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FlashReport

“I can't lie to your face”: Minimal face-to-face interaction promotes honesty[☆]



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HIGHLIGHTS

- We randomly assign people to communicate face-to-face (FTF) or through an intermediary prior to and during a game.
- We find that in-game FTF interaction promotes honesty relative to communication through an intermediary.
- The effect of in-game communication medium was mediated by individuals' attunement to their moral-interest.
- We rule out accounts involving mechanisms like rapport and perceived trust.
- The effect was not moderated by the removal of anonymity during a pre-game interaction.

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ABSTRACT

Scholars have noted that face-to-face (FTF) interaction promotes honesty because it provides opportunities for conversation in which parties exchange information and build rapport. However, it is unclear whether FTF interaction promotes honesty even in the absence of opportunities for back-and-forth conversation. We hypothesized a *minimal interaction effect* whereby FTF interaction promotes honesty by increasing potential deceivers' consideration of their own moral-interest. To test this account of how FTF interaction may promote honesty, we used a modified version of the deception game (Gneezy, 2005). We found that people were more honest when communicating FTF as opposed to through an intermediary. While FTF interaction tended to promote honesty irrespective of whether it occurred prior to or during the game, the effect was more pronounced when it occurred during the game. The effect of in-game communication medium was mediated by the activation of potential deceivers' moral-interest. We also ruled out alternate accounts involving interpersonal liking, expected counterpart trust, and retaliation fear as honesty-promoting mechanisms. Furthermore, because these effects were not moderated by whether participants had been visually identified during a pre-game interaction, we suggest that our effects are distinct from theoretical accounts involving anonymity.

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Introduction

Face-to-face (FTF) interaction promotes a host of social benefits relative to anonymous interactions, including increased honesty (Citera, Beauregard, & Mitsuya, 2005; Rockmann & Northcraft, 2008; Valley, Moag, & Bazerman, 1998). The honesty-promoting quality of FTF interaction has primarily been explained as a result of its communication richness relative to other forms of interaction (e.g., Swaab, Galinsky, Medvec, & Diermeier, 2012). However, others have argued that FTF interaction might activate more moral concerns than alternate

forms of communication (e.g., Rockmann & Northcraft, 2008). Though evidence has supported the former account, to our knowledge no research has provided an adequate test of the latter account of FTF interaction's honesty-promoting virtues. Reliance on paradigms involving unrestricted back-and-forth communication render it difficult to determine whether simply delivering information to a potential deception target via FTF interaction is sufficient to promote honesty by attuning decision makers to their moral-interest as opposed to their self-interest. To test this hypothesis, we used a research paradigm that omits the back-and-forth conversation typical of FTF interaction. In so doing, we sought to understand the mechanism by which FTF interaction promotes honesty.

The communication richness account holds that the visual and auditory cues available in FTF interaction increase the rate of social information transmission (Walther, 1992, 1994), which improves coordination (Turnbull, Strickland, & Shaver, 1976) and reduces miscommunication (Kruger, Epley, Parker, & Ng, 2005). These factors

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are critical for the development of rapport (i.e., mutual liking and positive feelings towards others) and cooperation (Drolet & Morris, 2000; McGinn, Milkman, & Nöth, 2012; Morris, Nadler, Kurtzberg, & Thompson, 2002; Sally, 1995; Swaab, Postmes, van Beest, & Spears, 2007), each of which should reduce the likelihood of deception (Rockmann & Northcraft, 2008). In addition to promoting rapport, FTF interaction also increases the risk of deception-signaling nonverbal cues leaking in the face of persistent questioning (Buller & Burgoon, 1996; Valley et al., 1998). Given that prior research comparing deception in FTF to other forms of interaction has used contexts involving extended back-and-forth conversations such as negotiations and meetings, these findings are unsurprising. By providing more opportunities to ask questions and share information (Dennis, Fuller, & Valacich, 2008), FTF interactions facilitate rapport development and raise concerns about deception being revealed.

The primary goal of the current research is to examine whether FTF interaction promotes honesty even in situations where back-and-forth communication cannot be used to build rapport and scrutinize potential deceivers. Though these factors may still be activated to a degree during FTF interaction, we wanted to understand whether FTF interaction could promote honesty independently of these factors. We hypothesized a *minimal interaction effect* whereby FTF interaction promotes honesty in an impoverished interaction that omits the conversational element typical of FTF interaction.

We expected FTF interaction to curtail deception by encouraging individuals to consider moral-interest in favor of self-interest *when being presented with an opportunity to deceive*. When people behave opportunistically, they capitalize on information asymmetries by misleading others about their intentions or other information relevant to a task at hand (Bok, 1978; Kray, Kennedy, & Van Zant, 2014). Given that the strategic disclosure of one's intentions or interests occurs in the context of task-relevant communication (Dawes, McTavish, & Shaklee, 1977), we consider whether FTF interaction promotes honesty during a brief exchange of information directly relevant to a task at hand. Unlike task-irrelevant communication, task-relevant communication attunes people to moral values like fairness (Cohen, Wildschut, & Insko, 2010) and promotes cooperation (Bouas & Komorita, 1996; Dawes et al., 1977).

Even when they are identifiable, people tend to be more self-aware when communicating task-relevant information FTF than they are when communicating via other mediums (Hecht, 1978). This increased self-awareness makes them more likely to evaluate whether their behavior meets personal ethical standards (Rockmann & Northcraft, 2008), which should curtail opportunistic behavior motivated purely by self-interest. The prospect of violating one's ethical standards triggers an anticipation of negative affect (Ruedy, Moore, Gino, & Schweitzer, 2013) and lay theories about gaze aversion are consistent with this notion. Although gaze aversion is not a reliable cue to deception (DePaulo et al., 2003), the faulty lay perception that it is (Rotenberg & Sullivan, 2003; Vrij & Granhag, 2007) may reflect expectations of a nonverbal reaction to shame (Keltner & Harker, 1998) triggered by telling a lie. Because FTF interaction increases individuals' self-awareness and attunes them to moral values, it may deter deception.

We note that one means by which FTF interaction differs from other forms of communication is that it is inherently less anonymous. Whereas two individuals become identifiable the moment they have visual access to one another in FTF interaction, other forms of interaction—particularly those conducted through an intermediary—may allow them to interact under anonymity. Many have argued that anonymity promotes the depersonalization of others (Coleman, Paternite, & Sherman, 1999; Lea, Spears, & de Groot, 2001; Moore, Kurtzberg, Thompson, & Morris, 1999; Postmes & Spears, 2002) and serves as a route to moral disengagement that can promote anti-social behaviors (Diener, Fraser, Beaman, & Kelem, 1976; Festinger, Pepitone, & Newcomb, 1952; Milgram, 1974; Zimbardo, 1969). However, we argue that FTF interaction can promote honesty independently of its removal of anonymity. Because exchanging task-relevant information

FTF can attune people to moral-interest, the aversive prospect of acting immorally by lying to another's face should be sufficient to promote honesty irrespective of whether both parties are identifiable. If increased honesty during task-relevant FTF interaction is driven by more than identifiability, it should be robust to the removal of anonymity in a prior task-irrelevant interaction. Furthermore, we expected the effect of task-relevant communication medium to be mediated by the consideration of moral-interest as opposed to self-interest.

Method

We adapted the deception game developed by Gneezy (2005). This dyadic paradigm involves a decision by a “sender” to provide truthful or deceptive information to a “receiver” in an attempt to influence both parties' financial payouts. We modified several aspects of the original game to suit our research question. First, we created a FTF condition of the game where senders delivered their choice to receivers in person. Second, to reduce the possibility that receivers would attempt to influence senders' choices during this interaction, research confederates acted as receivers. Third, senders and receivers traded basic demographic information prior to playing the game, either via FTF interaction or through an intermediary. This allowed us to manipulate identifiability prior to the game to assess whether any honesty-promoting quality of FTF interaction is simply the result of a loss of anonymity. In combination, we utilized a 2 (pre-game communication medium: FTF versus intermediary) \times 2 (game communication medium: FTF versus intermediary) between-subjects design.¹

Participants

We recruited 306 individuals from a participant pool at the University of California, Berkeley. Nine participants failed to complete experimental questionnaires and were thus omitted from analyses. Among the remaining 297 participants, 148 (50%) were males.

Procedure

After participants arrived at the laboratory, an experimenter informed them that they would engage in a one-shot strategic game with another research participant and that their payment would depend on the choices made by both players. To reduce concerns about possible retaliation from counterparts, the experimenter emphasized that monetary payouts would occur at the end of each session in private. A pre-game task required participants and their counterparts to exchange an introduction form containing basic demographic information. Participants then played the game by deciding whether to send their counterpart a truthful or deceptive message.

Pre-game communication medium manipulation

Prior to receiving instructions about the game, participants circled their gender and age on a written introduction form. In the intermediary condition, the experimenter ostensibly delivered each participant's introduction form to a matched counterpart in an adjacent room before returning to deliver the counterpart's form. In the FTF condition, participants privately met their counterpart in-person in the hallway outside the two rooms to exchange introduction forms. The interaction lasted just long enough for participants to exchange forms and return to their room. Research confederates playing the counterpart role maintained a neutral demeanor and remained silent while exchanging

¹ We conducted this experiment over two academic semesters. In the first semester, participants were randomly assigned to either the FTF pre-game/FTF in-game condition or the intermediary pre-game/intermediary in-game condition. In the second semester, participants were randomly assigned to either the FTF pre-game/intermediary in-game condition or the intermediary pre-game/FTF in-game condition. We analyzed all conditions simultaneously after ensuring that the two participant pools were comparable on demographic and Big-5 personality profiles.

information sheets in the intermediary condition. We counterbalanced whether participants were paired with a 21-year-old male or female. In total, we used eleven different confederates.

In-game communication medium manipulation

After the pre-game task, participants learned about the specifics of the game and its associated payoffs. They then either circled a message to be delivered by the experimenter to their counterpart (intermediary condition) or met their counterpart privately in the hallway to verbally read their message of choice verbatim (FTF condition). Participants were not required to commit to a particular message prior to the interaction nor did they hand their counterpart a written form containing their message. As in the FTF pre-game condition, confederates adopted a neutral demeanor and remained silent throughout the FTF interaction. In combination, these instructions ensured that there was no actual conversation between participants and confederates during the FTF interaction.

Honesty

We operationalized honesty as participants' choice between selecting a truthful or deceptive message. Participants knew about the following payment options:

Option A: \$10 to you and \$12 to the other player.

Option B: \$12 to you and \$10 to the other player.

Knowing that their counterpart had no knowledge of the payments associated with each option, participants selected from the following messages:

Option A will earn you more money than Option B [truthful option].

Option B will earn you more money than Option A [deceptive option].

Decision rationale

Participants' motives were assessed in a post-message questionnaire to reduce the possibility of leading questions influencing message selection. Notably, because payoffs in the game are ultimately driven by counterparts' choices, honesty can be motivated by either strategic concerns (i.e., reverse-psychology if a counterpart is perceived as untrusting) or moral concerns (Cohen, Gunia, Kim-Jun, & Murnighan, 2009; Sutter, 2009). Participants provided a rationale for their message selection in writing.

Table 1
Conditional means and standard deviations.

Variable	Pre-game communication medium	In-game communication medium	
		FTF	Intermediary
<i>Moral-interest</i>	FTF	1.46 (0.53)	1.34 (0.53)
	Intermediary	1.43 (0.55)	1.07 (0.63)
<i>Expected trust</i>	FTF	5.38 (1.47)	5.32 (1.50)
	Intermediary	5.28 (1.55)	5.07 (1.53)
<i>Counterpart liking</i>	FTF	5.34 (1.02)	4.54 (1.24)
	Intermediary	5.07 (1.06)	4.67 (1.17)
<i>Retaliation fear</i>	FTF	3.47 (1.84)	3.38 (1.69)
	Intermediary	4.00 (1.78)	3.98 (1.56)

Note: Honesty = 1 if truthful message was sent, 0 if deceptive message was sent.

Table 2
Correlations between variables.

Variable	1	2	3	4	5
1. Honesty	–				
2. Moral-interest	.40***	–			
3. Expected trust	.06	.10	–		
4. Liking of counterpart	.07	.11	.34***	–	
5. Retaliation fear	–.15*	–.15*	–.15**	–.07	–

Note: Honesty = 1 if truthful message was sent, 0 if deceptive message was sent.

*** $p < .001$.

** $p < .01$.

* $p < .05$.

Consistent with Cohen et al. (2009), we coded participants' rationales for whether they reflected self-interest or moral-interest. Three independent coders blind to hypotheses and experimental conditions coded each explanation for whether it reflected strategic self-interest (coded 0; i.e., "Player 2 does not know that one person will receive more money and has no reason not to believe the message"), a combination of self-interest and moral-interest (coded 1; i.e., "\$2 is not worth the lie, and if the other player does not trust me, I get paid"), or purely moral-interest (coded 2; i.e., "I don't like to lie"). The three coders' ratings were reliable ($\alpha = .93$) and thus combined into a single measure of moral-interest.

Controls

Similarly to Cohen et al. (2009), we accounted for the possibility that honesty was driven by strategic reverse-psychology as opposed to moral-interest by asking participants to indicate the degree to which they expected their counterpart to trust their message on a scale ranging from 1 (*extremely distrusting*) to 7 (*extremely trusting*). We were also concerned that liking for one's counterpart could potentially account for honesty in the deception game because it is a key element of rapport (Tickle-Degnen & Rosenthal, 1990) that could be enacted by mere visual exposure to counterparts. Thus, we asked participants to indicate how likable they considered their counterpart on a scale ranging from 1 (*not at all likable*) to 7 (*extremely likable*). Finally, we controlled for retaliation concerns by asking participants to indicate how likely their counterpart would be to retaliate if they knew they had been deceived on a scale ranging from 1 (*extremely unlikely*) to 7 (*extremely likely*).

Results

Conditional means and standard deviations are summarized in Table 1. See Table 2 for a correlation matrix of dependent and control variables. Confederate race was only tracked within the FTF pre-game/FTF in-game condition; we did not find any effects associated with confederate race, so this factor is omitted from the analyses below. Our data is available at osf.io/urh5i.

Honesty

In analyzing honesty rates, we conducted a 2 (honesty) \times 2 (pre-game communication medium) \times 2 (in-game communication medium) log-linear analysis. We observed an effect of in-game communication medium such that participants were more honest in the FTF condition (83%) than in the intermediary condition (69%), $\chi^2(1, N = 297) = 7.82, p = .005, d = .33, 95\% CI = [.10, .56]$.² This effect did not interact with pre-game communication medium, $\chi^2(1, N = 297) = 0.37, p = .54$. Though participants were more honest in the FTF pre-game condition (81%) than they were in the intermediary pre-game condition (71%), the difference was smaller

² When including all 306 participants in analyses, the effect is similar in magnitude, $\chi^2(1, N = 306) = 7.89, p = .005, d = .33$. The rate of honesty in the intermediary pre-game/intermediary in-game condition is similar to that previously reported under complete anonymity (Cohen et al., 2009; Gneezy, 2005; Sutter, 2009).

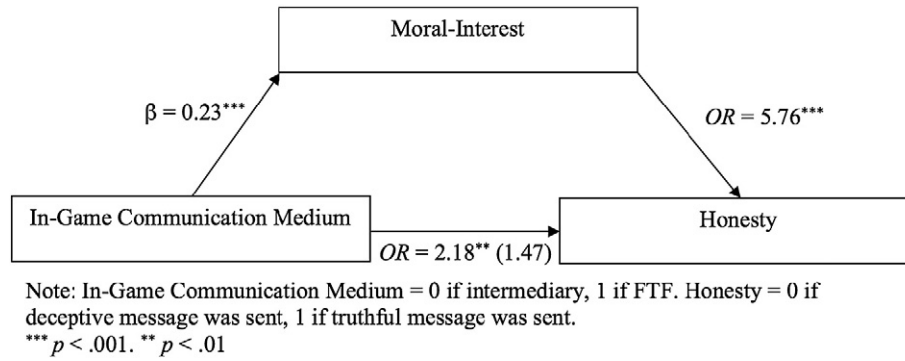


Fig. 1. Moral-interest mediates the effect of in-game communication medium on honesty.

in magnitude than that of the two in-game communication medium conditions, $\chi^2(1, N = 297) = 2.12, p = .15, d = .17 [-.06, .40]$.

To examine the robustness of the effect of in-game communication medium to participant and counterpart gender, we conducted a follow-up analysis that added both sender and receiver gender as factors to the above analysis. The main effect of in-game communication medium held, $\chi^2(1, N = 297) = 5.94, p = .01, d = .29$.³

Decision rationale

We assessed the extent to which decision rationales reflected moral-interest using a 2 (pre-game communication medium) \times 2 (in-game communication medium) ANOVA. Consistent with the prior analyses, we found a main effect of in-game communication medium such that rationales reflected more moral-interest in the FTF condition ($M = 1.45, SD = 0.53$) than in the intermediary condition ($M = 1.18, SD = 0.60$), $F(1, 293) = 13.36, p < .001, d = .43 [.12, .66]$. Though the interaction was not significant, we did find an effect of pre-game communication medium such that moral-interest was greater in the FTF pre-game condition ($M = 1.41, SD = 0.53$) than in the intermediary pre-game condition ($M = 1.20, SD = 0.62$), $F(1, 293) = 5.13, p = .02, d = .26 [.04, .49]$.

To examine whether these effects were robust to gender composition and controls, we ran a 2 (pre-game communication medium) \times 2 (in-game communication medium) \times 2 (participant gender) \times 2 (confederate gender) ANCOVA with the control variables included as covariates. The effect of in-game communication medium remained significant, $F(1, 278) = 11.07, p < .001, d = .39$, while the effect of pre-game communication medium dropped in magnitude, $F(1, 278) = 2.26, p = .13, d = .18$. These were the only effects to emerge across both analyses of moral-interest. While both pre-game and in-game communication mediums impacted moral-interest, the in-game effect was larger in magnitude than the pre-game effect.⁴

³ We also identified an unexpected pre-game communication medium \times participant gender \times counterpart gender interaction, $\chi^2(1, N = 297) = 6.68, p = .01, d = .30$. For female participants, we found a pre-game communication medium \times counterpart gender interaction, $\chi^2(1, N = 149) = 4.85, p = .03$. This effect did not hold for male participants, $\chi^2(1, N = 148) = 1.08, p = .30$. Specifically, females were more honest with male counterparts (93%) than female counterparts (73%) in the intermediary pre-game condition, $\chi^2(1, N = 71) = 5.22, p = .02$. Counterpart gender did not influence honesty rates for females in the FTF pre-game condition, $\chi^2(1, N = 78) = 0.54, p = .54$. No other effects emerged.

⁴ In an exploratory vein, we conducted a series of 2 \times 2 ANOVAs on the three control variables. We identified a main effect of in-game communication medium on liking of counterpart where participants indicated more liking towards their counterpart in the FTF condition ($M = 5.24, SD = 1.04$) than in the intermediary condition ($M = 4.62, SD = 1.19$), $F(1, 293) = 20.21, p < .001, d = .52$. We also found a main effect of pre-game communication medium on retaliation fear where participants feared retaliation less in the FTF condition ($M = 3.43, SD = 1.77$) than in the intermediary condition ($M = 3.99, SD = 1.64$), $F(1, 293) = 7.69, p = .006, d = .32$. No other effects emerged.

Mediation analysis

Finally, we conducted a mediation analysis to examine whether moral-interest mediated higher honesty rates in the in-game FTF condition relative to the intermediary condition. As illustrated in Fig. 1, the main effect of in-game communication medium was no longer significant when controlling for the influence of moral-interest ($p = .21$). To test for mediation, we used a procedure outlined by MacKinnon and Dwyer (1993) for estimating the indirect effects associated with binary response variables. A bootstrap procedure with 10,000 replications revealed a significant indirect effect of moral-interest, 95% CI = [.06, .18]. Furthermore, in a separate mediation analysis, the indirect effect of moral-interest remained significant when accounting for the influence of controls, 95% CI = [.05, .17]. Taken together, these findings suggest that the activation of moral-interest promoted honesty during the in-game FTF interaction.

General discussion

Though prior research has established that FTF interactions involving back-and-forth conversation promote honesty, the current research is the first to our knowledge that examines whether this occurs in the absence of conversation. Whereas back-and-forth conversation may enhance honesty via the development of rapport and concerns about deception scrutiny, we hypothesized that, over and above these factors, FTF interaction promotes honesty by increasing potential deceivers' awareness of their moral-interest. We empirically tested the validity of this account and found supporting evidence in the form of greater honesty rates when in-game communication was FTF as opposed to through an intermediary. Furthermore, because the honesty-promoting quality of FTF interaction was not moderated by whether anonymity had been removed in a pre-game FTF interaction, we differentiate our effect from theoretical explanations centered on the antisocial behaviors promoted by anonymity.

However, we note that because our in-game FTF interaction condition involved both visual access to counterparts and participant vocalization, we cannot be sure whether one or both of these factors are sufficient to promote honesty. Vocal communication channels can at times be more effective at promoting cooperation than visual channels absent vocal communication (Wichman, 1970), so our results may be contingent on whether deceptive information must be vocalized. Future research that empirically separates the audio and visual components of FTF interaction could more precisely identify how minimal interactions promote honesty.

Despite this limitation, our research finds that even in an impoverished FTF interaction absent opportunities for back-and-forth communication, people are more honest when communicating FTF than through an intermediary. Scholars have touted the benefits of FTF interactions due to their ability to enhance opportunities for rapport-building (e.g., Drolet & Morris, 2000; Moore et al., 1999; Morris et al., 2002) and their tendency to raise concerns about being

scrutinized (e.g., Valley et al., 1998), but we suggest that even the briefest of FTF interactions may activate moral-interest that prevents individuals from lying to others.

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