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To Be Perceived as Altruistic: Strategic Considerations That Support Fair Behavior in the Dictator Game

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We successfully replicated Dana, Cain, and Dawes' study (2006) using a dictator game with an exit option with a Japanese sample. The exit option allowed the dictator to leave the recipient with nothing by paying a small fee while ensuring that the recipient never noticed that the dictator game was being played. If the dictator was motivated by fairness or even self-interest, there would be no reason to choose the exit option. However, our study, as well as the original study, demonstrated that approximately 40% of participants chose the exit option. Based on these results, we argue that the altruistic behavior exhibited during the standard dictator game represents a default strategy for reputation management.

Keywords
altruistic behavior, reputation, error management

Introduction

The dictator game (DG) has been used to demonstrate that people have a preference for altruism or fairness. The game is played by two individuals who take on the roles of a dictator and a recipient. The dictator decides how much, if any, of an endowment of money he/she will share with the recipient. A purely self-regarding dictator would not give any money to the recipient. However, many dictators give at least some of the endowment to the recipient, even during a one-time anonymously played DG (Camerer, 2003). The standard interpretation of the dictator's giving is that the individual is motivated by a concern for others' outcomes, i.e., by a preference for fairness (Van Dijk & Vermunt, 2000). Alternative interpretations of the dictator's giving include that it is a strategy for enhancing his/her reputation (Barclay, 2013; Dana, Cain, & Dawes, 2006) or avoiding blame (Oexl & Grossman, 2013). In this study, we examined the relative power of these two explanations for altruistic giving during the DG.

Recent research has shown that people who behave in an altruistic manner during an anonymously played economic game were sensitive not only to the fact that they were being observed but also to subtle cues suggesting that they might be monitored (Haley & Fessler, 2005). These results suggest that players' altruistic behavior is related to their concern for their reputation, even if they are playing completely anonymous economic games. Dana, et al. (2006) conducted a study supporting this interpretation. In this study, the authors utilized a DG with an exit option. The dictators who had already made their decisions about how to allocate $10 during a standard DG were provided with an opportunity to either stay in the game or choose the exit option. If a dictator chose the exit option, he/she received $9 and the recipient received $0, but the recipient would not be informed that he/she had been designated as a recipient in the DG. The recipient would not have any knowledge of the DG. Given the exit option, the dictators who gave at least $1 to the recipients in the DG due to their concerns for the recipients' welfare should stay in the game, rather than exit the game and give the recipients $0. The dictators who only care about their own welfare should also stay in the game and keep all of $10 for themselves, rather than exiting and taking only $9. Yet, Dana et al. (2006) found that some of the dictators who gave $5 of the $10 to the recipients in the DG chose to exit if they were provided with this option. This result suggests that the dictators' seemingly "altruistic" behavior actually reflects their desire to avoid being identified as violators of the fairness norm, rather than expressing their intrinsic motivation for fairness or altruism.

A potential problem with the reputation interpretation is that it assumes that DG players are concerned with their reputations even during an anonymously played game. Yamagishi and his colleagues (Yamagishi, Terai, Kiyonari, Mifune, & Kanazawa, 2007) provided a conceptual solution to this problem by referring to error management. These authors argued that people adopt a default strategy that maximizes the long-term overall benefits and minimizes the overall costs within a specific adaptation domain, such as the domain of social exchanges. During a one-time encounter, non-cooperation can be a benefit maximizing strategy because such behavior will have no reputational effect in the future. In contrast, this behavior may be a losing strategy during a long-standing on-going relationship, as it may affect the long-term outcomes. Therefore, the nature of the relationship may determine whether it is more adaptive to behave altruistically or egoistically. Thus, individuals should behave cooperatively when engaging in a long-standing relationship, whereas they should behave egoistically during a one-time encounter. However, assessing the nature of a relationship may involve errors. One type of error is regarding that a situation does not have reputational consequences when, in fact, an individual's behavior is actually observed by

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someone, which may affect this individual's reputation and future responses toward the individual from others. This type of error is a missed detection. Another type of error is a false alarm in which a situation that does not have reputational consequences is perceived as a situation that does. The consequences of a missed detection is negative reputational consequences, such as being expelled from a long-standing relationship, which can be more serious than the negative consequences of false alarm, which is forgoing the potential benefits of exploiting others during a one-time relationship. This asymmetry with regard to the seriousness of the two types of errors during social exchanges may promote the bias for minimizing a missed detection at the cost of increasing the risk of false alarm. Therefore, the long-term benefit maximizing, error management strategy is to cooperate unless it is absolutely guaranteed that one's behavior will not yield the former type of errors. Cooperation is a default choice for such an error management strategy unless the benefit accruing from exploitation is excessively large. Small amount paid in the laboratory is not large enough to abandon this default strategy and choose the risk of being detected. Assuming that human communities are based on a system of indirect reciprocity or generalized exchange (e.g., Nowak & Sigmund, 1998), behaving altruistically is the safest strategy to use within a community, unless it is evident that this behavior is too costly.

In the current study, we investigate whether the fair allocation observed during the standard DG could be interpreted from the perspective of reputation management by replicating a study by Dana et al.'s (2006) with a different sample (Japanese students) than the original sample (North American students).

Method

Participants

Ninety-seven (27 females and 69 males, one participant was of an unspecified gender; *mean age* = 19.97, *SD* = 1.09) Japanese undergraduate students participated in this study. They were recruited from a large participant pool that consisted of students from various departments on campus. Monetary rewards were emphasized as an incentive for participation.

Procedures and Design

Upon arrival at the laboratory, participants were individually greeted by a receptionist who assigned each of them with an ID number to ensure anonymity. Each participant was then escorted to a private compartment in the laboratory. After being seated, the participants who were randomly assigned the dictator role were provided with instructions about the DG[1]. These instructions explained the rules of the DG. Following the procedure of Dana et al. (2006), we administered two conditions, a control condition and a private condition. Fifty-one participants were assigned to the control condition, and 46 participants were assigned to the private condition. The condition manipulation was administered during the instructions for the DG. The instructions provided to participants in the control condition described the standard DG procedure in which the dictator divides JPY1,000 (approximately US$10) between him/herself and a randomly matched recipient. In this condition, the dictator was told that the recipient would be informed later of the DG rules and receive a share of JPY1,000 from the dictator. In both conditions, it was clear that the recipients were not provided with instructions at this stage. The instructions provided in the private condition stated explicitly that the randomly matched recipient was not expecting the dictator to share the JPY1,000. Instead, the dictator was told that the recipient would be given the money that the dictator allocated with no rationale. Thus, the dictators could assume that their decisions regarding how much to give to the recipients would not affect the recipients' evaluations of them. Therefore, it was clear that the dictators' decisions would have no reputational consequences in the private condition.

Following these instructions, the dictators were asked to record their decisions on how to divide the JPY1,000 between themselves and the recipients on a decision sheet; at this stage, the dictators were not aware of the exit option. Then, their decision sheets were enclosed in envelopes, which were collected by the experimenter. Next, they were provided with a second set of instructions that explained the exit option, which gave the dictator JPY900 and the recipient JPY0. It was explained that if the dictator chose the exit option, the recipient would not be informed of the dictator's decision. It was made explicit that the recipient would not know that he/she was paired with a dictator. The recipient would neither receive any money nor even be told that they had had a chance to receive any money. The dictator's choice regarding the exit option was recorded on another decision sheet, which the experimenter later collected.

Results

Allocation and Exit Decisions

The difference in the dictators' allocation choices between conditions was significant ($t(95) = 2.17$, $p = .03$). The dictators in the control condition ($M = 401.96$, $SD = 167.92$) allocated more money to the recipient compared to those in the private condition ($M = 319.57$, $SD = 206.15$). Although these mean allocation amounts were generally larger than those observed in the original study (Dana et al., 2006; 24 to 27% in the control condition and 18% in the private condition), the differences between the conditions were successfully replicated. The difference between the conditions in the rates of choosing the exit option was

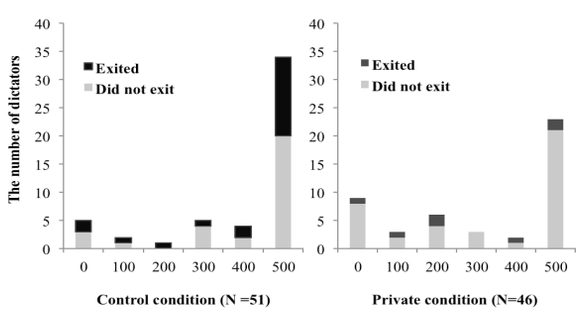

Figure 1. Distributions of the amounts allocated to the recipients (horizontal axis) and the number of dictators who chose the exit option in the control and private conditions.

also significant (χ^2 (1) = 7.94, p < .01). Twenty-one of the 51 dictators in the control condition (41.18%) chose the exit option compared to 7 of 46 (15.22%) in the private condition. These rates were generally consistent with those reported in the original study (28 to 43% in the control condition and 4% in the private condition). As shown in Figure 1, 41.2% of the dictators who originally offered a fair proposal to the recipient in the control condition and 8.7% of those in the private condition chose the exit option. Similar to the original study, these results indicate that a relatively large proportion of dictators choose the exit option.

Discussion

In a replication of Dana et al. (2006), we found that approximately 40% of the participants chose the exit option. This result supports our argument that the altruistic allocation that is frequently observed during a standard DG is partially due to strategic considerations. The finding that participants in the private condition allocated some of their money to recipients suggests that a portion of the fair allocation that is evident in the DG reflects the participants' preferences for fairness and altruism. However, the substantial differences in the levels of allocation between the conditions suggest that most allocations in the standard DG reflect strategic considerations. According to Yamagishi and Mifune (2008), who conducted DG experiments within a minimal group paradigm, the altruistic behavior toward group members that is typically observed in a DG is not evident in a private knowledge condition in which the dictators know that the recipients are unaware of the dictator's group membership (see also Mifune, Hashimoto, & Yamagishi, 2010). If altruistic behavior is motivated solely by fairness and altruism, altruistic behavior should occur during a DG even in the private knowledge condition. Thus, their findings suggest that altruistic behavior is partially motivated by strategic avoidance of a potentially negative impression among community members.

One interesting topic for future research concerns cross-societal differences in the use of the error management strategy. Assuming that the cost of making errors of missed detection in collectivist societies is generally higher than that in individualist societies (Yamagishi, Hashimoto, & Schug, 2008), we should expect a stronger operation of error management in the former than the latter societies. The comparison of our results with the Dana et al. (2006)'s suggests this possibility, but no firm conclusion can be drawn from the comparison of two studies without tight control for the comparison.

The conditional differences in the allocation levels found in the current study suggest that norm-abiding behavior is partially internalized as a preference and partially as a default strategy. Individuals who allocated the endowment in a fair manner in the private condition may have internalized the norms of altruism and fairness as their preferences, whereas those who allocated the endowment fairly in the control condition and still chose the exit option may not have internalized norms as their preferences. In reality, preferences and reputational concerns supplement each other. One open question is how strongly internalized preferences influence individuals' decisions in the complete absence of reputational cues. Most experiments that examine the effect of reputational concerns compare conditions with and without anonymity (e.g., anonymity to the experimenter is evident; Dana et al., 2006). Although Barmettler, Fehr, and Zehnder (2012) provided empirical evidence that anonymity to the experimenter in the form of double-blindness does not affect participants' choices during the DG, someone is always aware of the participants' choices, even if the choice is not associated with a particular participant. Future research in which subtle cues regarding reputation are completely eliminated is needed.

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[1] Participants were randomly assigned to the role of either a dictator or a recipient. In the current paper, we only reported data from individuals who were randomly assigned to the dictator role because the recipients did nothing.