



Why are individuals with higher subjective social class more altruistic online—Unless situational risk intervenes?

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Abstract: Internet altruistic behavior (IAB) is important for fostering supportive and constructive digital interactions, yet its relationship with subjective social class (SSC) remains underexplored. This study examined the link between SSC and IAB, and its underlying psychological mechanisms of self-control and situational risk. Two experiments were conducted with college students. In Study 1 ($N = 117$, 66.7% female, $M_{age} = 19.84$, $SD = 2.19$), SSC was manipulated to test its effect on IAB via self-control. In Study 2 ($N = 175$, 72.6% female, $M_{age} = 21.42$, $SD = 2.11$), participants were assigned to risk conditions to test whether situational risk moderated the SSC–IAB association. Moderated mediation analyses showed that higher-SSC individuals reported greater IAB, an effect mediated by self-control. Situational risk weakened the positive self-control–IAB association. Consistent with cost consumption theory, suggesting that higher SSC may be associated with greater self-control to engage in IAB. These findings highlight how individual resources and situational risks shape online helping, offering insights for fostering a safer digital environment.

Keywords: Subjective social class; internet altruistic behavior; self-control; situational risk; prosocial behavior

Introduction

A substantial body of research has examined the relationship between social class and prosocial behavior, yet findings remain mixed, with two contrasting perspectives identified in the literature (Wu et al., 2025). One perspective suggests that individuals from lower social classes may be more likely to engage in prosocial behavior. This view is often explained by the social-cognitive perspective on social class.

In contrast, another perspective suggests that individuals from higher social classes may be more likely to engage in prosocial behavior. This perspective is primarily grounded in resource-based and cost-related accounts of prosocial behavior, which suggest that prosocial behavior involves the expenditure of resources such as money, time, and cognitive effort (Korndörfer et al., 2015). Lower-class people have relatively limited resources, and the cost of performing prosocial behavior is relatively higher, making them less likely to perform prosocial behavior. Higher-class people have more resources and can perform prosocial behavior. In indeed, research found high social class individuals showed to be more prosocial (Yao & Enright, 2023). Individuals from higher social classes had a greater propensity to engage in philanthropic activities (Stamos et al., 2020). Given these conflicting propositions, this study examined internet altruistic behavior (IAB) and its potential formation mechanism involving subjective social class (SSC), self-control, and situational risk to provide insights for promoting the occurrence of IAB.

Social class and prosocial behavior

IAB is an important form of prosocial behavior in online environments and may be associated with individuals'

social class. In addition, online altruistic contexts are typically characterized by limited or absent direct rewards. Such helping behaviors are generally voluntary and are not primarily motivated by direct rewards (Zheng et al., 2021). Accordingly, individuals may need to consider the potential costs involved in helping, such as time, attention, emotional effort, and uncertainty inherent in online interactions. From a resource- and cost-based perspective, individuals with higher SSC may perceive themselves as having greater available resources and stronger capacity to bear such costs (Korndörfer et al., 2015). Consequently, they may be more likely to engage in online altruistic behavior than those with lower SSC.

Although some studies have suggested that individuals from lower social classes may show stronger prosocial tendencies, this conclusion should be interpreted cautiously. For example, Korndörfer et al. (2015) argued that some influential findings supporting lower-class prosociality relied on limited samples and should not be regarded as conclusive evidence. Taken together, given the resource demands and potential costs involved in online altruistic contexts, higher SSC is expected to be positively associated with IAB.

The mediating role of self-control

The above derivation reveals the relationship between SSC and IAB, but the psychological mechanisms behind it are unclear. Scarcity theory states that scarcity in which individuals with relatively few resources live depletes their psychological resources, such as self-control (de Bruijn & Antonides, 2022; Mullainathan & Shafir, 2013). Compared with people in high SSC, low-class people have fewer social resources and are more likely to feel scarcity and



deprivation. As a result, their level of self-control is also relatively low. For example, [Jia et al. \(2021\)](#) found that adolescents with lower socioeconomic status have relatively low levels of self-control. ERP studies have also found that compared with the “rich” group, college students in the “poor” group have poorer inhibitory control ([Wang & Yang, 2020](#)).

The moderating role of situational risk

The mediating role of self-control seems to explain how SSC influences IAB, but its boundary conditions are unclear. Currently, the phenomenon of “The rich are not benevolent” is still common, and people with high self-control do not engage in more altruistic behavior. This suggests that the existence of certain factors may prevent high SSC people from performing altruistic behavior. According to reciprocal determinism, IAB is also the result of the interaction between situational and individual factors ([Zhang et al., 2021](#)). Among them, situational risk is an important factor affecting altruistic behavior. It has been found that individuals are more likely to engage in altruistic behavior when they are safe ([Liu et al., 2023](#)). When the perceived risk is high, participants may not engage in knowledge-sharing behavior ([Aldhmour & Doyle, 2023](#)). As mentioned before, self-control is a motivational safeguard factor for individual behavior regulation ([Baumeister et al., 2006](#); [DeWall et al., 2008](#)), and people can make altruistic behavior in the network through self-control to satisfy people’s high-level needs ([Zhang et al., 2021](#)). However, the existence of situational risk may consume the individual’s self-control resources and also threaten their security needs. Security needs are the basic needs of human beings, and when security is threatened, people may make more self-interested behavior and less altruistic behavior ([Zhang et al., 2021](#)). There are various risks in the current online environment, such as privacy leakage ([Li et al., 2024](#)), which are likely to make individuals behave more selfishly and reduce altruistic behavior. Therefore, when risk in online environments is high, even individuals from higher social classes may become less willing to engage in IAB, because situational risk may weaken the role of self-control in motivating online altruistic behavior. In other words, situational risk may moderate the association between self-control and IAB.

Theoretical basis. The Social Cognitive Theory of Social Class proposes that the lower class have fewer social resources ([Kraus et al., 2012](#)). They are more dependent on the outside world, thus forming a social cognitive tendency of contextualism, making them pay more attention to other people’s needs and more willing to socialize, hence showing more prosocial behavior ([Kraus et al., 2012](#)).

Consistent with this perspective, [Zhang et al. \(2022\)](#) found that individuals from lower social classes tended to be more generous, charitable, and helpful. From an evolutionary psychological perspective, mutual helping among individuals with fewer material resources may serve as an adaptive strategy for coping with environmental threats ([Simpson & Beckes, 2010](#)). Empirical evidence further supports this perspective: individuals from lower social

classes have been found to exhibit greater prosocial tendencies and engage in more donation behavior than those from higher social classes ([Zhang et al., 2022](#)).

These contrasting perspectives suggest that the relationship between social class and prosocial behavior is complex. Moreover, whether these patterns observed in offline contexts extend to online environments remains unclear. Accordingly, the present study seeks to clarify this issue by examining how social class is associated with IAB. It is worth noting that social class can be conceptualized in both objective and subjective terms. Objective social class (OSC) refers to differences in access to material and social resources, such as income, education, and occupational status, whereas subjective social class (SSC) reflects individuals’ perceived position within the social hierarchy. Although SSC and OSC are related, their association is typically modest ([Richter & Menold, 2024](#)). Moreover, SSC is often more strongly associated with psychological and behavioral outcomes than OSC, as it captures individuals’ subjective interpretations of their social position ([Kraus et al., 2013](#)).

In addition, according to the self-control process model of altruistic behavior (SCMAB), self-control is a safeguard for pro-social behavior, and individuals need to consume self-control resources to implement pro-social behavior ([Fei et al., 2016](#)). Self-control may allow individuals to be calmer in the face of social conflict, which makes them more likely to seek cooperative solutions and promotes pro-social behavior.

Combining the aforementioned scarcity theory and SCMAB, individuals from different social classes may differ in self-control resources and, consequently, in their tendency to engage in IAB. Individuals in the upper SSC have sufficient self-control resources to restrain their self-serving tendencies and are more likely to engage in IAB. In contrast, individuals in the lower SSC, who have relatively scarce resources, have a lower level of self-control and are therefore less likely to engage in IAB.

In summary, drawing on resource depletion theory and the self-control model of altruistic behavior, this study investigates whether self-control mediates the relationship between SSC and IAB. IAB refers to voluntary helping behavior performed in online environments, such as making online donations or reposting help-seeking information. Such behavior is often accompanied by uncertainty because online contexts may involve risks such as fraud and privacy leakage. According to reciprocal determinism, IAB may be associated not only with individual factors, such as SSC and self-control, but also with environmental factors, such as situational risk in online settings. Therefore, situational risk may serve as an important situational factor that conditions the relationship between SSC and IAB.

The China context

According to the Statistical Reports on Internet Development in China, as of June 2024, the Internet penetration rate in China is 78% ([China Internet Network Information Center, 2024](#)). The Internet has become an essential part of most people’s lives, and it has also made altruistic behavior extend from real life to cyberspace. Researchers refer to

this type of behavior that occurs in the environment on the Internet without any expectation of return, consciously and voluntarily helping others, as Internet altruistic behavior (IAB). IAB can create a positive cyberspace atmosphere and promote the construction of cyber-ecological civilization (Zheng et al., 2024).

Rapid economic development has brought enormous material wealth to society and simultaneously aggravated social stratification. Moreover, in the context of rapid social change in China, objective indicators of social class, such as education, income, and occupation, may change over time (Lu, 2010) and therefore may not fully capture individuals' subjective experiences of their social standing. Accordingly, the present study focuses on SSC as the primary predictor of IAB, while also including OSC as a control variable to provide a more comprehensive assessment of participants' social class background.

Goals of the study

The present study examines whether and how SSC is associated with IAB. Specifically, the present study proposes a moderated mediation model to test whether self-control mediates the relationship between SSC and IAB and whether situational risk moderates the relationship between state self-control and IAB. Accordingly, the following hypotheses are proposed (see Figure 1):

Hypothesis 1: Subjective social class is associated with higher internet altruistic behavior.

Hypothesis 2: Self-control mediates the relationship between subjective social class and internet altruistic behavior. Specifically, higher subjective social class is associated with higher state self-control, which in turn is associated with internet altruistic behavior.

Hypothesis 3: Situational risk moderates the relationship between state self-control and internet altruistic behavior, and this relationship is weaker under conditions of high situational risk compared to low situational risk.

Methods

Research design

To test the proposed moderated mediation model, a two-study experimental design was adopted. First, the effect of SSC on internet altruistic behavior was tested to examine Hypotheses 1 and 2 in in study 1. College students were recruited, and SSC was experimentally manipulated to assess its effect on IAB and the mediating role of self-control. To further test the robustness of the mediation model and examine the moderating role of situational risk, an on-site experimental study was conducted in Study 2 to

test Hypothesis 3. In this study, participants were randomly assigned to different risk conditions and completed an online altruism task to determine whether situational risk moderated the self-control–IAB relationship.

Study 1

Participants and setting

College students were recruited through information posted on social media platforms to participate in a laboratory-based experiment. The experiment was conducted in the university's psychology lab. Participants completed the questionnaire by clicking a link on the computer and received a certain return. The exclusion criteria of the questionnaire were: 4 people failed the set test questions; 6 people answered the questions in too short a period, and 117 valid data were obtained. The sample consisted of 66.7% females and 33.3% males, with an average age of 19.84 ± 2.19 . The study was approved by the Institutional Review Board of Jiangxi University of Chinese Medicine (Approval No.: 20250326), and all participants provided informed consent.

Procedure

The study was approved by the by the Institutional Review Board of the Jiangxi University of Chinese Medicine, and all participants provided written informed consent. Participants consented to the study with assurances of confidentiality of personal information. Secondly, participants were randomly assigned to one of the two conditions (high/low SSC). They underwent the corresponding SSC initiation and answered the manipulation test questions. In the third step, participants completed the State Self-Control Scale. Finally, the participants were asked through the instruction whether they were willing to leave their QQ numbers, and leaving their real QQ numbers was considered as making IAB.

Measures

SSC Initiation. First, participants were shown a picture (see Figure 2) of a ladder (Tan & Tai, 2026). Then, they were shown a picture of the living conditions of people in the upper (lower) social class. They were guided to compare the differences between their living conditions and those in the picture. Specifically, participants primed with a high SSC saw a picture of the living conditions of people in the lower social class. In contrast, participants primed with a low SSC saw a picture of the living conditions of people in the upper social class (Zheng et al., 2025). To check whether the participants had read the manipulation

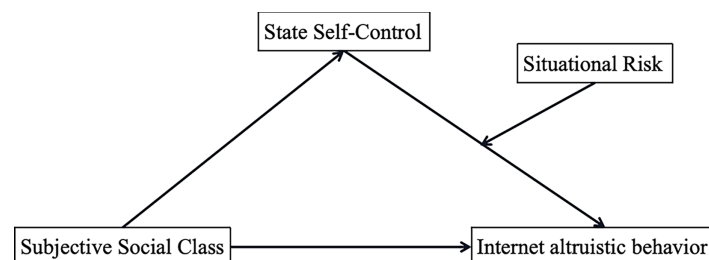


Figure 1. The proposed moderated mediation model

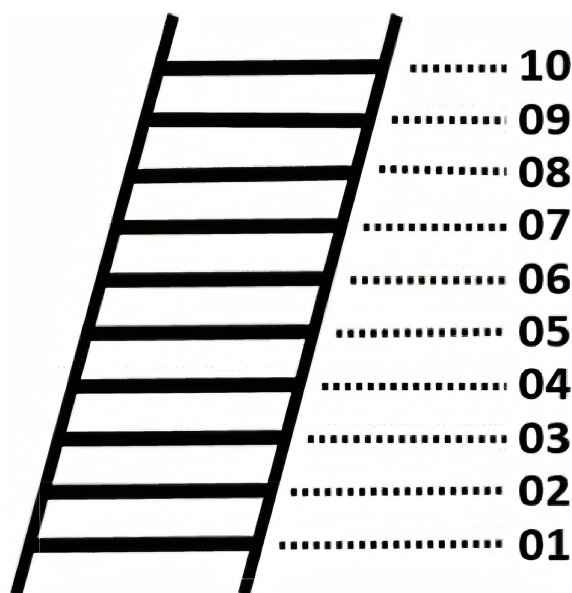


Figure 2. The ladder of SSC

material carefully, the participants answered the question, “Which level of the social ladder do you think the picture shows (1 being the lowest and 10 the highest)?”. Then, the validity test was carried out according to the method of Kraus et al. (2012).

State Self-Control Scale. The Scale was used by Twenge et al. (2004). The design of the Scale is derived from the strength model of self-control, which has been shown to have good reliability. There are 10 items on a seven-point Likert scale. Since the measure is of an individual’s state self-control, which is closely linked to the present moment, it is also emphasized in the instructions that participants think about how they feel in the here and now. In this study, the Scale’s Cronbach was 0.86.

IAB. Based on the definition of IAB a need-to-help situation in the network was set up. The instruction is as follows, “The group next door is conducting a survey and would like to invite you to help them fill it out, though it may not be rewarding. Would you be willing to help them fill out the questionnaire? If you want to help them complete the survey, please select yes and leave your real QQ number. We will send you a link via your QQ number; if you don’t want to help, please choose No. (Your choice will not affect this experiment)” (Zhang et al., 2021). When participants chose “yes” and wrote down their real QQ number, they were considered willing to help, i.e., engaged in IAB, coded as 1. When they chose no or did not write down their real QQ number, they were considered unwilling to help, i.e., they did not engage in IAB, coded as 0.

Control variables. Research has shown that SSC is moderately correlated with OSC (Zheng et al., 2021). OSC also affects prosocial behavior (Kafashan et al., 2014). Therefore, this study excluded the effect of OSC to improve the accuracy of the effect of SSC on IAB. Since the participants are college students, the OSC was measured using annual family income, parents’ education level, and occupation as indicators (Kraus & Stephens, 2012). The lowest annual household income level is

“5000 yuan or less,” and the highest is “more than 100,000 yuan”, and there were six levels of educational level, which were also assigned a score of 1–6 (Zheng et al., 2021). Occupational types were measured based on the social classes classified by Lu (2010), with ten types assigned a score of 1–10. The collected data were processed according to the following steps: First, the party with the higher scores for paternal and maternal education and occupation was selected, thus combining the three indicators as by this formula.

$$\text{OSC} = (0.80 * Z \text{ family income} + 0.83 * Z \text{ education level} + 0.86 * Z \text{ occupation}) / 2.06$$

Second, the principal component analysis was conducted according to the related research (Xu et al., 2026). A principal factor with an eigenroot greater than 1 was obtained, explaining 68.65% of the variance.

Regardless of trait or state, individuals show less prosocial behavior when self-control is lower (DeWall et al., 2008; Xu et al., 2012). To investigate the effect of state self-control on IAB triggered by the experimental scenario better, individuals’ trait self-control was measured and statistically controlled. The measurement used the revised scale of Tan and Guo (2008). There are 19 items. The Cronbach’s alpha coefficient for this scale was 0.91, indicating good reliability.

Data analysis

Statistical analysis was performed using SPSS 29.0. In the first step, the manipulation test of SSC was conducted. Next, Pearson correlation analysis was performed on the variables to check the correlation between the main research variables. Finally, the Process macro program of SPSS was used to check the mediation model (Model 4) (Hayes, 2022).

Manipulation test for SSC. The perceived social class of the participants in the high SSC group ($M = 5.53$, $SD = 0.88$) was significantly higher than that of the low SSC group ($M = 4.00$, $SD = 0.77$), which suggests that manipulating the participants’ SSC was effective.

Results

Descriptive statistics and correlation analysis. As shown in Table 1, SSC, state self-control and IAB were positively correlated with each other. SSC was also moderately correlated with OSC. The correlation analysis also found a significant positive correlation between trait self-control and IAB. While age was significantly associated with IAB. Therefore, trait self-control and age were included as control variables in the subsequent model analyses.

Mediated Effects Test. The bias-corrected nonparametric percentile Bootstrap method (5000 resamples) was used to test for mediating effects. The results showed (see Table 2) that SSC was positively associated with state self-control ($\beta = 0.52$, $p < 0.01$), and state self-control was positively associated with IAB ($\beta = 0.88$, $p < 0.05$). The direct effect of SSC on IAB was significant. Thus, Hypothesis 1 was supported. The indirect effects of SSC on IAB was also significant, indicating that state self-control partially mediated the effect of SSC on IAB. Therefore, Hypothesis 2 was supported.

Table 1. Descriptive statistics and correlation analysis of main study variables (n = 117)

	M	SD	1	2	3	4	5	6	7
1 OSC	-0.16	1.50	1.00						
2 SSC	4.77	1.12	0.21*	1.00					
3 State self-control	48.98	9.34	0.09	0.53**	1.00				
4 IAB	0.60	0.49	-0.04	0.63**	0.50**	1.00			
5 Gender	1.67	0.47	-0.05	0.10	0.15	0.12	1.00		
6 Age	19.84	2.19	0.22*	-0.03	-0.12	-0.24**	0.01	1.00	
7 Trait self-control	59.28	11.32	0.06	0.17	0.15	0.27**	0.09	0.13	1.00

Note. * $p < 0.05$; ** $p < 0.01$; SSC, subjective social class; OSC, objective social class; IAB, internet altruistic behavior, the same below.

Table 2. Mediation model tests for state self-control (n = 117)

Predictor variable	Outcome variable: state self-control					Outcome variable: IAB				
	β	SE	t	Boot-LLCI	BootULCI	β	SE	Z	Boot-LLCI	BootULCI
SSC	0.52	0.08	6.35**	0.36	0.68	1.95	0.41	4.73**	1.14	2.75
OSC	0.03	0.08	0.32	-0.14	0.19	-0.40	0.33	-1.21	-1.04	0.24
Trait self-control	0.06	0.08	0.73	-0.10	0.22	0.79	0.32	2.44*	0.16	1.42
Age	-0.11	0.08	-1.40	-0.27	0.05	-0.7	0.34	-2.06*	-1.37	-0.03
Gender	0.10	0.08	1.32	-0.05	0.26	0.19	0.29	0.64	-0.39	0.76
State self-control						0.88	0.39	2.28*	0.12	1.64
Joint explanatory power	$R^2 = 0.33$					Nagelkerke $R^2 = 0.68$				
Significance	F (4, 117) = 10.63									

Note. * $p < 0.05$, ** $p < 0.01$. SSC, subjective social class; OSC, objective social class; IAB, internet altruistic behavior. Each model is standardized and substituted into the regression equation, the same below. LLCI = lower limit of the confidence interval; ULCI = upper limit of the confidence interval.

Study 2

Participants and setting

Participants were recruited through social media platforms. They completed the questionnaire via an online survey link and received compensation for their participation. The final sample comprised 175 college students, including 48 males and 127 females, with a mean age of 21.42 years (SD = 2.11).

Procedure

The study was approved by the Institutional Review Board of the Jiangxi University of Chinese Medicine, and all participants provided written informed consent. A 2 (SSC: high, low) $\times$ 2 (situational risk: no-risk group, risk group) between-participants experimental design was used, with the dependent variable IAB. First, participants were asked to read the questionnaire's instruction language and informed consent. The guidance statement mainly explained the purpose of the study, emphasized the principle of truthful completion and confidentiality of personal information, and completed the demographic variables, OSC scale, and trait self-control scale. Secondly, participants were randomly assigned to one of the two conditions (high/low SSC). They underwent the corresponding SSC initiation separately and answered the manipulation test question.

After answering the questions, all participants completed the State Self-Control Scale. Next, through the contextual randomization function, the participants were

randomly presented with (without) situational risk set in the reading materials. Finally, the participants were asked whether they were willing to leave their QQ number, and leaving the real QQ number was regarded as making IAB.

Measures

SSC initiation. Same as study 1.

State Self-Control Scale. Same as study 1, with a coefficient of 0.89 for Cronbach's α in this study.

Setting of situational risk. A reading material was set up, which reads: According to the authority, 100% (50%) of the teams conducting research during questionnaire surveys are relatively standardized and keep the personal information of the respondents confidential (Zhang et al., 2021). A question was then asked of the participants: "the previous material mentioned that (%) of the research teams might leak information. A starter test question was then set: Do you think there is a risk of leaking information during the filling process? Yes is 1, no is 0."

IAB. Same as experiment 1.

Control Variables. OSC Scale: The same calculation method as in Experiment 1, the formula was determined by principal component analysis:

$$\text{OSC} = (0.64 * Z_{\text{family income}} + 0.83 * Z_{\text{education level}} + 0.85 * Z_{\text{occupation}}) / 1.82$$

Trait Self-Control Scale. As in Experiment 1, the coefficient of Cronbach's α was 0.92, indicating good reliability of the scale.

Table 3. Descriptive statistics and correlation analysis of main variables (n = 175)

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8
1 OSC	−0.04	2.12	1							
2 SSC	4.86	1.3	0.28**	1						
3 State self-control	44.47	10.71	0.11	0.32**	1					
4 Situational risks	0.46	0.5	−0.11	0.01	0	1				
5 IAB	0.18	0.39	0.01	0.25**	0.26**	−0.20**	1			
6 Trait self-control	58.69	12.88	0.20**	0.09	0.31**	−0.12	0.15*	1		
7 Gender	1.73	0.45	0.09	0.1	−0.24**	0.02	−0.01	−0.05	1	
8 Age	21.42	2.11	0.03	−0.04	−0.32**	−0.06	0.02	0.19*	0.13	1

Note. * $p < 0.05$, ** $p < 0.01$. SSC subjective social class; OSC, objective social class; IAB, internet altruistic behavior.

Data analysis

Statistical analysis was performed using SPSS 29.0. First, the validity of the manipulation of SSC and situational risk was tested. Second, the differences in situational risk on IAB was tested. Third, Pearson correlation analysis was conducted to examine the relationship between variables. Finally, the Process macro in SPSS was used to examine the moderated mediation model (model 14) (Hayes, 2022).

Results

Manipulation test of SSC and situational risk. There was a significant difference in scores between the high SSC group ($M = 5.40$, $SD = 1.13$) and the low SSC group ($M = 4.37$, $SD = 1.25$), which suggests that the manipulation was successful.

The effect of situational risk was tested by answering the question, “Do you think there is a risk of leaking information?” Yes is 1, and no is 0. The result show that there was a significant difference between the scores of the risky context group ($M = 0.64$, $SD = 0.48$) and the no-risky context group ($M = 0.24$, $SD = 0.43$), which suggested that the setup of contexts with different risks is successful.

Tests of differences in situational risk on IAB. In order to test whether the manipulation of situational risk influenced IAB, an ANOVA test was required. However, since the dependent variable, IAB, is a dichotomous variable, and not applicable to ANOVA, logistic regression was chosen here. Logistic analysis was conducted with IAB as the dependent variable, situational risk, SSC, and the interaction term as the independent variables. The results showed that the main effect of SSC on IAB was significant ($Wald = 10.50$, $p < 0.01$), the main effect of situational risk on IAB was not significant ($Wald = 3.90$, $p = 0.05$), and the interaction term on IAB was also not significant ($Wald = 1.85$, $p > 0.05$). This indicated that the differences in the level of IAB under different SSC initiations were not affected by the situational risk manipulation.

Descriptive statistics and correlation analysis. As in Table 3, SSC, state self-control and IAB were positively correlated with each other. SSC was also moderately correlated with OSC. SSC had a significant positive correlation with OSC, while situational risk had a significant negative correlation with IAB.

Moderated mediation model tests. The moderated mediation model was tested using SPSS while controlling for OSC, trait self-control, gender, and age. The results

(see Table 4) showed that SSC was positively associated with IAB ($\beta = 0.83$, $p < 0.01$). Thus, Hypothesis 1 was supported. Moreover, SSC was positively associated with state self-control ($\beta = 0.30$, $p < 0.01$), and state self-control was positively associated with IAB ($\beta = 0.86$, $p < 0.05$). These results were consistent with the proposed mediating role of state self-control, supporting Hypothesis 2. The interaction term between situational risk and state self-control was significantly associated with IAB ($\beta = -2.23$, $p < 0.01$), indicating that situational risk negatively moderated the relationship between state self-control and IAB. These findings provided support for the proposed moderated mediation model.

As situational risk moderated the second half of the mediation path, the mediation effect of self-control was analyzed in different risk contexts. The results showed that the mediation effect value of self-control in the no-risk context is 0.57, 95% CI [0.29, 1.22], excluding 0, indicating a significant mediation effect; the mediation effect value in the risky context was -0.08 , 95% CI $[-0.33, 0.10]$, including 0, indicating a nonsignificant mediation effect. This indicated that the mediation model with moderation holds.

A simple slope analysis was conducted to analyze the moderating role of situational risk level in self-control and IAB. Because the outcome variable was binary, logistic regression was used. To facilitate interpretation, the estimated log-odds were converted into predicted probabilities using the logistic function. The formula is:

$$p(y) = \frac{1}{1 + e^{-z}}$$

$p(y)$ represents the probability of IAB; Z is the result of the regression equation. Using the point selection method (Zhang et al., 2021), the moderating effect was shown in Figure 3. State self-control was significantly related to IAB in the no-risk context condition but not significantly related to IAB in the situational risk condition. This is in supports of the moderating effect of situational risk in the relationship between state self-control and IAB (see Figure 4)., Therefore, Hypothesis 3 was supported.

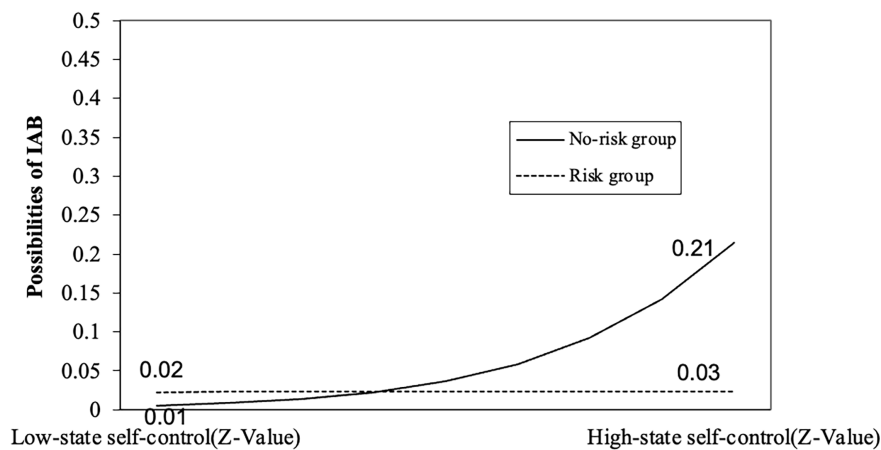
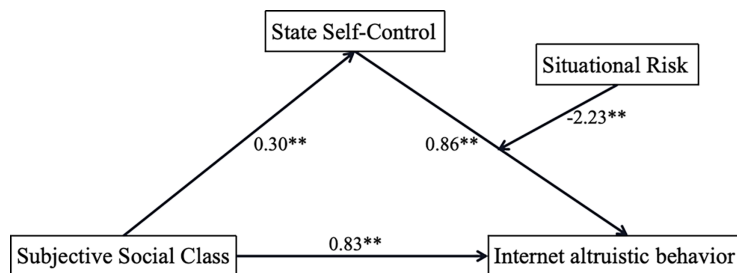
Discussion

The results of both Study 1 and 2 indicated that SSC has a positive effect on IAB. This was consistent related studies (Whillans et al., 2017; Zheng et al., 2023a). This

Table 4. Moderated mediation model tests of SSC and IAB (n = 175)

Predictor variable	Outcome variable: state self-control					Outcome variable: IAB				
	β	SE	t	Boot-LLCI	BootULCI	β	SE	Z	Boot-LLCI	BootULCI
SSC	0.30	0.06	4.65**	0.17	0.43	0.83	0.30	2.74**	0.23	1.42
OSC	0.00	0.07	-0.06	-0.13	0.13	-0.44	0.26	-1.70	-0.95	0.07
Trait self-control	0.33	0.06	5.11**	0.20	0.46	0.00	0.27	0.02	-0.52	0.53
Age	-0.34	0.06	-5.39**	-0.47	-0.22	0.00	0.25	-0.01	-0.50	0.50
Gender	-0.46	0.14	-3.26**	-0.73	-0.18	0.60	0.59	1.02	-0.55	1.74
State self-control						0.86	0.36	2.41*	0.16	1.57
Situational risk						-0.73	0.57	-1.28	-1.84	0.39
Situational risk x state self-control						-2.23	0.67	-3.33**	-3.54	-0.92
Joint explanatory power	$R^2 = 0.36^{**}$					Nagelkerke $R^2 = 0.36^{**}$				
Significance	$F(4, 173) = 18.41$									

Note. * $p < 0.05$, ** $p < 0.01$. SSC, subjective social class; OSC, objective social class; IAB, internet altruistic behavior. LLCI = lower limit of the confidence interval; ULCI = upper limit of the confidence interval.

**Figure 3.** Moderating effects of situational risk between state self-control and IAB**Figure 4.** Moderated mediation model and coefficients. Note. ** $p < 0.01$

result was consistent with the theory of social comparison in that differences in the direction of an individual's social comparison produce different psychological feelings (Wills, 1981). Social comparisons between lower-class individuals and others can negatively impact individuals, such as psychological stress (Wood et al., 2012). This may further depletes the individual's psychological energy, leaving them with insufficient resources to notice the requests or help of others, the first step in performing an altruistic act. In contrast, when individuals engage in downward social comparison, they experience a stronger sense of satisfaction and self-affirmation (Wills, 1981),

giving sought psychological resources to notice whether others need help, making them more likely to perform an altruistic act.

This study found self-control to mediate the relationship between SSC and IAB. From a theoretical perspective, the mediating role of self-control supports and extends the application of scarcity theory to social behavior. Scarcity theory suggests that the situation of resource-scarce individuals cuts into their psychological resources, such as self-control and cognitive abilities (Mullainathan & Shafir, 2013). According to the theory, individuals with lower SSC have lower levels of self-control because they

feel the scarcity of resources, making their psychological resources focus more on the scarce things, decreasing self-control. According to the SCMB, individuals who are making altruistic behavior need self-control resources to overcome their egoistic tendencies (Fei et al., 2016). Therefore, individuals with fewer self-control resources are less likely to perform IABs, and self-depletion was negatively associated with prosocial behavior (Li et al., 2022).

The previous findings suggested that SSC is associated with IAB partly through self-control (Zheng et al., 2023a). The present findings further identified situational risk as a boundary condition, showing that it negatively moderated the association between state self-control and IAB. Consistent with this view, state self-control was associated with IAB under low-risk conditions, but not under high-risk conditions. Previous research has shown that risk may inhibit performing altruistic behavior (Hafizah et al., 2025). Increased situational risk may raise the perceived cost of performing altruistic behavior. In an online environment, such costs may include time expenditure and the disclosure of personal privacy (Kankanhalli et al., 2005; Krasnova et al., 2010). Therefore, in risky online situations, individuals may become more concerned about information security when performing IAB.

Theoretical contributions and practical implications

First, this study contributes methodologically by using an experimental design to examine the role of SSC in IAB. Whereas previous studies on social class and prosocial behavior have mainly relied on correlational designs (Korndörfer et al., 2015; Zheng et al., 2021), this study manipulated SSC and provided more direct evidence that changes in perceived SSC are associated with changes in IAB. These findings highlight SSC as an important psychological factor in IAB.

Second, this study found the mediating role of self-control between SSC and IAB, providing a basis for future research on ways to improve self-control and thereby promote IAB among college students. In other words, educators who take effective interventions to improve the self-control of college students will promote their IAB.

Finally, the significance of this study also lies in introducing situational risk as an influencing factor in the online environment. Previous studies that explored the mechanism of IAB rarely considered the influence of situational factors (Wright & Li, 2011; Zheng et al., 2023a), which may lead to inconsistent research results. However, this study found that the association between state self-control and IAB is moderated by situational risk. This showed that the risks present in the online environment may inhibit college students' implementation of IAB (Zhang et al., 2021). Therefore, in addition to paying attention to college students' self-control level, it is also necessary to strengthen the security of the online environment and protect individuals' privacy to be more likely to perform IAB. This also provides a reasonable explanation for the current low incidence of IAB; that is, because of the high risks in the network, people are afraid to engage in IAB due to concerns.

From an individual perspective, information privacy protection in the online environment requires discretion. From the perspective of a business, the platform provider should strengthen supervision to ensure the platform's security (Pavlou & Gefen, 2004). From a regulator's perspective, corresponding policies should be introduced to avoid various risks in the network, such as privacy leaks (Kshetri, 2013). This will make the online environment safer and build a more harmonious society.

Limitations and future research directions

The research object of this article is college students. In addition to considering the positive significance of IAB for this group, the reason for choosing college students is that class is inherent in the college student group. Therefore, judging behavior by social class characteristics has better predictability. Unlike the cognition and behavior of adults, college students have not entered society, do not have a fixed economic income or occupational role, and do not have a stable understanding of their class. Consequently, our sample may not fully capture the experiences of individuals from diverse socioeconomic backgrounds in the broader population. Therefore, caution is warranted when generalizing these findings beyond the university context. Future research should recruit more diverse non-student community samples from a wider range of socioeconomic strata to further examine the robustness and generalizability of these findings.

Another limitation concerns the measurement of internet altruistic behavior (IAB). To reduce social desirability bias, a behavioral paradigm was used in which participants were asked to volunteer for a subsequent uncompensated survey by providing a valid email address. This method may capture altruistic intention and behavioral commitment more directly than self-report measures (Zhang et al., 2021). However, IAB is multifaceted and includes behaviors such as online charitable donation, knowledge sharing in open-source communities, and emotional support for strangers in online forums (Zheng et al., 2023b). Thus, reliance on a single scenario may not fully capture the broader spectrum of IAB. Future studies could incorporate multiple behavioral tasks across diverse digital contexts or combine behavioral experiments with validated IAB scales to provide a more comprehensive assessment of online altruism.

Conclusion

Several conclusions follow from this study's findings. First, individuals with a higher SSC are more likely to perform IAB. Therefore, more IAB can be promoted by increasing an individual's SSC. Second, state self-control mediates the effect of SSC on IAB. Specifically, low SSC individuals who perceive fewer resources also have fewer resources for self-control and thus are less likely to overcome egoistic tendencies to engage in altruistic behavior, whereas high SSC individuals have higher levels of self-control, which further contributes to IABs. Third, situational risk moderates the effect of state self-control on IAB. Specifically, individuals with high state self-control levels are more likely to engage in IABs when they are in a risk-free situation; when they are in a risky situation, there is no

difference in the level of IABs between individuals with high and low state self-control levels. Altogether, these findings suggest that IAB may be promoted by fostering positive perceptions of social class, reducing risk factors in online environments, and increasing potential helpers' sense of safety. Such efforts may contribute to a more supportive and prosocial digital environment.

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