Excessive Altruism and Its Underlying Motivation: Effects on Likability in Japan and the US

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The present study examined whether there is a difference in the liking for the actor depending on whether the motivation for excessive altruistic behavior is selfish or altruistic. Two experiments were conducted via a Web-based survey. Participants in the experiments responded with their liking toward an altruistic actor, assuming a situation in which the actor responded about his/her motivations. The results showed no effect of individual differences in caution (Study 1), but did show differences between Japan and the US (Study 2). In Japan, actions with altruistic motivations may be evaluated more favorably because selfish motivations were judged to be normatively unfavorable, whereas in the US, where people are tolerant of deviation from the norm, excessively altruistic behavior with selfish motivation may be evaluated as favorably as that with altruistic motivation.

Introduction

Altruistic behavior[1] can elicit reciprocity not only from the direct recipients of altruistic actions but also from third parties. Therefore, actors of altruistic behavior may receive benefits from people who witness their altruistic actions. It is thought that altruistic behavior toward others has evolved through such a mechanism. In fact, it has been found that people behave more altruistically when their actions are recognized by others, and that third parties who observe such actions generally evaluate the actors favorably (Bereczkei et al., 2010). However, excessive altruistic behavior is sometimes evaluated negatively

rather than favorably (Kawamura & Kusumi, 2020). This is partly because excessive cooperation is regarded as a deviation from norm (Parks & Stone, 2010). Kawamura and Kusumi (2020) showed that the degree of disapproval of excessive altruistic behavior compared to normal altruistic behavior is mediated by the degree of deviation from norm.

Even when altruistic behavior is not excessive, it tends to be evaluated less favorably when the actor benefits from it (Berman et al., 2015; Newman & Cain, 2014). People may have a negative impression of such altruistic behavior due to their belief that "true altruism involves sacrifice and precludes benefits to the self" (Lin-Healy & Small, 2013). Carlson and Zaki (2018) investigated how observers evaluated altruistic acts that led to "self-oriented consequences" (the actor unwittingly benefiting from those acts) versus altruistic acts that were motivated by "self-oriented motives" (the deliberate intention to obtain benefits). The results showed that actors who were motivated by self-interest were judged to be less altruistic than those with "self-oriented consequences." In other words, people judge altruism by placing particular weight on the actor's intentions. Furthermore, it has been shown that the evaluation of an actor's altruistic behavior depends on the degree of benefit to the recipient, as well as cultural differences (Klein et al., 2015). One reason for these cultural differences is the varying tolerance for deviation from norms (Kawamura & Kusumi, 2020). This difference in tolerance for norm deviation can be explained in terms of individualism and collectivism. Countries with relatively collectivist cultures, such as Japan, are homogeneous societies that strictly demand conformity to the norms of the in-group. By contrast, countries with individualist cultures, such as the US, are highly heterogeneous and more tolerant of deviations from norms. This is because it is difficult for people in such societies to agree on specific norms and to impose severe sanctions (Triandis, 1989).

Whether cultural differences in excessive altruistic behavior also extend to motivations has not yet been examined. Kawamura and Kusumi (2020) demonstrated that in Japan, excessive altruistic behavior that deviates from the norm is not evaluated favorably, whereas in the US, it is assessed as favorably as normal altruistic behavior. If we consider motives in the same way, evaluations of excessive altruistic behavior with selfish motivations may differ between Japan and the US, where tolerance for deviation from norms varies, because it deviates from the belief that altruistic behavior should be performed with altruistic motivations. In other words, unlike Japan, the US may evaluate excessive altruistic behavior as favorably as altruistic behavior even if the motivation for such behavior is selfish.

In Study 1, we examine whether motivational influences on observers' judgment are also observed in the context of excessive altruistic behavior in Japan. If differences in evaluation are found in Japan, Study 2 will

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[1] In this study, we examine whether the evaluation of excessive altruistic behavior is affected by differences in motivation. For this purpose, from the standpoint of not being limited to behaviors with limited motivations such as helping behavior, "behaviors that benefit others at the expense of self regardless of their motivations" are called altruistic behaviors (Kawamura, 2022), and are the subject of this study.

Table 1. Multiple regression analysis with "liking" as a dependent variable (Study 1)

Variable	B	*SE* B	95% CI	β	*t*	*p*
Intercept	4.32	0.07	[4.18, 4.56]		61.10	.00
Gender (Man = 0)	−0.04	0.12	[−0.27, 0.20]	−.01	−0.33	.74
Age	0.00	0.01	[−0.01, 0.02]	.03	0.73	.47
Caution	−0.07	0.08	[−0.23, 0.09]	−.04	−0.85	.40
Selfish motivation (SM)[1]	−0.59	0.14	[−0.87, −0.32]	−.20	−4.21	.00***
Altruistic motivation (AM)[1]	0.35	0.14	[0.07, 0.63]	.12	2.48	.01*
SM×Caution	−0.27	0.16	[−0.59, 0.05]	−.08	−1.65	.10
AM×Caution	−0.11	0.16	[−0.43, 0.20]	−.04	−0.70	.48
Adjusted R^2	.073***					

[1] Control = 0
*: $p < .05$, **: $p < .01$, ***: $p < .001$

then examine cultural differences between Japan and the US. In doing so, we also consider the effects of individual differences based on the trait of caution (for a detailed discussion on caution, please refer to the Supplementary Information). Caution refers to the degree to which one is aware of danger and cautious in one's relationships with others (Yamagishi, 1998). People with high caution tend to become strongly skeptical when excessive altruistic behavior is explained as being based on altruistic motivations, resulting in low liking. On the other hand, those with low caution will take the presented motivation on face value, and even excessive altruistic behavior, when explained as altruistically motivated, will lead to more liking.

Study 1
Hypothesis
Liking toward excessive altruistic behavior is higher in the altruistic motivation condition than in the selfish motivation condition when caution is low, and it is higher in the selfish motivation condition than in the altruistic motivation condition when caution is high.

Method
(a) Experimental design & sample size design
This study is a one-factor between-participants design web experiment in which the type of motivation for excessive altruistic behavior (altruistic motivation, selfish motivation, or no description) is the independent variable, and liking toward the actor is the dependent variable. Based on this design, the sample size was determined prior to data analysis; according to G*Power 3.1 (Faul et al., 2009), the appropriate sample size for multiple regression analysis for hypothesis testing (α = .05, 1−β = .80, effect size .02) was 550. The effect size was set based on the results of Kawamura and Kusumi (2020).

(b) Participants & procedure
Using a crowdsourcing service (CrowdWorks: https://crowdworks.jp/), 626 participants (270 men and 356 women) aged 18 or older were recruited for the experiment. After completing the caution measurement scale, the participants read a scenario in which a person (Person A) who had engaged in excessive altruistic behavior spoke about his/her motivations. The altruistic behavior presented in the scenario was randomly assigned one of three types of motivation: altruistic, selfish, or no description. The 75 participants who answered incorrectly to at least one of the three questions gauging their understanding of the scenario were excluded from the experiment. The 551 participants (232 men, 319 women, *M* = 41.25 years, *SD* = 10.01) who completed the experiment were paid a gratuity of 30 yen.

(c) Measures & scenario
The caution trait was measured by the items of Caution in general trust scale (Yamagishi & Yamagishi, 1994). The scale consists of five items on a 7-point Likert scale. The scenario was "Person A gives 10,000 yen to another person and discusses his or her motivation." This scenario reflects daily situations in the dictator game, and is a partially modified version of the scenario used in Kawamura and Kusumi (2020) with the addition of a description of the motivation. For the full scenario along with images to facilitate understanding of the scenario, please refer to the Supplementary Information. Liking (two items: favorability and friendliness) toward Person A was measured on a 7-point scale.

Results & discussion
Mean scores were calculated because caution and liking had relatively high internal consistency. The correlation coefficients and descriptive statistics for each variable are shown in Supplementary Information (Table S1). In order to examine the effects of the manipulation of motivations and caution on liking, multiple regression analysis was conducted with caution and the manipulation of motivations as independent variables and liking as the dependent variable (Table 1). The model was significant and no multicollinearity occurred (VIFs < 1.361). Selfish motivation had a significant negative effect on liking (β = −.20, $t = −4.21$, $p < .001$), while altruistic motivation had a significant positive effect (β = .12, $t = 2.48$, $p < .05$). There was no interaction between caution and either selfish or altruistic motivation (β = −.08, $t = −1.65$, $p = .10$; β = −.04, $t = −0.70$, $p = .48$), and the hypothesis was not supported (see Supplementary Information for a detailed discussion). These results indicate that excessive altruistic behavior with altruistic motivations is evaluated more favorably than that with selfish motivations, regardless of whether caution is high or low. This result indicates that the finding in the context of normal altruistic behavior that altruistic behavior motivated by self-interest is less likely to be considered altruistic (Carlson & Zaki, 2018) and that such behavior is less likely to be evaluated favorably (Newman & Cain, 2014) also holds true for excessive altruistic behavior.

Table 2. Multiple regression analysis with "liking" as a dependent variable (Study 2: Japan vs US comparison)

Variable	B	*SE* B	95% CI	β	*t*	*p*
Intercept	4.78	0.07	[4.65, 4.91]		69.83	.00
Age	−0.01	0.01	[−0.02, 0.00]	−.08	−1.84	.07
Gender (Man = 0)	−0.18	0.14	[−0.45, 0.09]	−.05	−1.29	.20
Motivation[(1)]	0.58	0.14	[0.32, 0.85]	.18	4.31	.00***
Country[(2)]	1.31	0.14	[1.04, 1.58]	.40	9.54	.00***
Motivation×Country	−0.66	0.27	[−1.19, −0.13]	−.10	−2.45	.01*
Adjusted R^2	.26***					

[(1)] Selfish motivation = 0, Altruistic motivation = 1
[(2)] JP = 0, US = 1
*: $p < .05$, **: $p < .01$, ***: $p < .001$

It remains to be investigated whether this finding would be supported in other countries besides Japan. According to Kawamura and Kusumi (2020), in Japan, where tolerance for deviation from norm is low, there was a difference in liking between normal altruistic behavior and excessive altruistic behavior, whereas in the US, where tolerance for norm deviation is high, no such difference was found. However, this study only measured evaluations of the behaviors and did not examine the effects of motivation. If the difference in tolerance for deviation from norm between Japan and the US affects the evaluation of excessive altruistic behavior, it is necessary to examine whether excessive altruistic behavior motivated by selfishness that deviates from the norm of altruism is also evaluated differently between the US and Japan. In Study 2, we conducted the same experiment in the two countries to examine whether the motivation for excessive altruistic behavior has different effects on liking in the two countries.

Study 2
Hypothesis
In Japan, liking toward excessive altruistic behavior is higher in the altruistic motivation condition than in the selfish motivation condition. In the US, there is no difference in liking depending on the type or presence of motivation[2].

Method
(a) Experimental design & sample size design
The experimental design for Study 2 was the same as Study 1, a one-factor between-participants design (altruistic motivation, selfish motivation, and no description). Based on this design, the sample size was determined prior to data analysis. In Study 2, the hypotheses were tested in Step 1 of the hierarchical multiple regression analysis and exploratory analysis[3] was conducted in Steps 2 and 3. The results of the power analysis (Linear multiple regression: Fixed model, R^2 increase) with G*power 3.1 (Faul et al., 2009) showed that the appropriate sample size for testing the amount of increase in R^2 (α = .05, 1−β = .80, effect size .02) in the hierarchical multiple regression analysis was 647. The effect size was set to the same value as in Study 1. Therefore, the sample size was 324 subjects each in Japan

and the US. This study is preregistered with OSF (https://osf.io/qbz98/).

(b) Participants
In Japan, participants were recruited via the Web through a crowdsourcing service (CrowdWorks: https://crowdworks.jp/), and 404 individuals aged 18 or older participated in the experiment. In the US, 683 participants aged 18 or older were recruited through a panel sample provider, LUCID (https://luc.id/).

(c) Procedure
After the Japanese and US experimental participants completed the cultural self-construal scale (see below), the same procedure as in Study 1 was followed. The images presented to the American participants can be found in the Supplementary Information. The 332 Japanese participants and 335 American participants who completed the questionnaire were given a gratuity of 30 yen (about $0.3). We excluded 70 Japanese and 348 American participants from the experiment for failing to provide correct answers to all questions gauging their understanding of the scenario content.

(d) Measures
The same measures as in Study 1 was used. See Supplementary Information for the cultural self-construal scale.

Results & discussion
Excluding the two American participants who chose "other" or "no response" in the gender question, 332 Japanese participants (121 men, 211 women, *M* = 40.50 years, *SD* = 10.75) and 333 American participants (159 men, 174 women, *M* = 42.58, *SD* = 13.90) were included in the analysis. The correlation coefficients and descriptive statistics for each variable are shown in Supplementary Information (Table S2). After confirming the reproducibility of the results of Study 1 through multiple regression analysis on the Japanese sample only, we tested the hypotheses. In order to compare the selfish and altruistic motivation conditions, data from the control group were excluded (In the Supplementary Information document, the same analysis was performed after including the control group). Since multiple regression analysis with liking as the dependent variable showed that the interaction between country and motivation was significant (β = −.10, *t* = − 2.45, *p* < .05; Table 2), a simple slope analysis was conducted (Figure 1). The results showed that in Japan, liking was lower for selfish

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[2] Note that caution was not measured in Study 2 because it was not found to be related to liking in Study 1.

[3] In addition to testing the hypotheses, we tested the replicability of Study 1 and conducted an exploratory analysis of the relationship between cultural self-construal, country, and motivation (results are presented in the Supplementary Information).

motivations than for altruistic motivations, but in the US, there was no difference in liking across motivations. Thus, the hypothesis was supported.
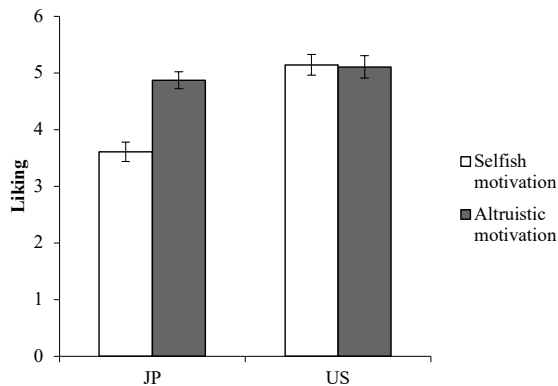

Figure 1. Effects of differences in motivations on likings in Japan and the US

General discussion

The purpose of this study was to examine the effects of motivations behind excessive altruistic behavior on third-party liking, and to clarify how motivations affect the actor's evaluation by observers. This study asked participants to consider a fictional scenario wherein a person performed the altruistic act of giving a substantial amount of money to another person. It was found that in Japan, excessive altruistic behavior motivated by altruistic motivations was perceived more favorably than an act motivated by selfish motivations, whereas in the US, there was no difference in liking based on the motivation.

The significance of this study is that it clarified the influence of motivation and its differences by country, which were not considered in Kawamura and Kusumi (2020), which found that excessive altruistic behavior was not evaluated favorably. This result may be caused by differences in the level of tolerance for deviation from norm, which does not rule out the possibility that Americans are more likely than the Japanese to focus on the consequences of their actions.

According to Yamagishi's (1998) emancipation theory of trust, Japanese society, being a secure society, may be less likely to form new commitments with others at transaction costs in situations of high social uncertainty. Therefore, it is possible that in this experiment, Japanese participants did not trust the actor until they understood the actor's altruistic motives and social uncertainty was reduced. Nevertheless, in a trusting society such as the US, the motive may have been less influential because the actor was able to trust others when observing the outcome of the action. However, this study did not measure trust, and this interpretation differs from the fact that altruistic behavior is generally evaluated by focusing on its intentions. Future research should examine the difference between general altruistic behavior and excessive altruistic behavior and conduct discussions relating altruistic behavior to measures such as trust. Additionally, future studies should test the generalizability of this finding by collecting data from more countries.

Author contribution
KH, KN, and AM developed the study concept and design, and KH collected and analyzed data. KH wrote the original draft and KN and AM reviewed and edited it. All authors have read and approved the final manuscript.

Ethical statement
Both Study 1 and Study 2 were conducted with the approval of the Research Ethics Committee of the Graduate School of Human Sciences, Department of Behavioral Sciences, Osaka University (Approval HB022-015 and HB022-049).

Data accessibility & program code
Data has been deposited in the Open Science Framework (https://osf.io/ktcea/)

Supplementary material
Electronic supplementary materials are available online.

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