Do Groups Lie More Than Individuals?

Honesty and Deception as a Function of Strategic Self-Interest

Taya Cohen

Brian C. Gunia

Sun-Young Kim

J. Keith Murnighan

Northwestern University

Kellogg School of Management

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Abstract

An experiment tested whether groups lie more than individuals. Groups lied more than individuals when deception was guaranteed to maximize economic outcomes, but lied relatively less than individuals when honesty could be used strategically. These results suggest that groups are more strategic than individuals in that they will adopt whatever course of action best serves their economic interest.

Keywords: deception; honesty; groups; interindividual-intergroup discontinuity; ethics; morality

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Would individuals, immune from detection, lie for a dollar? Would groups? Compared to individuals, groups are more self-interested and less trusted (Insko, Schopler, Hoyle, Dardis, & Graetz, 1990). There is a *discontinuity* between intergroup and interpersonal behavior. Groups are more competitive in prisoners' dilemma games (Wildschut, Pinter, Vevea, Insko, & Schopler, 2003), more aggressive following provocation (Meier & Hinsz, 2004), more likely to create and claim value in negotiations (Thompson, Peterson, & Brodt, 1996), and more self-interested (i.e., rational) in economic decision-making (Bornstein, Kugler, & Ziegelmeyer, 2004). Research comparing intergroup versus interpersonal deception, however, is scarce (see Sutter, 2009 for an exception). In this study, we tested whether the relatively greater self-interest of groups would lead them to lie more than individuals.

Why do Intergroup and Interpersonal Interactions Differ?

Two main perspectives describe the reasons for differences in the behavior of groups and individuals in mixed-motive situations (for reviews, see Cohen, Meier, Hinsz, & Insko, in press; Wildschut & Insko, 2007). According to the fear-and-greed explanation, fear and greed characterize intergroup interactions more than they characterize interpersonal interactions (Cohen et al., in press; Wildschut & Insko, 2007; Wildschut et al., 2003). This explanation assumes that groups are more likely than individuals to be distrusted (people fear groups), and groups are more likely to attempt to maximize their own outcomes, either in an absolute or relative sense (groups are greedier than individuals). Evidence supporting the fear-and-greed explanation comes from studies using the PDG-Alt (Insko et al., 1990)—a three-choice variation

of the prisoner's dilemma game that adds a third choice (withdrawal) that guarantees equal intermediate outcomes for both sides. In the PDG-Alt, competition is evidence of self-interest or greed, whereas withdrawal is evidence of distrust or fear. In the PDG-Alt, groups compete more, withdraw more, and cooperate less than individuals (Insko et al., 1990).

A second explanation for why group and individual behavior differ in mixed-motive situations is that groups are better at problem-solving than individuals (Bornstein et al., 2004; Lodewijkx, Rabbie, & Visser, 2006; Thompson et al., 1996). According to the group-decision-making explanation, "two heads are better than one" when it comes to solving complex economic problems. Bornstein and his colleagues (Bornstein et al., 2004; Bornstein & Yaniv, 1998) have provided evidence consistent with this explanation by showing that groups behave more consistently with game-theoretic predictions in economic games. Likewise, Thompson et al. (1996) found that groups were better than individuals at achieving Pareto-efficient outcomes in a multi-issue negotiation. However, because game-theoretic rationality and greed both involve self-interested behavior, there is some debate as to whether groups are actually more rational than individuals or whether they are simply more focused on winning or not losing (cf. Bornstein et al., 2004; Lodewijkx et al., 2006; Wildschut & Insko, 2007).

Intergroup versus Interpersonal Deception

Although many studies have compared intergroup and interpersonal interactions in the prisoner's dilemma game (Wildschut et al., 2003) and other economic games (e.g., Bornstein et al., 2004; Heap & Zizzo, 2009), research comparing group and individual deception is limited. In the sole study to investigate this topic, Sutter (2009) examined group and individual lying with the deception game (Gneezy, 2005). The deception game is an economic decision-making task that requires one party (the "sender") to send a truthful or deceptive message to another party

("the receiver"). Specifically, the sender learns of two payment options, and has to send either a truthful or a deceptive message about the options to the receiver. Sending the truthful message potentially harms the sender's financial outcomes, whereas sending the deceptive message makes it likely the sender will benefit financially (e.g., earn $6 instead of $5). After receiving one of the messages, the receiver ostensibly chooses one of the two payment options based on the sender's message (the only information the receiver "knows" about the payoffs is the information included in the sender's message).

Research with the deception game has found that 36% of university students lie (Gneezy, 2005), and men lie more than women (55% to 38%; Dreber and Johannesson, 2008). Sutter (2009) found that groups lied less than individuals (23% to 44%) but suggested that this was a function of groups expecting to be distrusted (i.e., groups told the truth only because they expected their message to be disbelieved). Sutter's (2009) results are consistent with the fear-and-greed explanation of the discontinuity effect: groups expected to be distrusted (fear) and they acted strategically to maximize their outcomes (greed). Sutter's (2009) findings indicate that, in certain circumstances, groups use honesty strategically to maximize their outcomes. In our study, we extended Sutter's (2009) work by testing whether groups are more deceptive than individuals when lying is guaranteed to yield more money than honesty.

Hypotheses

The current study extends prior research on the discontinuity between intergroup and interpersonal interactions by testing whether groups are more or less deceptive than individuals. According to the greed aspect of the fear-and greed-explanation of the discontinuity effect (Insko et al., 1990; Wildschut et al., 2003; Wildschut & Insko, 2007), groups should lie more than individuals when they expect deception to increase their payoffs, and they should lie less than

individuals when they expect honesty to increase their payoffs. If groups consistently choose to tell the truth or lie *strategically,* we can conclude that groups are simply and consistently self-interested. According to the fear aspect of the fear-and-greed explanation, groups should also be more likely than individuals to expect to be distrusted and modify their behavior accordingly. Thus, when it is unknown whether their message will be believed, groups should expect more disbelief and adjust their message to account for this disbelief.

Method

Participants were 273 undergraduates (51% men), who earned $14 for a decision-making study. Sessions included up to 20 same-gender participants, randomly assigned in a 2 (*Groups vs. Individuals*) X 2 (*Receiver's Response: Certain vs. Uncertain*) factorial design, using a modified version of the deception game (Gneezy, 2005). The experiment was run in a suite containing a large room with 13 cubicles, and six smaller private rooms, each with a table and chairs. The cubicles and private rooms each contained a computer. Groups and individuals were run simultaneously during the same session.

Interactions were either one-on-one (*individuals*) or three-on-three (*groups*). Individuals sat alone in separate cubicles in the large lab room; the three members of each group sat together at a table in one of the private rooms (the computer was on a desk next to the table). Participants were informed that they would interact with another participant or another group via the computer. They received a paper copy of the payoff table and instructions about the message-sending procedure, but no information about the identity of their counterpart.

All of the participants sent a computer-mediated message about the payoffs to anonymous receivers (who actually did not exist). Receivers (not participants) ostensibly chose between two payment options—each gave $5 to one party and $6 to the other—but they did not

know which option gave them the higher payoff. Supposedly, the receivers would use the participant's message to guide their choice. Group payoffs were $15 and $18; they were required to divide the money equally. After "talking about" (groups) or "thinking about" (individuals) their message choice for three minutes, participants either told the truth or lied about the payoffs.

The *uncertain condition* was the standard deception game—participants did not know whether the receiver would believe their message (Gneezy, 2005; Sutter, 2009). In the *certain condition*, participants learned that receivers had preemptively committed to following their payoff-choice recommendation. Specifically, participants in the certain condition received the following instructions via the computer:

> In some conditions of this study, the sending group sends a message BEFORE the receiving group makes a binding decision about whether to follow the recommendation provided in the message. In other conditions of this study, the sending group sends a message AFTER the receiving group makes a binding decision about whether to follow the recommendation provided in the message.
>
> Your group has been randomly assigned to send a message AFTER the receiving group chooses whether to follow your recommendation. At this time, please click Continue to find out whether the receiving group has decided they will follow the recommendation provided in your group's message.

On the following screen, this message appeared:

> The receiving group has decided to follow the recommendation your group provides in your message. The receiving group's decision is final and binding. Now, please take the next three minutes to talk about which message to send.

Thus, participants in the certain condition knew that their receivers would choose the option that they identified as giving receivers more money. These instructions made it clear that deception was guaranteed to give each participant $6 and honesty was guaranteed to give each participant $5.[i]

The main dependent variable was whether participants lied. Participants also indicated, individually, why they chose their message. Two coders, blind to condition, coded explanations for self-interest ("to obtain the most money"; $\kappa = .85$, $p < .001$) and moral-interest ("to be honest"; $\kappa = .88$, $p < .001$). Self- and moral-interest were combined into a single score because they were highly correlated ($r = -.79$, $p < .001$); higher scores indicate more self-interest and less moral-interest (.5 = reported self-interest but not moral-interest, 0 = reported both self-interest and moral-interest, -.5 = reported moral-interest but not self-interest). Participants in the uncertain condition also indicated whether they thought their message would be believed (1 = *not at all likely*, 7 = *very likely*). Group members' responses were averaged.

Results & Discussion

Results are shown in Table 1 and Figure 1. As predicted, the Groups-Individuals X Receiver-Response interaction was significant for lies. Groups lied more than individuals when the receiver's response was certain, but relatively less than individuals when the receiver's response was uncertain. Specifically, when the message was certain to be followed, almost half of the individuals lied (48%) but more than four out of five groups lied (82%). Consistent with prior deception game studies (Gneezy, 2005; Sutter, 2009), when it was uncertain whether the message would be followed, approximately one in three individuals lied (32%), whereas one in four groups lied (24%).[ii]

Not only did groups lie more when they were sure that they would be believed, they also reported more self-interest (see Table 1 and Figure 1). Most groups who lied reported no qualms about using deception. Take, for example, these explanations provided by group members who lied:

> "We wanted to make more money so we took advantage of the other group's trust."
>
> "We sent message two in order to deceive the other group. Although some may consider our decision immoral, we felt as though it was practical."
>
> "We chose this message because it would give us each $1 more. Because the other group had pre-committed to using our advice, we would gain by lying to them."
>
> "Message 2 allowed for our group to make more money. In this scenario of imperfect information and deception, a group will do what is best for itself."

As the second statement illustrates, many groups thought their decision was "practical," and were not bothered by the fact that they were deceiving others. We conducted a mediation analysis to determine whether the greater frequency of lying among groups in the certain condition was due to differences in self-versus-moral-interest. The mediation analysis used weighted least squares (WLSMV) estimation with bootstrapping. In the certain condition, the indirect effect of groups-versus-individuals on lying, with self-versus-moral-interest as the mediator, was significant, $z = 2.94$, $p = .003$. Thus, self-interest explains why groups lied more than individuals when the receiver's response was certain. Previous research suggests that groups are greedier than individuals and that their greed fuels competition (Insko et al., 1990; Wildschut & Insko, 2007); it also seems to fuel deception.

Groups lied somewhat (not significantly) less than individuals in the uncertain condition. Although these groups were honest, their explanations indicated that their motivation was far from pure. Instead, their explanations suggest that they strategically chose honesty because they thought they could earn more money by tricking the other group through "reverse psychology." Take, for instance, these explanations provided by group members who told the truth:

> "We thought the other group would think we were lying, so we told the truth to get more money."
>
> "This was sent in the hopes that the other group would choose the option opposite of what the message says due to their lack of faith in our group. It was kind of like reverse psychology."

Consistent with these statements and Sutter's (2009) previous findings, in the uncertain condition groups expected their message to be believed less (M = 3.67, SD = .78) than individuals (M = 4.18, SD = 1.13), $F(1, 60) = 4.03$, $p = .049$, $d = -.53$, suggesting that groups used honesty strategically in an attempt to gain a greater payoff.

Conclusion

Strategic deception often drives organizational scandals (e.g., Enron). The greed of groups seems to predispose them to lie more than individuals. Groups of Enron traders, for example, may have exacerbated the company's collapse (McLean & Elkind, 2004). Having groups make decisions, then, may be particularly risky when organizations anticipate tradeoffs between ethics and self-interest. Groups can appear to be paragons of honesty, however, when truth-telling serves their economic interest (Sutter, 2009). Thus, when scandal-ridden organizations need to "come clean" for strategic reasons, groups may be more likely to divulge honest information than individuals.

Our results suggest that individuals and groups view honesty and deception differently: an ethical issue for individuals may be a strategic issue for groups. Whether individuals or groups should handle sensitive situations, then, may depend on an organization's preference for ethics or economics.

References

Bornstein, G., Kugler, T., & Ziegelmeyer, A. (2004). Individual and group decisions in the centipede game: Are groups more "rational" players? *Journal of Experimental Social Psychology, 40,* 599-605.

Bornstein, G., & Yaniv, I. (1998). Individual and group behavior in the ultimatum game: Are groups more “rational” players? *Experimental Economics, 1,* 101-108.

Cohen, T. R., Meier, B. P., Hinsz, V. B., & Insko, C. A. (in press). *When and why group interactions are competitive, and how competition can be replaced with cooperation.* In S. Schuman (Ed.), The Handbook for Working with Difficult Groups. New York: Jossey-Bass/Wiley.

Dreber, A., & Johannesson, M. (2008). Gender differences in deception. *Economics Letters, 99,* 197-199.

Gneezy, U. (2005). Deception: The role of consequences. *American Economic Review, 95,* 384-394.

Heap, S. P. H., & Zizzo, D. J. (2009). The value of groups. *American Economic Review, 99,* 295-323.

Insko, C. A., Schopler, J., Hoyle, R. H., Dardis, G. J., & Graetz, K. A. (1990). Individual-group discontinuity as a function of fear and greed. *Journal of Personality and Social Psychology, 58,* 68-79.

Lodewijkx, H. F. M., Rabbie, J. M., & Visser, L. (2006). 'Better to be safe than to be sorry': Extinguishing the individual-group discontinuity effect in competition by cautious reciprocation. *European Review of Social Psychology, 17,* 185-232.

McLean, B., & Elkind, P. (2004). *The smartest guys in the room: The amazing rise and scandalous fall of Enron*. New York: Portfolio.

Meier, B. P., & Hinsz, V. B. (2004). A comparison of human aggression committed by groups and individuals: An interindividual-intergroup discontinuity. *Journal of Experimental Social Psychology, 40*, 551-559.

Sutter, M. (2009). Deception through telling the truth?! Experimental evidence from individuals and teams. *The Economic Journal, 119*, 47-60.

Thompson, L. L., Peterson, E., & Brodt, S. E. (1996). Team negotiation: An examination of integrative and distributive bargaining. *Journal of Personality and Social Psychology, 70*, 66-78.

Wildschut, T., & Insko, C. A. (2007). Explanations of interindividual-intergroup discontinuity: A review of the evidence. *European Review of Social Psychology, 18*, 175 - 211.

Wildschut, T., Pinter, B., Vevea, J. L., Insko, C. A., & Schopler, J. (2003). Beyond the group mind: A quantitative review of the interindividual-intergroup discontinuity effect. *Psychological Bulletin, 129*, 698-722.

Table 1

Means and Standard Deviations with Logistic Regression Results (Lies) and ANOVA Results (Self-versus-Moral Interest)

Variable	*Lies (Proportion)*	*Self-Versus-Moral-Interest*
Gender[a]	Women: *M* = .37 (*SD* = .49) Men: *M* = .52 (*SD* = .50) *B* =-.67, *SE* = .37, *p* = .07 *Wald* χ^2 =3.19, *OR* = .51	Women: *M* = .08 (*SD* = .44) Men: *M* = .19 (*SD* = .40) *F*(1, 139) = 3.22, *p* = .08 *d* = -.26
Groups vs. Individuals	Groups: *M* = .49 (*SD* = .50) Individuals: *M* = .41 (*SD* = .50) *B* = .59, *SE* = .40, *p* = .14 *Wald* χ^2 = 2.18, *OR* = 1.80	Groups: *M* = .23 (*SD* = .35) Individuals: *M* =.07 (*SD* = .46) *F*(1, 139) = 5.58, *p* = .02 *d* = .39
Receiver's Response	Certain: *M* = .60 (*SD* = .49) Uncertain: *M* = .28 (*SD* = .45) *B* = 1.64, *SE* = .40, *p* < .001 *Wald* χ^2 = 17.04, *OR* = 5.17	Certain: *M* = .13 (*SD* = .45) Uncertain: *M* = .14 (*SD* = .39) *F*(1, 139) = .04, *p* = .85 *d* = -.02
Groups-Individuals X Receiver-Response	Certain Groups: *M* = .82 (*SD* = .40) Individuals: *M* = .48 (*SD* = .51) Uncertain Groups: *M* = .24 (*SD* = .43) Individuals: *M* = .32 (*SD* = .47) *B* = 2.10, *SE* = .80, *p* = .009[b] *Wald* χ^2 =6.91, *OR* = 8.17	Certain Groups: *M* = .32 (*SD* = .35) Individuals: *M* = .02 (*SD* = .48) Uncertain Groups: *M* = .16 (*SD* = .35) Individuals: *M* = .13 (*SD* = .44) *F*(1, 139) = 3.63, *p* = .06 *d* = .32

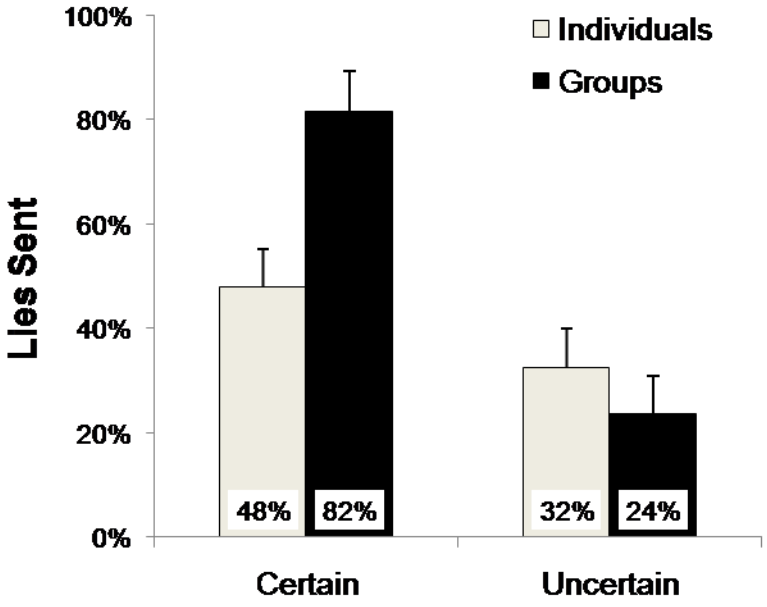
Note. *N* = 144 observations (61 groups, 83 individuals). *OR* = Odds Ratio.

[a] Gender interactions were also tested, but none were significant.

[b] Simple effects: Groups-Individuals significant in certain condition (*B* = 1.59, *SE* = .58, *p* = .006, *Wald* χ^2 = 7.52, *OR* = 4.91), not in uncertain condition (*B* = -.48, *SE* = .55, *p* = .38, *Wald* χ^2 = .77, *OR* = .62). Receiver's Response significant for groups (*B* = 2.70, *SE* = .66, *p* < .001, *Wald* χ^2 = 17.04, *OR* = 14.91), not individuals (*B* = .59, *SE* = .47, *p* = .20, *Wald* χ^2 = 1.63, *OR* = 1.81).

Figure Caption

Figure 1. *N* = 144 observations (61 groups, 83 individuals). The top panel shows the percentage of lies sent; the bottom panel shows reported motivation (.5 = reported self-interest but not moral-interest; -.5 = reported moral-interest but not self-interest, 0 = reported both self-interest and moral-interest). In the certain condition, deception was guaranteed to yield a greater payoff than honesty. In the uncertain condition, it was unknown as to whether deception or honesty would yield a greater payoff.


100%
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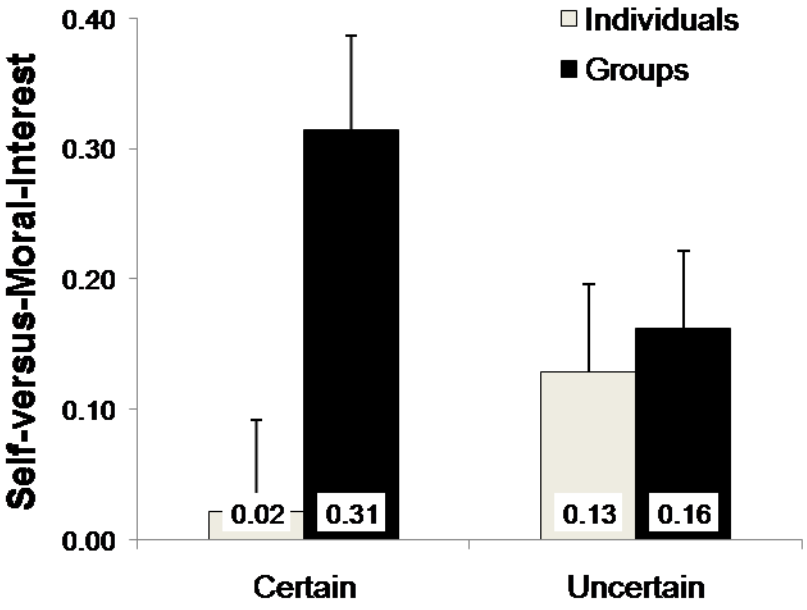
0.40
0.30
0.20
0.10
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Self-versus-Moral-Interest
Individuals
Groups
0.02
0.31
0.13
0.16
Certain
Uncertain

Footnotes

[i] Several participants (9 individuals, 17 groups) indicated confusion about the message-sending procedure or reported suspicion regarding the existence of another party, so they were excluded from the study.

[ii] Although in the uncertain condition the simple effect of groups versus individuals on lies was nonsignificant, the trend was consistent with Sutter's (2009) results from a study that used a similar procedure. Given the relatively low frequency of lying by both individuals and groups in the uncertain condition, it is possible that our simple effect was nonsignificant due to a lack of statistical power.