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The present study examined the effect of profit gained from others when engaging in perceived deceptiveness. Deceptiveness was measured by a truth/lie judgment using specified information and a deceptiveness scale. Nineteen college students were asked to judge the truthfulness of declarations made by a confederate during a nine-round card game. Participants were also given a chance to gain a bonus prize during each round. The results indicated that the mean proportion of a lie judgment pertaining to the confederate's declaration in the round containing a bonus was significantly lower than in the round without a bonus. However, there were no significant differences in the deceptiveness scale between the round conditions. This discrepancy between judgment and cognition indicated the influence of an emotional impact on a truth/lie judgment containing information.

Key words: lie judgment, deceptiveness, positive emotion

Introduction

Lying is a prevalent occurrence in everyday life. Lies and deception have mainly been studied in terms of physiological psychology, developmental psychology, and social psychology (Murai, 2005). Accordingly, several studies have focused on the features of lies, including reasons for and frequency of lies (DePaulo, Kashy, Kirkendol, Wyer, & Epstein, 1996), verbal or nonverbal deception cues (DePaulo, Lindsay, Malone, Muhlenbruck, Charlton, & Cooper, 2003), children's lies (Lewis, Stanger, Sullivan, 1989), the phylogeny of deception (Byrne & Corp, 2004), and cerebral mechanisms of lying (Abe, 2011). As such, lie detection is the most active research topic in this field. Therefore, the goals of lie detection studies are improvement of accuracy in lie detection and avoidance of false alarms. Many researchers have investigated improvements in the accuracy of lie detection, and developed several detection techniques using polygraph, EEG and fMRI (Vrij, 2008).

Most people do not have access to sophisticated equipment in their daily lives. Thus, individuals must be able to detect lies with available cues, including verbal messages or expressive behaviors. A study using a meta-analytic approach showed that certain deception cues can be used for detection, such as a socially dissatisfying or compelling story with negative impressions, or messages with tense imperfect and unusual content (DePaulo et al., 2003). Additionally, techniques for assessing the veracity of a verbal testimony has progressed (Sato & Nihei, 2007).

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Although studies investigating deception cues have predominantly focused on the sender of a lie, some researchers have focused on the receiver. Murai (2005) examined deceptiveness and discussed several factors that affect it, including the ambiguity of the message, the occurrence probability of the message (or lie) and the verifiability of the lie. In an additional recent study, Kikuchi, Sato, Abe, Nihei (2008) assigned occurrence probabilities to tardiness excuses in to 3 levels: (1) a rare occurrence (the bus caused an accident); (2) a medium degree occurrence (the bus encountered slight congestion); and (3) high likelihood of occurrence (the bus encountered a traffic jam). They found that participants rated rare excuses as less reliable but more forgivable and attributed this discrepancy to a decrease in anger, and stated that the functional role of lying was emotional regulation in interpersonal communication.

Thus, when focused on communication in daily lives, it becomes apparent that an important subject of research is not only lie detection but also the role or function of the lie.

Moreover, Murai (1999) showed that a pleasant message is perceived as less deceptive than an unpleasant one. In light of Kikuchi et al.'s (2008) findings, we can consider this result to be associated with a change in perceived deceptiveness via positive emotion. Thus, people may evaluate statements as being lower in deceptiveness by attributing positive information to the speaker.

At this point, a specific research question emerges namely, if people made a profit without attributing it to the speaker, would their perceived deceptiveness decrease? Thus, the purpose of the present study was to examine whether positive information unrelated to others' intentions decreases perceived deceptiveness.

Method

Participants

Nineteen college students (5 males and 14 females) participated in the present study (20.4 ± 1.0 years; mean \pm SD).

Confederates

Four male college students acted as the confederates in the present study (21.5 ± 0.6 years; mean \pm SD). They were told the purpose of the study and were asked to act as a decoy for the experimenter.

Rules of the game

Initially, the experimenter places two decks of playing cards in front of both the participant and the confederate. Then, the participant and confederate are asked to draw a card from each of their decks and lay the card face down after confirming the suit of their own card. Next, the confederate (serving as a decoy) conveys the suit of their card to the participants without showing the face of their card. The participants are then asked to judge the authenticity of the given declaration. The entire game lasts for a total of nine rounds.

If participants correctly judge the authenticity of the declarations for five or more rounds, then they are declared the winners of the game. However, if the participants fail to provide correct guesses for four or more rounds, then the confederate is declared the winner. During game instructions, both the participant and the confederate were informed that the winner receives additional snacks as a reward, but the loser has to take a penalty (which consists of drinking tea mixed with chili oil and vinegar). Also, if the participant's suit matched a given declaration, the participants would get a bonus (snack) regardless of winning or losing the round.

However, confederates always declared a false suit to the participants. Although each deck was shuffled before the participant's eyes, the occurrence of the bonuses was actually controlled and randomly selected in only three out of the nine rounds.

Measures

Proportion of lie judgments. The mean of proportion for lie judgments in the rounds with bonuses (i.e. bonus rounds) was compared to rounds without bonuses (i.e. non-bonus rounds).

Deceptiveness scale. Participant responses included four categories including, this declaration is untrue, unfaithful, unreliable, or dishonest and conveyed their agreement of these categories using a 7-point scale (from 1 = strongly disagree to 7 = strongly agree). This scale is identical to the one used in Murai (1999).

Procedure

Participants and confederates sat opposite from one another and the experimenter sat next to them and provided instructions regarding the game's procedure. At the beginning, the experimenter explained all of the rules of the game, rewards, penalties and the bonuses. Also, both the participants and the confederates were informed that there is no relationship between the occurrence of the bonuses and authenticities of the declarations made by the confederates.

The game was conducted for a total of nine rounds. After hearing the confederate's declaration, participants would check if their own card suit matched with the one declared by the confederate. Next, participants were allowed to interrogate the confederates. Finally, participants made note of their judgment regarding the authenticity of the confederate's declaration and evaluated the deceptiveness of the declaration. The results of the game became clear at the end of the final round.

Results

Table 1 presents the means for the proportion of lie judgments and deceptiveness scores measured in each round condition. The results of a one-sided paired t-test, revealed that bonus rounds had significantly lower proportions of lie judgments than non-bonus rounds ($t(18) = 2.00, p < .05$). Similarly, a t-test showed no significant difference in the deceptiveness scores ($t(18) = 1.29, n.s.$).

Table 1 Means (and SDs) for proportions of lie judgments and deceptiveness for each round condition

Condition	Proportion of lie judgments (%)	Deceptiveness score
Bonus rounds	43.9 (22.4)	16.2 (3.4)
Non-bonus rounds	57.0 (18.7)	15.0 (2.6)

Discussion

The present study examined whether positive information unrelated to others' intentions decreased perceived deceptiveness. Thus, we investigated the effect of an incidental bonus on truth / lie judgments by use of the game "I Doubt It".

During the game, the confederates were the instigators of the lie (and acted as the liars), and the participants were the listeners who had to detect the confederate's lie in the game. The results indicated that participants were less likely to judge a confederate's declaration as a lie during a round with a bonus versus a round without a bonus. In contrast, no significant differences were found in the deceptiveness scale between the conditions in the rounds. Thus, participants tended to judge the message to be true when they had made a profit. However, their perceived deceptiveness was not affected. This discrepancy between judgment and cognition may be explained by other factors which may mediate the truth / lie judgment.

In the Affect-as-information hypothesis, people are thought to draw on self-affect to use as information during judgment (Shwalts, 2001). According to this theory, the bonus may have aroused positive emotion and induced a truth judgment.

In the game used in the present study, the interrogation before the judgments was uncontrolled, and emotional changes were not measured. Therefore, future studies should control for the interrogation portions and measure any associated emotional changes. Although the present study was limited by the aforementioned fact, it demonstrated the following phenomenon: the occurrence of an incidental profit reduced one's odds of providing a lie judgment regarding information without it affecting the deceptiveness of the message.

References

- Abe, N. (2011). How the Brain Shapes Deception: An Integrated Review of the Literature. *Neuroscientist*, *17*(5), 560-574.
- Bond, C. F., & DePaulo, B. M. (2006). Accuracy of deception judgments. *Personality and Social Psychology Review*, *10*(3), 214-234.
- Byrne, R. W., & Corp, N. (2004). Neocortex size predicts deception rate in primates. *Proceedings of the Royal Society of London Series B-Biological Sciences*, *271*(1549), 1693-1699.
- DePaulo, B. M., Kirkendol, S. E., Kashy, D. A., Wyer, M. M., & Epstein, J. A. (1996). Lying in everyday life. *Journal of Personality and Social Psychology*, *70*(5), 979-995.
- DePaulo, B. M., Lindsay, J. J., Malone, B. E., Muhlenbruck, L., Charlton, K., & Cooper, H. (2003). Cues to deception. [Review]. *Psychological Bulletin*, *129*(1), 74-118.
- Kikuchi, F. Sato, T. Abe, T. Nihei, Y. (2008). Effects of anger emotion, credibility, and the severity on forgiveness. *The*

- Japanese Journal of Research on Emotions*, 15, 115-123. (in Japanese)
- Lewis, M., Stanger, C., & Sullivan, M. W. (1989). Deception in 3-year-olds. *Developmental Psychology*, 25(3), 439-443.
- Murai, J. (1999). The effect of pleasantness of verbal messages on deceptiveness in romantic relationships. *The Japanese journal of Psychology*, 5, 421-426. (in Japanese)
- Murai, J. (2005). An examination of the factors that influence perceived deceptiveness of verbal messages. *Kitaohji shobo*. (in Japanese.)
- Shwalts, N.(2001). Feelings as Information: Implications for Affective Influences on Information Processing. In L. L. Martin & G. L. Clore (Eds.), *Theories of mood and cognition: a user's handbook* (pp.159-176). New Jersey: Lawrence Erlbaum Associates.
- Sato, T & Nihei, Y. (2007) Techniques for assessing the veracity of a verbal testimony: CBCA and RM. In Nihei, Y (Ed), *Lesprit Daujourdhui: usonorinshou · usonogenba (lies in clinical setting and lies in venue)* ,481, 186-196. Tokyo: Shibundo.
- Vrji, A.(2008). *Detecting lies and deceit: Pitfalls and opportunities*. (2nd ed). Chichester: John Wiley and Sons.

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