An instrumental approach to deception in bargaining

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3. Goals and Deception [3]

People lie on a daily basis; research has shown that people tell two lies per day on average (DePaulo, Kashy, Kirkendol, Wyer, & Epstein, 1996). Mixed-motive situations, such as negotiations, are especially conducive to the use of deception. According to Tenbrunsel (1998), negotiations are asserted to be breeding grounds of unethical behavior, with deception positioned as a common bargaining tactic. But what makes mixed-motive situations so conducive to deception?

In mixed-motive conflict, two or more parties face a conflict between the motives to cooperate or compete with each other (Schelling, 1960). While cooperation may benefit all parties involved, competition may lead to even higher personal outcomes. When all parties compete, however, this often leads to detrimental outcomes for everyone. A typical example of mixed-motive conflict is bargaining; two parties may compete with each other to get high personal outcomes, but they also need to cooperate and compromise to reach an agreement. In such situations, deception can help bargainers overcome this conflict**.**

According to Vrij (2001, p. 6), deception can be defined as "a successful or unsuccessful deliberate attempt, without forewarning, to create in another a belief which the communicator considers to be untrue". To answer the question why deception is used so readily in bargaining, researchers have often focused on self-interest as an important motive. In fact, Gneezy (2005) added to the above definition that deception is used in order to increase the deceiver's payoff at the expense of the other side. Research on deception has also often focused on the fact that bargainers may use deception to increase their own payoff. For example, Boles, Croson and Murnighan (2000) studied deception in an ultimatum bargaining setting in which two parties bargained over an amount of money. Only one party knew the exact amount of money that would be distributed and this party informed the other party about the amount. Results showed that bargainers lied about the amount and portrayed it as lower than it really was. By doing so bargainers made their offer seem more generous, allowing them to make lower offers and keep more money. In similar vein, Pillutla and Murnighan (1995) found that bargainers labeled their low offers as fair

[3] This chapter is based on Koning, Steinel, Van Beest and Van Dijk (2010b)

offers in order to increase the chances that the other party would accept them. In addition, Gneezy (2005) demonstrated that bargainers used deception more frequently when it yielded higher personal gains. Finally, Steinel, Utz and Koning (2010) found that bargainers with a disposition to pursue high personal outcomes used deception more frequently than bargainers that pursued equality in outcomes.

Research has thus often identified self-interest as an important motive to use deception. Although we acknowledge the importance of self-interest as a motive to use deception, we argue that other motives may also play a role and that people may pursue other goals than to simply increase their own payoff. To this end, we took an instrumental approach to deception that relates the use of deception to the goals bargainers pursue. Instrumentality refers to the means-end connection, i.e., the relation between goals and the behavioral means to reach these goals (e.g. Becker & McClintock 1967; Edwards, 1961; Mitchell & Biglan, 1971). The instrumentality approach presupposes that people select the means they find most instrumental to their current goal. If deception is viewed solely as a means to increase the own payoff, then it follows that one would choose this means if one pursues the goal of maximizing the own payoff.

However, recent research shows that bargainers may pursue a variety of goals they and that they may pursue goals other than self-interest. In this context, social value orientation is a highly relevant personality characteristic. Social value orientation can be described as a relatively stable preference for a certain distribution of outcomes (Messick & McClintock, 1968; Van Lange, Bruin, Otten & Joireman, 1997). Many orientations can be distinguished depending on the weight people assign to their own and others' outcomes, but most people can be classified as being either prosocial, individualist or competitor (Van Lange, 1999). Prosocial bargainers are primarily motivated to maximize joint outcomes and equality in outcomes. The main goal of individualists is to maximize their own outcome, regardless of other's outcome. Competitors aim to maximize the difference between outcomes for self and other. These latter two -individualists and competitors- are usually taken together and defined as proselfs (Van Lange & Kuhlman, 1994), because they both assign a higher weight to the own outcomes than to the outcomes of others.

So far, research on deception predominantly seems to assume that deception is used for one goal only, namely to maximize the own outcomes. While proself bargainers may indeed wish to use deception to maximize their own outcomes, this may not be the case for

prosocial bargainers. Indeed, this is exactly what Steinel, Utz and Koning (2010) found when they reported that bargainers with a prosocial motivation used deception less frequently than bargainers with a proself motivation. In many studies on deception, however, deception is presented as a means to increase the own outcome. Deception often cannot be used to increase joint outcomes or promote equality in outcomes. If deception could be used as a means to reach these goals, prosocial bargainers might be more likely to use deception.

To test this hypothesis and we developed a new paradigm in which deception can be used as an instrument to maximize the own outcomes as well as joint outcomes and equality in outcomes. Our paradigm, to which we refer as the *Motivated Deception Game*, allows us to directly compare deception by both proself and prosocial bargainers. In the *Motivated Deception Game*, two people distribute a number of points that are of value to both. One person (the allocator) chooses between three different distributions of these points, while the other (the recipient) has no influence on the outcomes. The first distribution is favorable to the recipient, but not to the allocator. The second distribution reverses this pattern; the distribution is favorable to the allocator, but not to the recipient. The third and final distribution has equal outcomes for both the allocator and the recipient, but the outcomes are slightly lower than the highest outcomes of the other distributions.

In the *Motivated Deception Game*, the recipient might expect the allocator to choose the distribution that is most favorable to the allocator. We offered recipients the possibility to influence the choice of the allocator by using deception. Prior to giving information about the distribution to the allocator, recipients were allowed to adjust the information. Recipients could move points from one distribution to another, thereby making distributions more or less attractive to the allocator. It is important to note, however, that recipients could make either the first distribution (favorable to the recipient) or the third distribution (equal outcomes for both) more attractive. Recipients could thus use deception to maximize their own outcomes or to maximize joint outcomes and equality in outcomes.

Experiment 3.1: Social value orientation and deception

In Experiment 3.1, we focused on the relation between deception and the goals people pursue. To assess these goals we measured people's social value orientation and classified them as either proself or prosocial. In this experiment, all participants were assigned to the role of the recipient. We anticipated that both proself and prosocial recipients would use deception in an attempt to influence the allocator's decision, but that they would differ in the way they deceived the allocator. We expected that proself recipients would use deception to maximize their own outcomes, while prosocial recipients would use deception to maximize joint outcomes and equality in outcomes. In other words, we expected proself recipients to make the distribution that was most favorable to the recipient more attractive to the allocator, while we expected prosocial recipients to make the distribution that yielded equal outcomes more attractive.

Method

Participants and design. The participants, 82 first year psychology students (mean age: 21.32 years; 25 men, 57 women) at Leiden University, participated voluntarily in a laboratory study. The experiment used a between-subjects design with two conditions (social value orientation: proself vs. prosocial). Social value orientation was assessed using the Decomposed Games Measure (Van Lange, Otten, De Bruin, & Joireman, 1997).

Procedure. After arriving at the laboratory, participants were seated in separate cubicles with a computer. Then their social value orientation was assessed using the Decomposed Games Measure (Van Lange, Otten, De Bruin, & Joireman, 1997). This measure consists of nine items, in which participants choose combinations of outcomes for themselves and an (anonymous) other. Outcomes are represented by points, and participants are instructed to imagine that the points have value for both. Each option represents a particular orientation. An example is the choice between alternative A: 500 points for self and 500 points for other, B: 560 points for self and 300 for other, and C: 500 points for self and 100 for other. Option A represents the *prosocial* orientation, because it provides an equal distribution of outcomes (i.e., 500 for self and other), and generates the highest collective outcome (i.e., 1000). Option B represents the *individualistic* option because own outcomes are maximized (560 versus choice A: 500, and C: 500) irrespective of other's outcomes. Option C represents

the *competitive* orientation because this distribution maximizes the difference between own outcomes and other's outcomes (Choice C: 500 - 100 = 400, versus A: 500 - 500 = 0, and B: 560 - 300 = 260). Participants are classified as prosocial, individualistic or competitive when at least six choices (out of nine) are consistent with one of the three orientations (e.g., McClintock & Allison, 1989; Van Lange & Kuhlman, 1994). Finally, the individualistic- and competitive orientations were combined into the proself orientation (see also Messick & McClintock, 1968; Van Lange, 1999). Only 4 participants (5%) could not be classified as being either proself or prosocial and were therefore excluded from further analyses. Of the remaining 78 participants, 46 participants (59%) had a prosocial orientation and 32 participants (41%) had a proself orientation.

After measuring the participant's social value orientation, participants were introduced to the *Motivated Deception Game*. Participants learned that they were going to bargain over a number of points with another participant. They were then told that their opponent would choose from three distributions and would thereby determine the outcomes for both participants. We showed participants the distributions the opponent would be allowed to choose from (see Table 3.1).

Table 3.1. Payoff structure of Experiment 3.1.

	Distribution 1	Distribution 2	Distribution 3
Points participant	550	250	400
Points opponent	250	550	400

We told participants that only they had received information on the distributions and that they should send information on the distributions to their opponent. We then offered participants the opportunity to change the information prior to sending it to the opponent. Participants could thus mislead the opponent by making distributions seem more or less attractive to the opponent. Participants were only allowed to change information about the outcomes of the opponent. They could add or subtract points from any of the three distributions in steps of 50 points. A limitation was that the total number of points of all three distributions combined had to be 1200 points or less. Our main dependent variable was the number of points participants added to or subtracted from each distribution. When

participants had sent the information to the opponent, the experiment ended. Participants were thoroughly debriefed and received €2 for their participation.

Results

Changes per distribution. Our main dependent variable was the number of points participants added to or subtracted from each distribution. Table 3.2 shows the changes made to the distributions by participants from both orientations. Three separate t tests were used to analyze whether proself and prosocial participants differed in the changes they made. Proself and prosocial participants did not differ in the number of points they subtracted from the distribution that favored the opponent, $t(59) = 0.86$, $p = .396$. More interestingly, proself participants added significantly more points to the distribution that favored the participant than prosocial participants did, $t(59) = -2.27$, $p = .027$. Finally, prosocial participants added slightly more points than proself participants to the distribution that yielded equal outcomes, $t(59) = 1.69$, $p = .097$.

Table 3.2. Payoff changes as a function of social value orientation in Experiment 3.1.

	Distribution 1	Distribution 2	Distribution 3
Prosocial	+114.71 (161.68)	-254.41 (120.84)	+52.94 (166.94)
Proself	+195.56 (146.98)	-279.63 (105.85)	-9.26 (104.73)

Note. Standard deviations between brackets.

Deceptive strategies. In total, 61 out of 78 participants (78%) used deception by changing information about the outcomes of the opponent. Moreover, the number of participants that used deception did not differ between both orientations, $\chi^2(1) = 1.21$, $p = .271$. Deception was used by 27 out of 32 proself participants (84%) and 34 out of 46 prosocial participants (74%).

When participants used deception, we investigated which distribution they made most attractive to the opponent. We investigated whether participants assigned most points to the distribution that favored them or that yielded equal outcomes. Results showed that 33 participants made the distribution that favored the participant most attractive, while 15 participants made the distribution that yielded equal outcomes most attractive.

Thirteen participants did not favor one distribution over the others and were therefore excluded from subsequent analyses. A Chi-square analysis showed significant differences between both orientations, $\chi^2(1) = 5.87$, $p = .015$. Most proself participants (19 out of 22, 86%) made the distribution that favored the participant most attractive. Prosocial participants, on the other hand, showed a more differentiated pattern and did not show a clear preference for one strategy over the other (see Table 3.3).

Table 3.3. Information sharing as a function of social value orientation in Experiment 3.1.

	No Deception	Deception: Own outcomes	Deception: Equal outcomes	Deception: Other
Prosocial	12	14	12	8
Proself	5	19	3	5

Discussion

Our results show that *both* proself and prosocial participants used deception to influence the opponent's choice, but they differed in the way they deceived the opponent. Participants of both orientations made the distribution that favored the opponent less attractive. However, proself participants more frequently made the distribution that favored the participant more attractive than prosocial participants did. Prosocial participants most often made the distribution that yielded equal outcomes more attractive.

It is interesting to see that most proself participants used the same strategy, while prosocial participants showed a more differentiated pattern of strategies. A possible explanation for this effect may be found in the expectations participants held about the goals of the opponent. Prosocial participants may hold more diverse expectations about the goals of the opponent than proself participants. According to Kelley and Stahelski's (1970) triangle hypothesis, one's social value orientation influences expectations about the social value orientations of others (see also Van Lange, 1992). In particular, it states that proself bargainers hold homogenous views of others by assuming most others will be proself too, while prosocial bargainers hold heterogeneous views by assuming others will be either proself or prosocial. Different views on the orientation of the opponent may explain the differences between proself and prosocial participants in terms of the strategies they

employ (see also Steinel & De Dreu, 2004). More specifically, it may explain why proself participants predominantly chose the same strategy, while prosocial participants showed more variety in the strategies they employed. In Experiment 3.2 we address this matter by providing information about the orientation of the opponent to the participants.

Experiment 3.2: Expectations about the opponent and deception

The results of Experiment 3.1 showed that proself participants predominantly used deception to maximize their own outcomes, while prosocial participants differed from each other in the strategy they employed. In our second experiment we try to identify factors that may influence the choice of deceptive strategies. We argue that the (assumed) social value orientation of the opponent may play a crucial role in the selection of deceptive strategies, especially for prosocial participants.

In Experiment 3.2 we addressed this matter by providing information about the social value orientation of the opponent. We expected that this information would be especially likely to influence the use of deception of prosocial participants. We expected prosocial participants facing a proself opponent to be likely to use deception to prevent the opponent from choosing the distribution that was most favorable to the opponent. More specifically, we expected that prosocial participants would make the distribution that yielded equal outcomes more attractive to their opponent. However, we also anticipated that some prosocial participants might feel justified to act competitively against a proself opponent and make the distribution that favored the participant more attractive.

We expected that prosocial participants facing a prosocial opponent would most likely not use deception. In the case that both the participant and the opponent are prosocial, they would both strive for the same goal. Hence participants would not need to use deception, because the opponent would favor the same distribution. Therefore prosocial participants would most likely send the actual information to a prosocial opponent.

Finally, we expected that the orientation of the opponent would have little effect on the use of deception by proself participants. Proself participants are most likely to use deception to maximize their own outcomes, regardless of whether the opponent is proself

or prosocial. After all, in both cases proself participants might not expect the opponent to choose the distribution that favored the participant.

Method

Participants and design. The participants, 104 first year psychology students (mean age: 22.00 years; 68 men, 36 women) at Leiden University, participated voluntarily in a laboratory study. The experiment used a 2 (participant's orientation: proself vs. prosocial) by 2 (opponent's orientation: proself vs. prosocial) between-subjects design. The participant's social value orientation was again assessed using the Decomposed Games Measure (Van Lange, Otten, De Bruin, & Joireman, 1997).

Procedure. The setup of our second experiment was nearly identical to the one used in Experiment 3.1. Again we started by measuring the participant's social value orientation. This time, 9 participants (9%) could not be classified as being either proself or prosocial and were therefore excluded from further analyses. Of the remaining 95 participants, 64 participants (67%) had a prosocial orientation and 31 participants (33%) had a proself orientation.

Participants were then introduced to our *Motivated Deception Game*. Table 3.4 shows the slightly adjusted payoff table of the game. We adjusted the payoff table so that the third distribution not only provided equal outcomes but also yielded the highest joint outcomes for both bargainers. By doing so, the distribution now more appropriately matched the prosocial goals of maximizing joint outcomes and equality in outcomes. As a result, the total number of points participants could allocate to the three distributions was lowered from 1200 to 1100 (see Table 3.4).

Table 3.4. Payoff structure of Experiment 3.2.

	Distribution 1	Distribution 2	Distribution 3
Points participant	500	200	400
Points opponent	200	500	400

Before participants started bargaining, we manipulated the information participants received about the social value orientation of the opponent. We showed participants three

items of the Decomposed Games Measure allegedly completed by the opponent. The opponent had made either three proself choices or three prosocial choices. In addition to these three choices we also showed a motivational statement allegedly given by the opponent as a reason for picking these choices. In the motivational statement the opponent indicated that he or she wanted to maximize either the own outcomes (proself opponent) or joint outcomes (prosocial opponent). After receiving information about the opponent, participants were allowed to change the information about the outcomes of the opponent. Participants answered our manipulation check of the opponent's orientation by indicating whether they thought it was important to the opponent to earn more than them. Finally, participants were thoroughly debriefed and received €2 for their participation.

Results

Manipulation check. To test whether participants had understood our manipulation of the opponent's orientation, we asked participants whether they thought that it was important to the opponent to earn more points than them. Responses were measured on a Likert-type scale ranging from 1 (not important) to 7 (highly important). An ANOVA showed a highly significant main effect of the opponent's orientation (F[1,91] = 157.61, p < .001, η^2 = . 63). Participants indicated that earning more points than them would be more important to a proself opponent (M = 6.12, SD = 1.49) than to a prosocial opponent (M = 2.16, SD = 1.31). Finally, the ANOVA did not reveal a main effect for the participant's orientation or an interaction effect ($F's$ < 1, *ns*).

Changes per distribution. Table 3.5 shows the changes participants made to the payoff distributions in each experimental condition. Separate ANOVAs were used to analyze differences between experimental conditions for each distribution. An ANOVA showed significant main effects for both the participant's orientation (F[1,91] = 17.26, p < .001, η^2 = .16) and the opponent's orientation (F[1,91] = 3.91, p = .051, η^2 = .04) in the changes made to the distribution that favored the opponent. The means revealed that proself participants subtracted more points from this distribution (M = -283.87, SD = 145.14) than prosocial participants (M = -157.03, SD = 141.94). Furthermore, the means showed that participants subtracted more points from this distribution when the opponent was proself (M = -239.00, SD = 129.48) rather than prosocial (M = -153.32, SD = 168.01).

An ANOVA showed significant main effects for the participant's orientation (F[1,91] = 11.24, p = .001, η^2 = .11) and the opponent's orientation (F[1,91] = 8.31, p = .005, η^2 = .08) in the changes made to the distribution that favored the participant. Proself participants added significantly more points to this distribution (M = +240.32, SD = 216.19) than prosocial participants (M = +102.34, SD = 155.69). Furthermore, participants added more points to this distribution when the opponent was proself (M = +199.00, SD = 209.10) rather than prosocial (M = +90.00, SD = 143.26).

Finally, an ANOVA on the changes made to the distribution that yielded equal outcomes showed a significant main effect for the participant's orientation, F(1,91) = 6.87, p = .010, η^2 = .07. Proself participants subtracted points from this distribution (M = -70.97, SD = 201.15), while prosocial participants added points (M = +15.62, SD = 98.75).

Table 3.5. Payoff changes as a function of social value orientation in Experiment 3.2.

Participant	Opponent	Distribution 1	Distribution 2	Distribution 3
Prosocial	Prosocial	+60.94 (116.21)	-103.12 (136.75)	+4.69 (19.51)
	Proself	+143.75 (179.49)	-210.94 (127.47)	+26.56 (138.53)
Proself	Prosocial	+161.54 (180.46)	-276.92 (178.67)	-30.77 (275.03)
	Proself	+297.22 (226.53)	-288.89 (120.73)	-100.00 (126.03)

Note. Standard deviations between brackets.

Deceptive strategies. In total, 71 out of 95 participants (75%) used deception by changing the information about the opponent's outcomes. A Chi-square analysis showed a significant effect for the social value orientation of the participant, χ^2(1) = 11.84, p = .001. Proself participants used deception more frequently (30 out of 31, 97%) than prosocial participants (41 out of 64, 64%). Further analysis showed that a significant effect of the opponent's orientation on deception for prosocial participants (χ^2[1] = 11. 47, p = .001). Prosocial participants lied more frequently to a proself opponent (27 out of 32, 84%) than to a prosocial opponent (14 out of 32, 44%). This difference was not observed for proself

participants, (χ^2[1] = 1.43, *ns*). Proself participants lied as frequently to a proself opponent (18 out of 18, 100%) as to a prosocial opponent (12 out of 13, 92%).

Similar to Experiment 3.1, we investigated which distribution was made most attractive by participants who used deception. Table 3.6 shows the number of participants that used deception for each experimental condition. In total, 34 participants made the distribution that favored the participant most attractive, while 33 participants made the distribution that yielded equal outcomes most attractive. Ten participants did not clearly favor one distribution over the others and were therefore excluded from further analyses. A Chi-square analysis showed significant differences in the strategies used by both orientations, $\chi^2(1) = 10.75$, $p = .001$. Most prosocial participants used deception to make the distribution that yielded equal outcomes most attractive (24 out of 36, 67%). By contrast, most proself participants made the distribution that favored them most attractive (19 out of 25, 76%). Further analyses did not show any differences for the opponent's orientation for either prosocial participants (χ^2[1] = 0.06, *ns*) or proself participants (χ^2[1] = 2.34, *ns*).

Table 3.6. Information sharing as a function of social value orientation in Experiment 3.2.

Participant	Opponent	No Deception	Deception: Own outcomes	Deception: Equal outcomes	Deception: Other
Prosocial	Prosocial	18	4	9	1
	Proself	5	8	15	4
Proself	Prosocial	1	6	4	2
	Proself	0	13	2	3

Discussion

Our results showed significant differences in the use of deception between proself and prosocial participants. Proself participants used deception more frequently than prosocial participants. In addition, we found differences between proself and prosocial participants in the way they deceived the opponent. Proself participants most frequently made the distribution that favored the participant most attractive to the opponent. By

contrast, prosocial participants most frequently made the distribution that yielded equal outcomes most attractive to the opponent.

General discussion

In the current article we studied the relation between goals and the use of deception. Based on an instrumental approach to deception we expected that such a relation would exist. In an instrumental approach, the use of deception is determined by both the goals bargainers pursue and the means they have available. Whether bargainers will use deception depends on whether they consider it an effective means to reach their goals. Previous research has often focused on self-interest as the main motive to use deception and on deception as a means to increase the own outcomes. More recently, research has demonstrated that bargainers may pursue other goals than self-interest and in this context social value orientation is an important personality characteristic (Messick & McClintock, 1968; Van Lange, Bruin, Otten & Joireman, 1997). We distinguished two different social value orientations; proself and prosocial. Proself bargainers strive to maximize their own outcomes, while prosocial bargainers strive to maximize joint outcomes and equality in outcomes. Our results showed significant differences between both orientations in their use of deception. Moreover, we also demonstrated that expectations about the opponent's orientation had a significant impact on deceptive behavior.

Using our *Motivated Deception Game,* we demonstrated that both proself and prosocial bargainers can use deception as a means to reach their goals. As such, the current findings extend previous research which primarily focused on self-interest as a motive to use deception (see e.g., Pillutla & Murnighan, 1995; Gneezy, 2005). Our findings show that as the goals of proself- and prosocial bargainers differ, so does the way in which they use deception. Proself bargainers mainly used deception to maximize their own outcomes, while prosocial bargainers used different strategies depending on the orientation of the opponent. When facing a proself opponent, prosocial bargainers often used deception to maximize joint outcomes. However, when the opponent was prosocial as well, prosocial participants most refrained from using deception. When both bargainers had a prosocial orientation, they pursued the same goal and the same distribution of outcomes, making

deception as a means unneeded. Due to the unethical nature of deception, prosocial participants may prefer not to use deception when deception is not necessary to reach their goals. This finding is in line with other research that shows that prosocial bargainers more readily adapt their strategies to the (expected) orientation of the opponent (cf., Kelley & Stahelski, 1970; Van Lange, 1992).

In our *Motivated Deception Game,* interesting similarities and differences between proself and prosocial bargainers appeared. The strength of the paradigm is that both orientations may be motivated to use deception to prevent exploitation by their opponent. At the same time, both orientations can reach the goals they strive for through deception; deception is not only presented as a means to maximize the own outcomes, but can also be used to maximize joint outcomes and equality in outcomes. We think that the paradigm offers interesting opportunities for future research. For example, the current studies only used positive outcomes, but one might also use negative payoffs to study deception in the domain of losses and the role of harm in deception (cf., Leliveld, Van Beest, Van Dijk, & Tenbrunsel, 2009; Gneezy, 2005). Furthermore, additional distributions could be added to study other motivations such as maximizing the difference in outcomes, maximizing the other's outcomes, etcetera (cf., Messick & McClintock, 1968).

To conclude, our results confirm that both proself- and prosocial bargainers may use deception, but that they do so to reach different goals. Our results thus supported an instrumental approach to deception that incorporates the goals bargainers pursue. Although previous research has focused on differences between proself and prosocial bargainers, our research replicates and extends that body of literature by investigating the exchange of information during bargaining. Our results not only show that proself and prosocial bargainers strive for different patterns of outcomes, but also that they use different deceptive strategies as a result.