negative externalities. Thus, the equivalent of *trustor* and *trustee* can increase their respective payoffs only at the expense of a third party. Second, the *trustor* does not make an investment in the classical sense, i.e. there is no monetary payment to the *trustee*. However, what she does "invest" is her preferred allocation and thus her notion of fairness.

[4] Instead of using the average transfer of Player 2 and 3, we could have allowed that both players can make a transfer under B. However, a strictly disadvantaged player would probably not have rewarded Player 1 anyway – especially as there is no strategic benefit in doing so. Thus, this would have created an asymmetry between two possible senders under Option B vs. one possible plus one extremely unlikely sender under Option A. In this case, a risk averse decision-maker might have found Option A more appealing as it increases the likelihood of receiving a positive transfer. We thus decided to use the raw transfer of the higher earning individual under B and the average of both transfers under A.

3.3 Treatments

A bribing relationship can be either a one-shot interaction or a repeated situation. Abbink (2004) has shown that this makes a difference in a classical corruption setting, and finds that the level of corruption is significantly higher with partner matching compared to stranger matching. We were thus interested in how repeated interaction affects the degree to which the weak position of Player 3 is exploited and whether it fosters the bond between the two "partners-in-crime" in the gift-exchange. Therefore, we conducted the experiment under two treatment conditions – *Partner* vs. *Stranger*. The first stage was identical for both treatments because subjects had no information about how groups would be formed. In the second stage, the *Partner* treatment assigned subjects to the same group in each round, while they were always matched with different persons in the *Stranger* treatment.

Theoretically, there is no reason why the matching protocol should make a difference for purely selfish individuals. Unlike in repeated public goods games, for example, there is no possibility to build up reputation because we do not provide information about other players' actions during the experiment. We do this in order to keep the number of independent observations identical across treatments. Also, in real-life situation it can sometimes be difficult or even impossible for the gift-giver to observe whether a public official has already carried out the favorable act on behalf of the gift-giver, e.g. when votes are cast anonymously.

What the treatment variation changes, however, is the degree of responsibility for the outcome of others, because a decision-maker can hide behind the veil of ignorance in the *Stranger* treatment. Even if he makes a very harmful decision at the expense of Player 3 he may convince himself that other decision-makers treat Player 3 better than he did. In the *Partner* setup, however, an opportunistic decision-maker would always disadvantage the same person, thus being fully responsible for the poor outcome of Player 3.

3.4 Implementation

We conducted in total 6 sessions (3 in *Partner*, 3 in *Stranger*) at MELESSA, the experimental lab at the University of Munich, and all participants were university students from various disciplines.[5] The experiment was computerized with the software z-tree (Fischbacher, 2007). Most sessions were conducted with 21 subjects, but due to non-show-up one *Partner* session was conducted with 18 and one *Stranger* session with 15 subjects. Subjects earned points

[5] Recruitment of subjects was done with the software Orsee (Greiner, 2004).

which were converted at an exchange rate of 1 Euro for 150 points. Average earnings were 13 Euros, and each session lasted approximately 50 minutes.

4 Behavioral Predictions

In the first stage each subject makes several choices between the equitable distribution A and the unequal distribution B. By design, there is always one of the self-interested players who is better off with the unequal option, and one who is worse off. In contrast, Player 1 is in a neutral position and earns the same in both cases. Therefore, his decisions should reflect purely distributional preferences, in particular how the trade-off between equity and efficiency is evaluated. If Player 1 is sufficiently inequality averse, he will always opt for Option A. However, in cases when B yields a higher overall payoff a decision-maker with preferences for efficiency may consider deviating from the equality-preserving choice.

Conjecture 1: *Player 2 and Player 3 choose B if their own payoff is higher than with A. Player 1 only deviates from the equitable distribution if the unequal option results in efficiency gains.*

At the beginning of the second stage, Player 1 learns that he can rule his distributional decision from the first stage irrelevant and instead adopt the preferred option of Player 2. For a purely benevolent decision-maker there is no reason why this possibility would be appealing, since adopting the partisan choice of Player 2 is unlikely to result in a better outcome in terms of efficiency and equity. In the absence of rewards, a selfish decision-maker should be indifferent between sticking to his own and Player 2's previous choice. When there is scope for rewards, however, the decision-maker may strategically favor Player 2 in the hope that his action will be reciprocated.

Conjecture 2: *With the possibility of being rewarded, decision-makers will strategically delegate the decision right to increase their own payoff if Player 2 is the one who benefits from giving up the equity-preserving option.*

Whether this kind of strategic behavior pays off for Player 1 depends on the reciprocal inclinations of the Player 2 subjects. As there is no feedback during the experiment, there is also no way to build up reputation, not even in the *Partner* treatment. Thus, the transfer decisions have no strategic component and an entirely self-interested player would always choose to send zero points. Positive transfers reflect purely reciprocal intentions.

Conjecture 3: *As it is individually rational to send nothing, we expect a large proportion of zero transfers. However, most individuals are reciprocally inclined at least to some degree. We thus expect that the transfers of Players 2 and 3 increase in their own earnings from the implemented option.*

Finally, our experimental design allows us to test whether the introduction of a rewards channel changes the aggregate outcome for a group. If the presumably benevolent decision of Player 1 is replaced by a decision which was not made in the best interest of all, the society as a whole might be worse off.

Conjecture 4: *Introducing the possibility that a decision-maker can favor a self-interested party in exchange for a reward leads to worse aggregate outcomes.*

In the next section we will evaluate these conjectures in turn.

5 Results

5.1 First Stage

With 117 subjects making 12 decisions about their preferred allocations we obtain a sample of 1404 single decisions. Due to the symmetric setting, we have 702 single decisions in cases when Option B is better for Player 2 and Player 3, respectively. As mentioned in the previous section, we expect that Players 2 and 3 generally opt for B when they earn more from it, while Player 1 seeks a compromise between equity and efficiency. Table 2 provides a summary of choices in the first stage. More detailed information about the choice frequencies for each decision situation can be found in Appendix A.

Table 2: Choices in Preference Elicitation Stage

	Frequency of choosing B (in percent)		
	total	advantage Player 2	advantage Player 3
Player 1	13.67	12.39	14.96
Player 2	46.37	89.74	2.99
Player 3	46.15	2.99	89.31
#choices	1404	702	702

The comparison across roles reveals that subjects in the role of Player 1 were generally reluctant to implement inequality. They opted for B only with 13.67 percent even though in one third of the situations it would actually have been efficiency enhancing. However, the desire to maintain equity seems to have been sufficiently strong to choose A in most cases. This result demonstrates neatly that subjects with no personal stakes in a distribution decision hardly ever sacrifice equity between the other involved parties. In contrast, the self-interested players clearly opted for B if it was to their advantage – 89.74% of Players 2 and 89.31% of Players 3 did so – and clearly avoided B if it was to their disadvantage, with a probability of being chosen of less than 3% for both of them.

These results show that Players 2 and 3 have very similar distributional preferences. In addition, we also see that Player 1 did not favor one person at the expense of the other, as the probability of choosing B does not depend on who gains more from it.

In the next step we estimate probit models in which the dependent variable is 1 if a subject chooses B, i.e. deviates from the equitable distribution, with standard errors clustered by individual to account for the likely error dependence across periods. The first column of Table 3 uses only the choices of subjects in the role of Player 1, the second column only those of Players 2 and 3. The regressions include two dummies indicating whether the choice of B over A results in an overall efficiency gain/loss; an inequality dummy for a large payoff gap between Player 2 and Player 3 (a difference of 120 vs. 40 points); a "treatment" dummy (but recall that there is no treatment difference in the first stage); and a control for period effects. In addition, the first regression includes a dummy for whether it is Player 2 or Player 3 who has an advantage from B. The second regression instead includes the amount to be earned with option B (which is omitted in column (1) as there is no variation for Player 1).

Table 3: Probit model for chosen option (dependent variable = 1 if Option B)

	(1)	(2)
	Player 1	Players 2&3
constant	-1.229***	-5.182***
	(0.352)	(0.858)
advantage Player 2 (0/1)	0.129	-
	(0.085)	
Option B earnings	-	0.051***
		(0.009)
efficiency 20 plus (0/1)	0.797***	-0.078
	(0.240)	(0.176)
efficiency 20 minus (0/1)	0.140	-0.028
	(0.097)	(0.110)
gap large (0/1)	-0.087	-1.392***
	(0.148)	(0.515)
stranger treatment (0/1)	-0.037	-0.112
	(0.317)	(0.172)
period	-0.019	0.006
	(0.021)	(0.017)
N	468	936
log-likelihood	-173.8	-239.9

Notes: Standard errors clustered by individuals in parentheses * p<0.10, ** p<0.05, *** p<0.01

The results clearly demonstrate that Player 1's main motive for implementing an unequal allocation by choosing B over A is to increase total efficiency. The degree of inequality, i.e. if the gap is 120 or only 40 points, does not play a role. Also whether it is Player 2 or Player 3 who benefits from Option B does not influence the decision of Player 1, which again confirms that in this symmetric setting the decision-maker acts as a neutral and benevolent authority. Turning to the decisions of Players 2 and 3, the potential earnings under Option B are a highly significant predictor for preferring the unequal option (with p-value < 0.001). However, this selfish motive is moderated by the significantly negative influence of the size of the gap between Players 2 and 3, which reflects a concern for others. Efficiency gains or losses do not seem to be important. The "treatment" dummy is insignificant in both regressions, which indicates that subjects are comparable in terms of social preferences across treatments. Finally, as Player 1 subjects make decisions in which they have nothing to gain at this stage, one might be concerned that they get less attentive over time and make their decisions less thoughtfully as the experiment progresses, but we find no time effects which would substantiate this concern.

Result 1: *Players 2 and 3 generally choose the option which maximizes their payoff, although a large degree of inequality moderates selfish behavior. Player 1 wants to preserve equity and does not favor one at the expense of the other; he only deviates from the equity-preserving option if the alternative allocation results in efficiency gains.*

5.2 Second Stage: Delegation Decisions of Player 1

In this section we investigate how decision-makers react to the new information that they can do Player 2 a favor by ex-post delegating the decision right about the payable option. Conditional on having chosen A in the first stage, decision-makers decide to render their own decision irrelevant with a probability of 38.61% and instead let payoffs be determined by the first stage decision of Player 2. In the less likely case that a decision-maker has opted for B in the preference elicitation stage, the percentage is only slightly higher, at 43.75%. Based on the observed frequencies, a Pearson’s chi-squared test does not reject the hypothesis that the delegation decision is independent of Player 1’s initial choice in Stage 1 (p-value = 0.434). Of course, this comparison of percentages is not informative about the underlying incentives in each decision situation, which is why we turn to regression analysis in the next step.

Table 4 contains results for 3 different probit regressions. The dependent variable is equal to 1 if Player 1 delegated his decision right. In column (1) we regress it on the same variables used for the estimations reported in Table 3. In column (2) we add Player 1’s beliefs about possible transfers from Players 2 and 3, elicited after each round. Finally, column (3) adds a set of demographic and behavioral covariates.

In comparison to Stage 1, the most striking result is that despite the symmetric setup of payments, the dummy variable which indicates an advantage for Player 2 from Option B is now highly significant. This is due to the non-symmetric setup of the delegation decision. Regardless of who gains more from inequality, the decision-maker can only guarantee that the option preferred by Player 2 is implemented, but not the option preferred by Player 3. Helping to impose an unequal distribution might be explained by the anticipation of potential rewards.

Table 4: Probit regression; dependent variable = 1 if Player 1 delegates

	(1)	(2)	(3)
constant	-0.990***	-1.486***	-2.899***
	(0.199)	(0.229)	(0.829)
advantage Player 2 (0/1)	0.775***	0.809***	0.834***
	(0.184)	(0.216)	(0.224)
efficiency 20 plus (0/1)	0.240*	0.191	0.215
	(0.128)	(0.135)	(0.139)
efficiency 20 minus (0/1)	-0.195	-0.116	-0.123
	(0.150)	(0.152)	(0.158)
gap large (0/1)	0.220	0.071	0.062
	(0.134)	(0.138)	(0.146)
stranger treatment (0/1)	0.357*	0.262	-0.027
	(0.184)	(0.174)	(0.309)
period	-0.000	0.015	0.017
	(0.015)	(0.018)	(0.015)
belief receiving transfer from 2 or 3 if Option B (0/1)		0.669***	0.716***
		(0.189)	(0.159)
belief receiving transfer from 2 if Option A (0/1)		0.066	0.101
		(0.236)	(0.208)
belief receiving transfer from 3 if Option A (0/1)		0.052	.106
		(0.235)	(.219)
demographics, risk aversion & BIG5	NO	NO	YES
N	468	468	468
Log-likelihood	-284.2	-271.8	-258.3

Notes: Standard errors clustered by individuals in parentheses * p<0.10, ** p<0.05, *** p<0.01; column (3) includes controls for age, gender, lab experience, study major, self-reported risk aversion and BIG5 traits.

We investigate this hypothesis more thoroughly by adding the decision-makers' beliefs about receiving transfers from Players 2 and 3. We find that the expectation of receiving a reward from the Player who gained more from B is positively and significantly associated with renouncing one's initial choice. Whether the decision-maker expects to receive a reward from either player if option A is implemented does not seem to be important. By adding beliefs, the initially significant effect of potential efficiency gains from choosing B becomes insignificant, and the spurious correlation with the treatment dummy vanishes. Whether subjects interact with partners or strangers has no effect on their decision to implement the preferred option of Player 2. Finally, adding further demographic and behavioral covariates does not reveal statistically significant associations, with the exceptions that more risk tolerant subjects are more likely to delegate and more conscientious persons are less likely to do so (coefficients not reported).

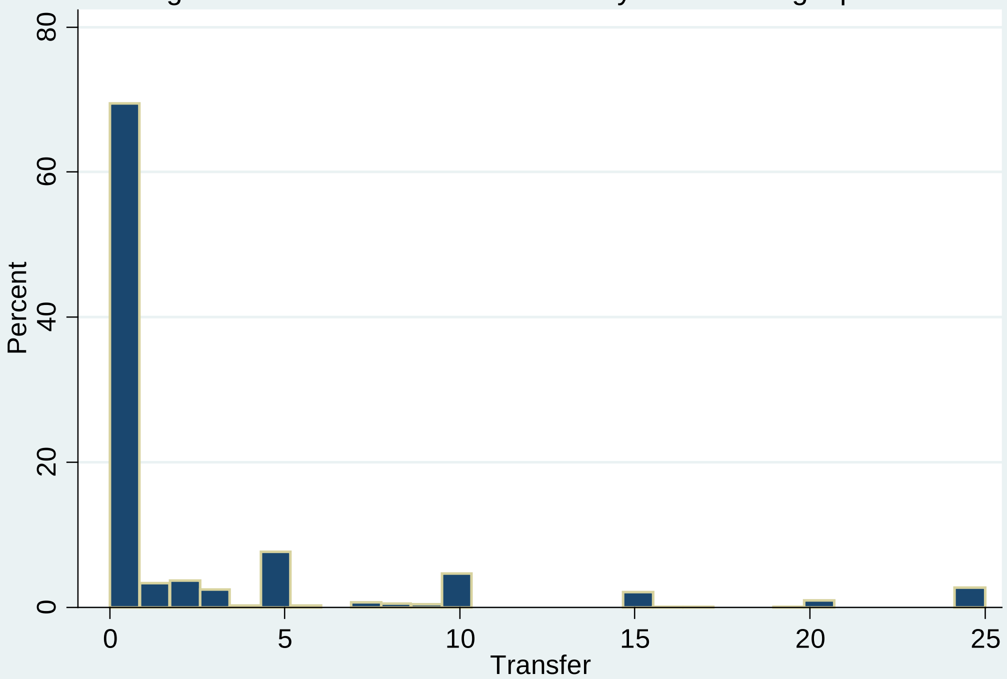
Result 2: *In anticipation of potential rewards, decision-makers act opportunistically and are significantly more likely to delegate their decision-right if Player 2 gains from inequality.*

5.3 Second Stage: Transfer Decisions

As transfers were elicited via the strategy method, subjects in the role of Player 2 and Player 3 had to make decisions conditional on Option A or B being the relevant outcome. Subjects could transfer any integer number of points between 0 and 25 to the decision-maker. A purely self-interested subject would always choose a transfer of 0, because her actions are not observable for other players. Note that this holds even in the *Partner* treatment. A positive transfer therefore reflects reciprocal intentions without any strategic considerations.

Figures 1 & 2 show that indeed the most frequent choice was to send nothing – in around 70 percent of cases when the final outcome was Option A and with around 40 percent in case it was Option B. However, there is also a nontrivial number of relatively high transfers, with multiples of 5 as focal points.

Figure 1: Transfer conditional on Player 1 choosing Option A



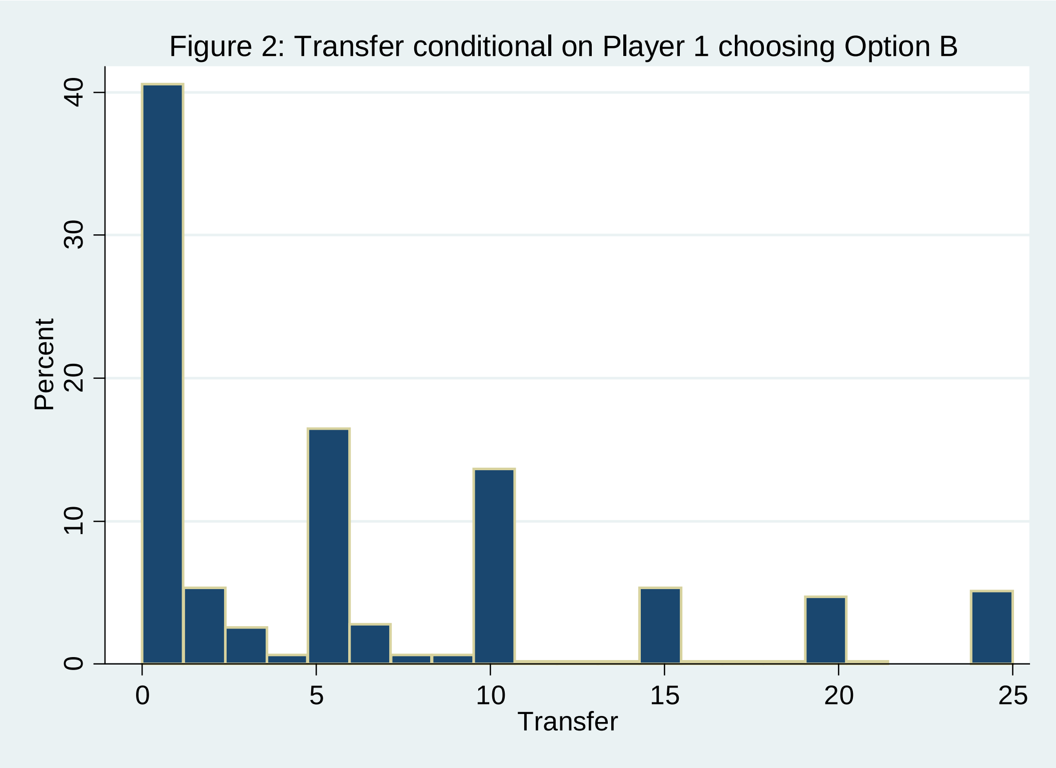


Table 5 displays mean transfers by option and role. In case Option A was implemented, Player 2 transferred 2.81 points on average, which is slightly more than the 2.11 points of Player 3 but the difference is statistically indistinguishable. A different picture emerges with transfers conditional on Option B being implemented. Again the average transfer of Player 2 is larger, but this time the difference is more pronounced (6.96 vs. 4.97 points) and statistically significant (p-value=0.003). Thus, from the perspective of the decision-maker, helping to implement Option A earned him on average 7.39 points (the average group transfer of 2.46 multiplied by 3), while he earned 5.97*3 = 17.90 points when Option B was implemented.

Table 5: Transfers sent by Players 2 and 3 conditional on implemented option

Amount sent		Mean	Std. Dev.	N	Percentage of zero transfers
if Option A implemented	Player 2	2.81	5.53	468	64.10 %
	Player 3	2.12	5.25	468	74.79 %
	Group average	2.47	5.40	936	69.45 %
if Option B implemented	Player 2	6.96	7.37	234	29.49 %
	Player 3	4.97	6.87	234	47.01 %
	Group average	5.97	7.19	468	38.25 %

As the individually rational strategy for a selfish subject would be to never transfer anything, we can further look at subjects individually and classify them in the spirit of the "conditional co-operator" vs. "free-rider" distinction of Fischbacher et al. (2001).[6] In total 23.1 percent of Players 2 and 3 (i.e. 18 out of 78) are completely "selfish" across all 12 decision situations. Table 6 further displays the fraction of subjects that never send any transfer, conditioned on the implemented option. Two interesting aspects become evident from this table: (i) Player 3 is more likely to be completely unwilling to send a transfer and (ii) regardless of their role, subjects are less likely to never reward conditioned on Option B as opposed to Option A.

Table 6: Fraction of subjects that never make a transfer conditional on which option is chosen

Person 2		Person 3	
If Option is A	If Option is B	If Option is A	If Option is B
28.21 %	17.95 %	48.72 %	33.3 %

We next turn to the determinants of transfer choices. As mentioned before, transfers were censored at 25 in order to avoid extreme outliers. As we did not allow transfers to be negative, they were also naturally censored from below at 0. We thus use a two-limit Tobit model to account for the double censoring, but a one-limit Tobit model with censoring at zero or conventional OLS regressions yield very similar results.[7]

The pattern of transfers suggests that reciprocity (positive as well as negative) is the key to subjects' choices. When making the transfer decision conditional on Option A being chosen, the earnings for the counterfactual outcome B has a significantly negative effect. In contrast, when Option B is implemented, the rewards that Players 2 and 3 send to the decision-maker are increasing in their earnings. Perhaps surprisingly, beliefs about the decision-maker's choices in both stages hardly have an effect, with the notable exception that Player 2 subjects send a significantly larger reward if they believe that the decision-maker delegated the decision right to implement their own preferred option. So Player 2 seems to recognize the favor and is willing to reciprocate. Again there are no time effects, and treatment differences are mostly insignificant but it is interesting to observe that Player 2 tends to send more in the Partner treatment, while Player 3 sends less.

[6] The equivalent of conditional co-operation in this context is to send a positive transfer in case the implemented option is to one's own advantage, while a free-rider is a subject who never sends a transfer regardless of the outcome.

[7] The results are available upon request.

Table 7: Two-limit Tobit-Regressions for transfers decisions of Players 2 and 3

	Transfer if outcome is			
	Option A		Option B	
	Player 2	Player 3	Player 2	Player 3
Constant	1.087	41.81	-6.767	8.143
	(13.44)	(27.5)	(10.84)	(20.57)
Option B earnings	-0.138***	-0.133***	0.107***	0.147***
	(0.036)	(0.037)	(0.036)	(0.052)
gap large (0/1)	2.066**	0.167	2.583	0.294
	(0.951)	(1.39)	(1.943)	(2.145)
period	0.120	-0.178	0.002	-0.111
	(0.183)	(0.162)	(0.134)	(0.183)
stranger treatment (0/1)	2.603	-4.618	1.202	-7.839**
	(3.779)	(4.27)	(3.24)	(3.775)
Belief Option B was Player 1's initial choice (0/1)	3.31*	0.696	1.92	2.263
	(1.939)	(2.669)	(2.118)	(2.502)
Belief Player 1 delegated decision (0/1)	2.665	-1.45	3.951**	0.572
	(1.86)	(2.436)	(1.726)	(2.852)
N	468	468	234	234

Notes: Standard errors clustered by individuals in parentheses * p<0.10, ** p<0.05, *** p<0.01; Tobit regressions include controls for age, gender, lab experience, and study major.

Result 3: *While a nontrivial fraction of subjects (23.1 percent) never sends any transfer to the decision-maker, the majority of subjects is conditionally cooperative and sends rewards which increase in their own earnings.*

Setting an upper limit does not impose a restriction on most subjects' choices (there are only 3.56 percent of 25 point transfers) but we observe a large fraction of zero transfers. In order to take into account that the excess zeroes could be generated by a different process than the transfer choices, we estimate a two-part model with a probit regression in the first stage, and OLS in the second stage. The results of the two-part estimation are consistent with the two-limit Tobit model and can be found in Appendix B.

5.4 Earnings comparison

In this section we investigate whether a strategy based on mutual gift-giving can serve as a worthwhile alternative for the two partners-in-crime of a bribery relationship. To this end, we make several comparisons of the average per-round earnings for each player and the total sum of per-round earnings, displayed in Table 8. In column (1) we see the players' payoffs for the hypothetical situation that the experiment had ended after the first stage. In other words, this is an earnings comparison based on the decision-maker's social preferences in the absence of strategic considerations. By construction, the decision-maker earns exactly 100 points each round. The other two players earn significantly more but their earnings are statistically indistinguishable across roles (p-value=0.9793), which reflects that most decision-makers want to maximize social welfare and opt for the efficiency enhancing option, but have no intention to discriminate against any of the players.

Table 8: Comparison of average earnings per round by experimental roles

Player	(1) Hypothetical earnings given Stage 1 choice of Player 1	(2) Earnings without incentive questions and transfers	(3) Earnings without incentive questions
1	100	100	111.96
2	117.91	109.72	105.44
3	117.86	92.20	90.81
Total Earnings	335.77	301.92	308.21
p-value for test of H_0: identical earnings for 2 and 3	0.9793	<0.0001	<0.0001

However, after the gift-giving opportunity is revealed, an entirely different picture emerges. Column (2) contains the actual average "raw" earnings (i.e. net of transfer payments and points for correct guesses in the incentivized questions) after stage 2. In the absence of transfers, the decision-makers' earnings remain at 100 points per round. In contrast, Players 2 and 3 now earn less than before, and a large and statistically highly significant (p-value<0.0001) gap has opened up between them. This demonstrates that with potential rewards the decision-maker now clearly favors Player 2 at the expense of Player 3, even though it drastically reduces total welfare. From column (3) it becomes evident that this strategy actually pays off for the subjects in the role of Player 1, because when transfers are taken into account they can increase their earnings from 100 points to almost 112 points. This leads us to our final result which concludes this section.

Result 4: *Compared to a situation in which the decision-maker acts in the best interest of all players, the introduction of a favor vs. reward exchange increases the payoff for Player 2 relative to Player 3, but reduces aggregate welfare because of negative externalities for the disadvantaged party.*

6 Conclusion

Our experiment demonstrates that even when there is no feasible coordination mechanism between a potential briber and a bribee, the anticipation of an uncertain future reward can lead to biased decisions of a supposedly neutral decision-maker. The role of expectations is sufficiently strong to produce an outcome similar to what might have been expected by conventional corruption. This shows that even a non-contractible exchange of gifts can serve as a viable bribery substitute for lobbying parties who prefer to refrain from illegal acts. However, this favor trading leads to negative externalities for the less influential side and reduces aggregate welfare.

From a policy perspective, the results suggest to broaden the focus of anti-corruption policies to include measures which increase the uncertainty that a favor can ever be reciprocated. Especially the imposition of a waiting period between leaving a political office and taking up a private job, and the prolongation of existing waiting periods, should be considered.

References

Abbink, K. (2004): “Staff rotation as an anti-corruption policy.” *European Journal of Political Economy*, Vol. 20, 887-906.

Abbink, K., B. Irlenbusch, and E. Renner (2002): “An experimental bribery game.” *Journal of Law, Economics, and Organization*, Vol. 18(2), 428-453.

Abbink, K. and H. Henning-Schmidt (2006): “Neutral versus loaded instructions in a bribery experiment.” *Experimental Economics*, Vol. 9, 103-121.

Barr, A., and D. Serra (2009): “The effects of externalities and framing on bribery.” *Experimental Economics*, Vol. 12, 488-503.

Bartling B., and U. Fischbacher (2011): ”Shifting the blame: on delegation and responsibility.“ *Review of Economic Studies*, Vol. 78(4),

Berg, J., J. Dickhaut, and K. McCabe (1995): “Trust, reciprocity, and social history.” *Games and Economic Behavior*, Vol. 10(1), 122-142.

Büchner, S., A. Freytag, L. Gonzales, and W. Güth (2008): “Bribery and public procurement: an experimental study.” *Public Choice*, Vol. 137, 103-117.

Charness, G., R. Cobo-Reyes, N. Jiménez, J. A. Lacomba, and F. Lagos (2011): “The hidden advantage of delegation: Pareto-improvements in a gift exchange game.” *American Economic Review*, forthcoming.

Coffman, L. (2011): “Intermediation reduces punishment (and reward).” *American Economic Journal: Microeconomics*, Vol. 3(4), 77-106.

Fershtman, C., and U. Gneezy (2001): “Strategic delegation: An experiment.” *RAND Journal of Economics*, Vol. 32(2), 352-368.

Fischbacher, U. (2007): “z-Tree: Zurich Toolbox for Ready-made Economic Experiments.” *Experimental Economics*, Vol 10, 171-178.

Fischbacher, U., S. Gächter, and E. Fehr (2001): “Are people conditionally cooperative? Evidence from a public goods experiment.” *Economics Letters*, 71, 397-404.

Gonzales, L., W. Güth, and M. V. Levati (2007): “Speeding up bureaucrats by greasing them: an experimental study.” *Homo Oeconomicus*. Vol. 27(1), 5-20.

Greiner, B. (2004): “An Online Recruitment System for Economic Experiments.“ in: Kremer, Kurt, and Volker Macho (eds.): *Forschung und wissenschaftliches Rechnen*. Göttingen: Gesellschaft für Wissenschaftliche Datenverarbeitung, 79-93.

Hannan, J. R., G. Loewenstein, and R. A. Weber (2010): “Self-interest through delegation: An additional rationale for the principle agent relationship.” *American Economic Review*, Vol. 100(4), 1826-1846.

Hannan, J. R., R. A. Weber, and J. Woon (2011): “An experimental investigation of electoral delegation and the provision of public goods.” *American Journal of Political Sciences*, Vol. 55(4), 737-751.

Lambsdorff, J. Graf, and B. Frank (2010): “Bribing versus gift-giving – An experiment.” *Journal of Economic Psychology*, Vol. 31, 347-357.

Malmendier, U., and K. Schmidt (2011): “You owe me!”, mimeo.

Potters, J., and F. van Winden (2000): “Professionals and students in a lobbying experiment. Professional rules of conduct and subject surrogacy.” *Journal of Economic Behavior & Organization*, Vol. 43, 499-522.

Svensson, J. (2003): “Who must pay bribes and how much? Evidence from a cross-section of firms.” *Quarterly Journal of Economics*, 118(1), 207-230.

Treisman, D. (2000): “The causes of corruption: a cross-national study.” *Journal of Public Economics*, Vol. 76, 399-457.

Appendix A: Options and Choices

Round	Payoffs with **Option B** for Player 1	2	3	Efficiency relative to Option A	Absolute gap between 2 and 3	% of Players choosing **Option B** 1	2	3
1	100	120	80	0	40	10.26	94.87	2.56
2	100	30	150	–20	120	12.82	0	84.62
3	100	130	90	+20	40	28.21	97.44	10.26
4	100	110	70	–20	40	7.69	76.92	0
5	100	160	40	0	120	2.56	87.18	0
6	100	170	50	+20	120	15.38	94.87	5.13
7	100	70	110	–20	40	5.13	2.56	71.79
8	100	90	130	+20	40	28.21	12.82	97.44
9	100	80	120	0	40	7.69	0	97.44
10	100	50	170	+20	120	28.21	2.56	94.87
11	100	40	160	0	120	7.69	0	89.74
12	100	150	30	–20	120	10.26	87.18	0
Mean	100	100	100	0	80	13.67	46.37	46.15

Note: in each session the order was randomly determined.

Appendix B: Two-Part Model for Transfer Decisions

Part 1: Probit (transfer>0)

	Transfer if outcome is			
	Option A		Option B	
	Player 2	Player 3	Player 2	Player 3
constant	-0.325	2.508	-2.493	0.702
	(1.423)	(2.253)	(1.748)	(2.831)
Option B earnings	-0.012***	-0.008***	0.0055	0.007
	(0.002)	(0.002)	(0.007)	(0.008)
gap large (0/1)	0.122	-0.104	0.0369	0.042
	(0.095)	(0.107)	(0.293)	(0.291)
period	-0.002	-0.019	0.006	-0.009
	(0.019)	(0.0148)	(0.026)	(0.023)
stranger treatment (0/1)	0.196	-0.357	0.5053	-0.937**
	(0.408)	(0.351)	(0.493)	(0.428)
Belief Option B was Player 1's initial choice (0/1)	0.170	-0.0263	0.267	0.320
	(0.408)	(0.180)	(0.310)	(0.334)
Belief Player 1 delegated decision (0/1)	0.131	-0.166	0.119	-0.073
	(0.186)	(0.199)	(0.274)	(0.337)
N	468	468	234	234
Log-likelihood	-253.6	-116.3	-233.2	-139.5

Part 2: OLS conditional on transfer > 0

	Transfer if outcome is			
	Option A		Option B	
	Player 2	Player 3	Player 2	Player 3
Constant	13.57	73.42***	0.509	15.94
	(8.432)	(13.67)	(8.94)	(12.64)
Option B earnings	-0.041**	-0.050**	0.142***	0.181***
	(0.016)	(0.019)	(0.036)	(0.058)
gap large (0/1)	2.200**	1.760	1.224	-1.450
	(0.900)	(1.059)	(1.701)	(2.218)
period	0.152	-0.004	0.014	0.138
	(0.167)	(0.200)	(0.117)	(0.173)
stranger treatment (0/1)	1.087	3.474*	-0.408	0.485
	(2.515)	(1.817)	(2.077)	(2.203)
Belief Option B was Player 1's initial choice (0/1)	3.484**	1.733	0.463	-0.276
	(1.522)	(1.959)	(1.063)	(1.686)
Belief Player 1 delegated decision (0/1)	1.885*	0.036	3.037***	0.952
	(1.009)	(1.151)	(0.996)	(1.747)
N	168	165	118	124
R-squared	0.286	0.426	0.527	0.360

Notes: Standard errors clustered by individuals in parentheses * p<0.10, ** p<0.05, *** p<0.01;
Regressions in both parts include controls for age, gender, lab experience, and study major.

Summary: Conditional on Option A being the outcome, there is a negative and highly significant relationship between the probability of sending a positive transfer and the foregone earnings under the alternative option (columns 1 and 2). In other words, Players 2 and 3 refuse to reward the decision-maker for Option A if they would have preferred the counterfactual. We have seen before that subjects generally transfer more under B, but the binary transfer choice does not depend significantly on the points earned (column 3 and 4). In Part 2, we again observe the same "punishment" pattern as under A (columns 5 and 6). Conditional on B, the amount earned is now a highly significant predictor for the transferred points (columns 7 and 8), so the more an outcome is beneficial for Player 2, the higher is the expected reward for the decision-maker. As in the one-step estimation, none of the other covariates has a consistently significant influence on any of the two choice components.

Appendix C: Instructions

Welcome to the experiment and thank you for your participation! Please read the following instructions carefully. They are identical for all participants, so you will receive the same information as the other participants. The decisions that you and others make in this experiment will determine your earnings, which will be paid to you in cash at the end of the experiment. In addition, you will receive 4 Euros for showing up in time.

During the experiment you are not allowed to communicate with others, use mobile devices, or run other programs on your PC. If you fail to comply with these rules, we have to exclude you from the experiment and all the payoffs. If you have a question, please raise your hand. We will then come to your seat and answer your question in private. If the question is relevant for all participants, we will repeat and answer the question for all participants.

During this experiment we will refer not to Euros, but to points. At the end of the experiment your total points over all rounds will be converted to Euros at an exchange rate of

150 points = 1 Euro

The experiment consists of two parts. In the first part you will have to make a number of decisions. Which of them are relevant for your payoff will be determined in the second stage. You will be informed about the rules for the second part after the first part is completed.

Instructions for Part 1:

In this experiment there will be three roles, which we will refer to as Player 1, Player 2, and Player 3. You will be randomly allocated to one of these roles at the beginning of the experiment, and remain in the same role until the end.

The decision situation:

In this experiment you will have to make a series of decisions. Each decision consists of a choice between 2 possible options: Option A and Option B. The two options denote different possible payoffs for each player involved.

Example 1:

	OPTION A	OPTION B
Player 1	100	100
Player 2	100	120
Player 3	100	80

With Option A each person earns 100 points. With option B, Player 1 earns 100 points, Player 2 earns 120 points, and Player 3 earns 80 points.

Before you start, the computer will randomly determine your role. Then you will make a series of decisions in which Option A will always result in 100 points for all players. With Option B the payoffs will vary in each round. Depending on your role, you may prefer either Option A or Option B. Whose decision will be relevant for your earnings will only be determined in the second part of the experiment.

Test:

	OPTION A	OPTION B
Player 1	100	100
Player 2	*???*	40
Player 3	100	160

Suppose you are **Player 3**: How many points would you get with **Option B**? _____
Suppose you are **Player 1**: How many points would you get with **Option A**? _____
Suppose you are **Player 2**: How many points would you get with **Option B**? _____
Suppose you are **Player 2**: How many points would you get with **Option A**? _____

Instructions for Part 2:

In this part of the experiment it will be determined which option will be paid in which round. You can earn additional points by correctly answering some questions about which decisions you expect others to have taken. The sum of your points over all rounds constitutes your earnings.

On your screen you will now see the same decision situations as in the first part, in identical order. As before, you will see the decision situation on the left hand side. On the right hand side you can make your decisions for this part and answer the questions to increase your payoff. You will not receive any information about the decisions of other participants, neither during nor after the experiment.

[Only Stranger:] For each round, groups consisting of one Player 1, one Player 2, and one Player 3 will be randomly formed. In each round, the groups will be formed anew.

[Only Partner:] In the first round of this part, a group consisting of one Player 1, one Player 2, and one Player 3 will be randomly formed. You will remain in this group until the end of the experiment.

The Decision of Player 1:

The person which decides about the option to be implemented is Player 1. As you have seen in the first part, Player 1 earns 100 points regardless of which option is chosen.

Now Player 1 has two possible choices:

1. He/she can decide that his/her initial choice from Part 1 remains valid
2. He/she can decide that instead the choice of Player 2 from Part 1 will be valid (without knowing, which option has actually been by Player 2).

Example 2:

	OPTION A	OPTION B
Player 1	100	100
Player 2	100	120
Player 3	100	80

Suppose Player 1 has chosen Option A in Part 1, while Player 2 has chosen Option B.
Player 1 will now receive the following information on the screen:

YOUR DECISION WAS A
Do you instead prefer the choice of Player 2 to be valid?
□ YES
□ NO

If Player 1 opts for NO, his/her initial choice remains valid. Here this would be option A. In this case, each player in the group earns 100 points.

If Player 1 opts for YES, the initial choice of Player 2 will become valid. Here this would be option B. In this case, Player 1 earns 100 points, Player 2 120 points, and Player 3 80 points.

The Decision of Player 2 and Player 3:
After each round, the person with the highest earnings in this round (or both Player 2 and Player 3, in case they earn the same) can transfer part of their earnings to Player 1.
Player 2 and Player 3 will have to make this decision without actually knowing, which option will be valid in a particular round. In other words, both decide how much they want to transfer to Player 1 if Option A will be relevant for payoff, AND how much they want to transfer to Player 1 if Option B will be relevant for payoff.

If Option A is relevant for Payoff:
In this case, Player 2 and Player 3 earn 100 points each. Both earn the same, so both can make a transfer between 0 and 25 points to Person 1. The transfers of Player 2 and Player 3 are multiplied by 1.5 (i.e. the average transfer is multiplied by 3), and transferred to Player 1.

If Option B is relevant for Payoff:
Case 1: Player 2 earns more with Option B than Player 3 (as in example 1)
In this case, Player 2 can transfer between 0 and 25 points to Player 1. The transfer will be multiplied by 3 and transferred to Player 1. Player 3 has no decision to make.
Case 2: Player 3 earns more with Option B than Player 2 (as in the following example)

Example 3:

	OPTION A	OPTION B
Player 1	100	100
Player 2	100	80
Player 3	100	120

In this case, Player 3 can transfer between 0 and 25 points to Player 1. The transfer will be multiplied by 3 and transferred to Player 1. Player 2 has no decision to make.
After each round, you will be asked to guess what the other players in your group decided, and you can earn additional points for each correct guess. If you are Player 1 you will be asked to guess which transfers Player 2 or Player 3 made. As Player 2 and Player 3 you will be asked to guess which option Player 1 has initially chosen and whether he/she has decided to stick to his initial choice. Think carefully before you answer – each correct guess will earn you 10 additional points.

Summary:
Player 1 decides for each decision situation whether his/her initially chosen option will be relevant for payoff, or whether instead the option chosen by Player 2 is relevant.
Player 2 and Player 3 decide for each decision situation how many points (0-25) they want to transfer to Player 1, both in case that Player 1 has chosen Option A and in case Player 1 has chosen Option B.
[Only Stranger:] In each round you will be randomly allocated to a new group of three.
[Only Partner:] In each round you will interact with the same group members.
After the last round, all your points will be added up and converted. Then you will have to complete a short questionnaire and you will receive your earnings.
Consider again some of the examples from above:

Example 1 (cont'd):

	OPTION A	OPTION B
Player 1	100	100
Player 2	100	120
Player 3	100	80

Option A will be the valid option

- If Player 1 has initially chosen Option A and decides in Part 2 that it remains valid
- If Player 1 decides that instead the choice of Player 2 is decisive, and Player 2 has initially chosen Option A.

In this case, both Player 2 and Player 3 can make a transfer between 0 and 25 points to Player 1, e.g. transfer of Player 2: 5 points and transfer of Player 3: 15 points
Both transfers are multiplied by 1.5 and the earnings from this round are:

- Player 1: 100 + 1,5*5 + 1,5*15 = 130
- Player 2: 100 – 5 = 95
- Player 3: 100 – 15 = 85

Option B will be the valid option

- If Player 1 has initially chosen Option B, and decides in Part 2 that it remains valid
- If Player 1 decides that instead the choice of Player 2 is decisive, and Player 2 has initially chosen Option B.

In this case, Player 2 earns more than Player 3 and can make a transfer between 0 and 25 points to Player 1, e.g. transfer of Player 2: 25 points
The transfer of Player 2 is multiplied by 3 and the earnings from this round are:

- Player 1: 100 + 3*25 = 175
- Player 2: 120 – 25 = 95
- Player 3: 80

Example 3 (cont'd):

	OPTION A	**OPTION B**
Player 1	100	100
Player 2	100	80
Player 3	100	120

Suppose Option A is valid. In this case, both Player 2 and Player 3 can transfer between 0 and 25 points to Player 1, e.g. transfer of Player 2: 0 points and transfer of Player 3: 20 points
Both transfers are multiplied by 1.5 and the earnings from this round are:

- Player 1: 100 + 1,5*0 + 1,5*20 = 130
- Player 2: 100 – 0 = 100
- Player 3: 100 – 20 = 80

Now suppose that instead Option B is valid. In this case, Player 3 earns more than Player 2 and can make a transfer between 0 and 25 points to Player 1, e.g. transfer of Player 3: 6 points
The transfer of Player 3 is multiplied by 3 and the earnings from this round are:

- Player 1: 100 + 3*6 = 118
- Player 2: 80
- Player 3: 120 – 6 = 114