

# Observer Responses to Others' Charitable Donations: Effects of the Donor Social Class–Donation Type Interaction<sup>☆</sup>

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## Abstract

The social impact of observing others' charitable donations remains underexplored, with few studies examining the influence of donors' social class. Across three experiments, we investigated how the donor social class–donation type interaction influences the observers' perceived sacrificial costs or desire for a moral self-identity, which consequently affects their willingness to donate. The participants perceived higher costs when lower-class donors made monetary donations, but for time donations, they saw no difference in sacrificial costs by donor social class. Moreover, when the hourly wage was emphasized, the participants felt an increased desire for a moral self-identity from higher-class donors' monetary donations and became more willing to donate their money. These findings highlight the importance of considering both the donor social class and donation type when designing donation campaigns, and offer valuable insights for enhancing overall donation amounts.

**Keywords:** Social class, Donation type, Charitable donations, Sacrificial costs, Moral self-identity, Hourly wage

## 1. Introduction

Research on prosocial behavior is fundamental to understanding consumer behavior. It encompasses "ethical consumption," which involves redistributing resources for societal improvement. However, studies on the factors influencing charitable behavior have focused on individual consumer traits and situational variables, with the social influences among consumers largely ignored. This study investigated the impact of the donor social class–donation type interaction on potential donors' donation intentions.

Stratification in society tends to depend on access to economic, social, and cultural resources (Oakes and Rossi 2003; Snibbe and Markus 2005), and previous research has shown that donors' social class affects others' engagement in similar acts of altruism (Schnall, Roper, and Fessler 2010). Although the expression "noblesse oblige" suggests a positive

societal impact of higher-class individuals' proactive actions, lower-class donors surprisingly exert greater influence toward benevolent behavior (Cha, Yi, and Lee 2020). What would the dynamics be if the donations were distinguished between time and money?

This study explored the effect of donors' social class on observers' donation intentions, which may vary depending on the donation type. We categorized donations as time versus money, which serve as vehicles for expressing moral behavior (Liu and Aaker 2008; Macdonnell and White 2015; Reed, Aquino, and Levy 2007). Higher (lower)-class individuals typically possess greater (less) material wealth, with the latter facing economic constraints (Kraus et al. 2012). Therefore, for equivalent donations, those from lower-class individuals may be deemed more significant in terms of sacrificial costs. Meanwhile, time is equally accessible to all individuals; hence, it is challenging to evaluate it economically (Okada and Hoch 2004; Soman 2001). Accordingly, asymmetric evaluations of

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time donations between social classes are unlikely to occur in general. However, by emphasizing the hourly wage information, observers may recognize the labor value inherent in the economic affluence of higher-class individuals such that they feel an increased desire for a moral self-identity, as exhibited in higher-class donors' monetary donations.

In summary, we examined the donor social class–donation type interaction effect on observers' cognitive and psychological responses and subsequent donation intentions. Additionally, we investigated whether the hourly wage status affects the proposed interaction.

## 2. Theoretical background

### 2.1. Social class and charitable donations

Social class, determined by objective economic resources and subjective social and cultural resources (Kraus et al. 2012; Snibbe and Markus 2005; Stephens, Markus, and Townsend 2007), influences individuals' access to economic, social, and cultural resources (Oakes and Rossi 2003; Snibbe and Markus 2005), and shapes their self-perception (Stephens, Markus, and Phillips 2014). Abundant resources afford higher-class individuals greater independence and control (Lachman and Weaver 1998), whereas scarce resources encourage lower-class individuals to focus on others' needs and foster group cohesion (Stephens, Markus, and Townsend 2007). Consequently, social class influences how people balance their own and others' interests in social settings (Van Doesum, Tybur, and Van Lange 2017), thus determining their inclination toward charitable giving (Piff et al. 2010). Notably, lower-class people are more attentive to others' needs and thus, more willing to engage in philanthropy (Kraus et al. 2012; Miller, Kahle, and Hastings 2015; Piff et al. 2010).

Studying the social class–charitable donation relationship is important, as previous donors' good deeds impact subsequent donations. People may infer social class from informational cues (e.g., nonverbal displays and voice) while interacting with others (Kraus and Keltner 2009), thus shaping their attitudes and behaviors toward others (Van Doesum, Tybur, and Van Lange 2017; Van Doesum, Van Lange, and Van Lange 2013). Therefore, previous donors' social class information may influence potential donors' subsequent donations.

Prior research has shown that others' charitable giving greatly influences observers' subsequent donation intentions (Croson and Shang 2008), thus motivating them to engage in similar altruistic behaviors (Schnall, Roper, and Fessler 2010). Observing the

philanthropic activities of specific social classes produces a ripple effect toward good behavior. For instance, when people observe monetary donations from lower (versus higher)-class individuals, they show higher donation intentions as self-reflection is promoted (Cha, Yi, and Lee 2020). Moreover, people deem situations involving pain and effort as valuable; hence, they are more willing to engage in prosocial causes that imply overcoming suffering (Olivola and Shafir 2013). Overall, people tend to value donations from lower-class individuals, who are perceived as having limited material resources, and undervalue donations from higher-class individuals, who are viewed as economically privileged.

### 2.2. Donation type and sacrificial costs

In this study, we investigated the effect of donation type (time versus money) as a crucial moderator interacting with donors' social class. Time and money are fundamental resources with distinct psychological properties (Leclerc, Schmitt, and Dube 1995; Mogilner 2010; Okada and Hoch 2004) and are often considered means of implementing moral actions (Liu and Aaker 2008; Macdonnell and White 2015; Reed, Aquino, and Levy 2007). Donating time fosters stronger interpersonal relationships and other-oriented behaviors (Mogilner 2010), thus encouraging self-reflection and socially desirable actions (Gino and Mogilner 2014). Conversely, thinking about money can lead to more self-centered and less altruistic behaviors (DeVoe and Pfeffer 2007; Vohs, Mead, and Goode 2008), whereas spending money on others increases donor happiness (Dunn, Aknin, and Norton 2008). Previous studies have noted that resources, such as time and money, are distinguished in terms of *doing* and *paying* (Reed, Aquino, and Levy 2007). Time donation implies effort or dedication and thus, is likely positively evaluated because it is related to motivation (Bandura and Cervone 1986) and internal value (Kirmani 1990), whereas monetary donation may be negatively evaluated because of its weak association with such virtues (Webley and Wilson 1989).

This study proposes the perceived sacrificial costs—a concept encompassing the cost, effort, and sacrifice involved in a donor's charitable giving—as a variable reflecting observers' cognitive responses to charitable donations. It estimates the donor's burden in making the donation, either physically or financially, from the observers' perspective. Specifically, this study examines how the cost by donation type is evaluated according to the donor's social class. Kraus et al. (2012) stated that a higher (lower) social class implies greater economic prosperity (deprivation). Therefore, given equivalent monetary donations by

a higher- versus a lower-class individual, that made by the latter is perceived to entail higher sacrificial costs. However, as time is equally available to everyone and is challenging to convert into economic value (mental accounting theory; Soman 2001), the perceived sacrificial costs of time do not significantly differ by donor social class. In essence, the donor social class–donation type interaction affects the inferred sacrificial costs of donations, with the difference being primarily apparent in monetary donations.

**H1.** *The donor social class–donation type interaction influences the perceived sacrificial costs. Specifically, for monetary donations, observers infer greater sacrifice from lower (versus higher)-class donors, but for time donations, the perceived sacrificial costs do not differ by donor social class.*

A donor's social class can influence an observer's subsequent giving behavior (Cha, Yi, and Lee 2020; Schnall, Roper, and Fessler 2010). Observing others' giving behaviors motivates people to engage in similar prosocial behaviors (Schnall, Roper, and Fessler 2010). When a person believed to have fewer resources donates, this encourages self-reflection in the observer, resulting in a higher willingness to donate (Cha, Yi, and Lee 2020). These findings align with the "martyrdom effect," which means that the more painful and effortful the process of charitable donation is, the more meaning and value are given to one's contribution, leading to an increased willingness to engage in prosocial behavior (Olivola and Shafir 2013). Accordingly, the current study predicts that if the donor social class–donation type interaction increases the perceived sacrificial costs of charitable giving (i.e., considering previous donor giving as martyrdom), observers would be encouraged to engage in similar prosocial behaviors.

**H2.** *The donor social class–donation type interaction influences the perceived sacrificial costs, which in turn affects subsequent donation intentions.*

### 2.3. Hourly wage and the desire for a moral self-identity

When provided with cues that highlight the time–money tradeoff (e.g., hourly wages or opportunity costs), consumers may treat time and money as exchangeable resources (DeVoe and Pfeffer 2007; Lee and Yi 2022). In the context of observing charitable donations, we propose that emphasizing hourly wage information concerning the donor social class–donation type interaction influences the observers'

desire for a moral self-identity. People desire to become morally better individuals upon witnessing others' charitable giving (Aquino et al. 2009; Reed, Aquino, and Levy 2007), and in situations where hourly wages are emphasized, they will be morally motivated by observing monetary donations, even those from higher-class individuals.

People can infer the approximate level of donors' wages from their occupations, but unless there is conspicuous information, wages are usually estimated based on annual salaries. However, the annual salary does not contain information about the time and effort someone puts in to earn that money. Therefore, monetary donations from higher-class individuals, who receive high salaries and are economically prosperous, are not enough to provide moral inspiration to observers. Meanwhile, when hourly wages can be measured, people are reminded of the time and effort someone puts into earning money, which helps overcome the negative evaluation of monetary donations and infers the same dedication and internal value as in time donations (Bandura and Cervone 1986; Kirmani 1990). Thus, even when higher-class donors make large sums of money, people are reminded of the labor value invested in that money, which elicits a moral inspiration like that of monetary donations from lower-class donors.

Likewise, one may predict that emphasizing hourly wages will affect the evaluation of the sacrificial costs for time according to the donor social class by prompting the objective value of time. Indeed, higher-class individuals who are affluent and have high hourly wages tend to be highly valued for their time (Kraus et al. 2012; Reed, Aquino, and Levy 2007) while simultaneously being seen as having greater control over the management of their time (Brislin and Kim 2003). Therefore, from the observers' perspective, it is unreasonable to assume that the time devoted by higher (lower)-class donors denotes higher (lower) sacrificial costs. Hence, we test both the sacrificial costs and desire for a moral self-identity as observers' cognitive and psychological responses to the donor social class–donation type interaction and predict that if the hourly wage is emphasized, only the desire for a moral self-identity would play a mediating role.

**H3.** *The donor social class–donation type interaction influences the desire for a moral self-identity, and this effect is moderated by the hourly wage status. [H3-1] When the hourly wage is emphasized, monetary donations from higher-class donors increase the observers' desire for a moral self-identity, [H3-2] leading to greater donation intentions.*

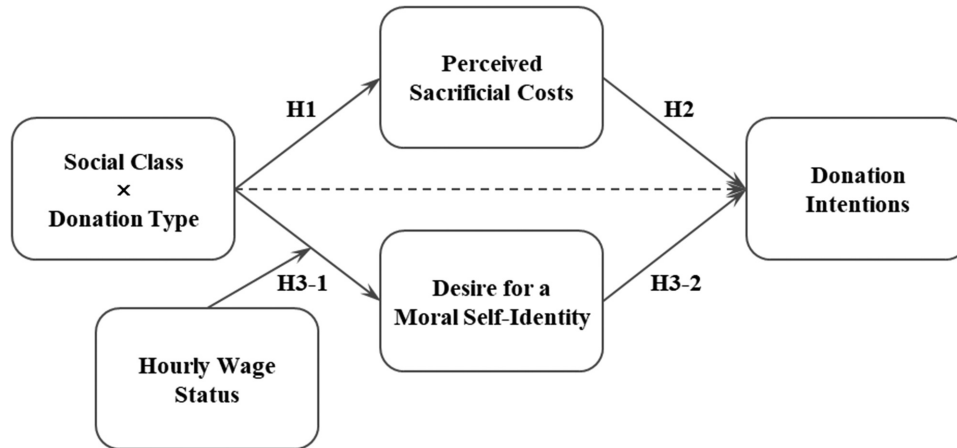


Fig. 1. Conceptual model for the effects of the donor social class–donation type interaction.

### 3. Study overview

This research comprises three studies that investigate how the donor social class–donation type interaction influences observers’ cognitive and psychological responses and subsequent donation intentions. Study 1 examines how the donor social class–donation type interaction evokes observers’ cognitive responses, and verifies the significance of the perceived sacrificial costs. Study 2 investigates how this interaction affects the observers’ willingness to donate, with the perceived sacrificial costs serving as a mediator. Study 3 explores the moderating role of the hourly wage status in the proposed model and suggests the desire for a moral self-identity as another mediator. Fig. 1 presents the conceptual framework and hypothesized relationships.

### 4. Study 1: Effect of the donor social class–donation type interaction

Study 1 investigated the donor social class–donation type interaction effect on the perceived donor sacrificial costs (H1). We anticipated that individuals observing a monetary donation would perceive greater sacrificial costs from a lower (versus higher)-class donor, whereas those observing a time donation would perceive a similar level of sacrificial costs regardless of the donor’s social class. In addition, we explored and ruled out an alternative outcome that could be influenced by this interaction.

#### 4.1. Method

##### 4.1.1. Participants and design

A total of 240 participants living in the United Kingdom were recruited via Prolific, which is known for its superior data quality compared with alternative

platforms (Peer et al. 2017). The final dataset included all 240 participants (171 females,  $M_{\text{age}} = 34.23$ , age range: 18–59,  $SD = 10.80$ ) as none failed the attention-check questions (Oppenheimer, Meyvis, and Davidenko 2009). Study 1 employed a 2 (social class: high versus low)  $\times$  2 (donation type: time versus money) between-subjects design. Participants were randomly assigned to one of four conditions.

##### 4.1.2. Procedures and measures

Upon agreeing to participate, participants were asked to read a hypothetical news article about a charity campaign urging them to help the needy. The campaign introduced a nonprofit organization that provides housing, food, healthcare, and education to millions of people worldwide. The description included an explanation about donors who had contributed to this organization over the years, to encourage good deeds from potential donors. Participants were randomly assigned to one of four scenarios based on the donor’s social class (high versus low) and donation type (time versus money). The donor in the higher (lower)-class condition was described as a chief executive officer (building security guard). Donors in each social class were introduced as providing either an education and care program every two weeks (time donation) or financial support worth 10% of their monthly income (monetary donation). All charity campaigns were designed to be identical, except for the manipulation of the donor’s social class and donation type.

After introducing the charity campaign, we asked participants to write down their thoughts about the donors’ lives, including income, education, living status, and leisure time, to strengthen the social class manipulation (Cha, Yi, and Lee 2020). Participants rated their perceived donor sacrificial costs using a scale developed for this study. They also rated



their self-reflection on someone else's donations (Cha, Yi, and Lee 2020). We used the MacArthur Scale of Subjective Social Status to ascertain the donor's socioeconomic status (SES; Adler et al. 2000). Participants marked the donor's relative social standing on a 10-rung ladder, with higher numbers representing a higher social class. We intermittently inserted a few questions for attention check (Oppenheimer, Meyvis, and Davidenko 2009) and assessed participants' beliefs about the realism of the scenario (Bagozzi et al. 2016). Finally, we collected the participants' demographic information, including gender, age, annual household income, education level, employment status, and previous donation experience. All measures and their reliability values are listed in Table 1.

## 4.2. Results

### 4.2.1. Manipulation checks

The results of a 2 (social class)  $\times$  2 (donation type) ANOVA on the manipulation checks of the donor's social class showed a significant main effect of social class priming. Participants in the higher-class donor condition perceived the donor's social class as significantly higher than those in the lower-class donor condition ( $M_{\text{high}} = 8.61$  versus  $M_{\text{low}} = 4.83$ ,  $F(1, 236) = 419.12$ ,  $p < 0.001$ ). The donation type had no significant main ( $F(1, 236) = 2.96$ ,  $p = 0.086$ ) or interaction ( $F(1, 236) = 1.44$ ,  $p > 0.2$ ) effects. Realism checks indicated that participants perceived the experimental setting as realistic ( $M = 6.28$ ,  $SD = 1.49$ ).

### 4.2.2. Interaction effect on perceived sacrificial costs

A 2 (social class)  $\times$  2 (donation type) ANOVA on the perceived donor sacrificial costs revealed a significant main effect of social class ( $M_{\text{high}} = 5.73$  versus  $M_{\text{low}} = 6.52$ ,  $F(1, 236) = 16.80$ ,  $p < 0.001$ ), thus confirming that people infer donations from lower-class donors to be at higher costs, regardless of what they donate. The main effect of donation type was not significant ( $F(1, 236) = 0.15$ ,  $p > 0.7$ ). As the donor social class–donation type interaction was significant ( $F(1, 236) = 3.90$ ,  $p = 0.049$ ), we performed a planned contrast. As shown in Fig. 2, for monetary donations, lower-class donors were considered to have incurred higher sacrificial costs ( $M_{\text{high}} = 5.50$  versus  $M_{\text{low}} = 6.67$ ,  $F(1, 236) = 18.77$ ,  $p < 0.001$ ). However, for time donations, no difference was found in the perceived sacrificial costs by donor social class ( $M_{\text{high}} = 5.96$  versus  $M_{\text{low}} = 6.36$ ,  $F(1, 236) = 2.22$ ,  $p > 0.1$ ). We also tested the effects of gender, age, income, education, employment status, and previous donation experience. As none of these variables changed the pattern of our findings, their effects are not elaborated further in this study for brevity.

### 4.2.3. Alternative outcome variable

Cha, Yi, and Lee (2020) suggested that people reflect on their prosocial behavior upon witnessing others' charitable giving. This response may arise because of the donor social class–donation type interaction. Therefore, we performed a 2 (social class)  $\times$  2 (donation type) ANOVA on self-reflection. The 2  $\times$  2 ANOVA on self-reflection showed a significant main effect of social class ( $M_{\text{high}} = 4.94$  versus  $M_{\text{low}} = 5.72$ ,  $F(1, 236) = 9.15$ ,  $p = 0.003$ ) and donation type ( $M_{\text{time}} = 5.61$  versus  $M_{\text{money}} = 5.06$ ,  $F(1, 236) = 4.49$ ,  $p = 0.035$ ). However, the interaction effect was not significant ( $F(1, 236) = 1.89$ ,  $p > 0.1$ ).

## 4.3. Discussion

The results of Study 1 confirmed the significant effect of the donor social class–donation type interaction on the perceived sacrificial costs, thus supporting H1. That is, observers infer higher costs from the monetary donations of lower-class donors. However, in terms of time donations, there was no difference in the perceived sacrificial costs by donor social class. These results are independent of income level and educational background, which are determinants of social class (Cha, Yi, and Lee 2020; Oakes and Rossi 2003), and thus suggest that the perceived sacrificial costs are related to the donor's social class rather than one's own social class. Meanwhile, one's tendency toward self-reflection is higher in the lower-class donor (Cha, Yi, and Lee 2020) and time donation (Liu and Aaker 2008) conditions, but with no interaction effect. Therefore, self-reflection is insufficient to account for the donor social class–donation type interaction effect.

## 5. Study 2: Perceived sacrificial costs drive donation intentions

Study 2 had the following three objectives: The first was to extend beyond the donor social class–donation type interaction effect on observers' perceptions of sacrificial costs and investigate their intentions to donate (H2). The second was to validate perceived sacrificial costs as the mechanism driving our proposed effects, thereby ruling out potential explanations based on the perceived authenticity of donors' prosocial motivations. We postulated this variable as an alternative account because both positive and negative evaluations are possible for donations: People may consider the donor's sacrifice, but they may also consider the donor's intentions/motivations behind "doing good" (Barasch et al. 2014). The third was to enhance the internal and external validity of our experiments by including various potential confounders as covariates and diversifying the scenarios.

Table 1. All measurement items.

Items	Cronbach's $\alpha$ coefficient		
	Study 1	Study 2	Study 3
<i>Perceived sacrificial costs (1 = strongly disagree, 9 = strongly agree)</i>	.75	.80	.83
1. The donor puts a lot of effort to support this prosocial campaign.			
2. The donor bears considerable costs, whether tangible or intangible, for this prosocial activity.			
3. The donor makes a kind of sacrifice for this prosocial engagement.			
<i>Self-reflection (1 = strongly disagree, 9 = strongly agree)</i>	.94	N/A	N/A
1. It makes me think about the way I live.			
2. It makes me think about what I did for our society.			
3. It makes me think about my attitude toward prosocial behavior.			
4. It makes me think about my feelings about prosocial behavior.			
<i>Perception of the donor's social class (a bipolar 1-9 scale)</i>	-	-	-
• Where would you place the donor relative to the people who are the best off and the people who are the worst off in terms of education, income, and job status?: the worst off (1) — the best off (9)			
<i>Donation intentions (1 = not at all, 9 = very much)</i>	N/A	.95	.96
1. How likely would you be to make a donation of [time/money]?			
2. How inclined are you to make a donation of [time/money]?			
3. How willing are you to make a donation of [time/money]?			
<i>Perceived prosocial motivation (1 = strongly disagree, 9 = strongly agree)</i>	N/A	.74	N/A
1. The donor seems to be altruistic.			
2. The donor seems to be true-hearted.			
3. The donor seems to be authentic.			
4. The donor might have motives behind this prosocial behavior. (R)			
<i>Desire for a moral self-identity (1 = strongly disagree, 9 = strongly agree)</i>	N/A	N/A	.84
• Listed below are some characteristics that might describe the donor: "Caring, Compassionate, Generous, Helpful, Kind"			
1. It would make me feel good to be a person who has these characteristics.			
2. Being someone who has these characteristics becomes an important part of who I am.			
3. I would be ashamed to be a person who had these characteristics. (R)			
4. Having these characteristics is not really important to me. (R)			
5. I strongly desire to have these characteristics.			
<i>Attitudes toward charity campaigns (a bipolar 1-9 scale)</i>	N/A	.90	.96
1. negative (1) — positive (9)			
2. unfavorable (1) — favorable (9)			
3. unappealing (1) — appealing (9)			
4. undesirable (1) — desirable (9)			
<i>Importance of charitable causes (a bipolar 1-9 scale)</i>	N/A	.93	.95
1. unimportant (1) — important (9)			
2. of no concern (1) — of concern (9)			
3. means nothing (1) — means a lot (9)			
<i>Attitudes toward occupations (1 = strongly disagree, 9 = strongly agree)</i>	N/A	.84	.87
1. In general, I trust someone who works as a [job in the scenario].			
2. In general, I value the contributions of [job in the scenario] to our society.			
<i>Suspicion toward charitable organizations (1 = not at all, 9 = very much)</i>	N/A	.94	.93
1. suspicious 2. concerned 3. wary 4. mistrustful			
<i>Subjective time value (1 = strongly disagree, 9 = strongly agree)</i>	N/A	.76	.76
1. I always use my time to "get things done."			
2. Only lazy people spend their time doing nonproductive things.			
3. I do not squander away my time.			
4. It is quite OK to spend your time doing "nothing." (R)			
5. Time is my most important resource.			
6. In general, I would say I'm the type of person who values my time.			
7. Time is one of the most important resources that I personally have.			
<i>Subjective financial constraints (1 = strongly disagree, 9 = strongly agree)</i>	N/A	.84	.88
1. My household budget is always tight.			
2. My household often has problems making ends meet.			

Note. Items denoted with (R) were reverse-coded.

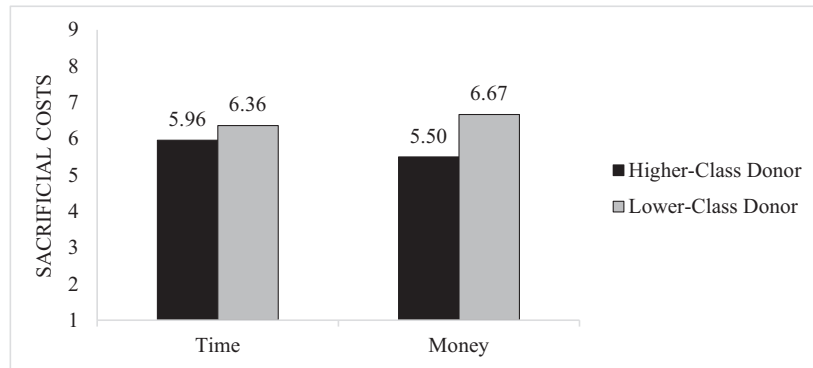


Fig. 2. Effect of the donor social class–donation type interaction on the perceived sacrificial costs (Study 1).

## 5.1. Method

### 5.1.1. Participants and design

A total of 245 UK citizens were recruited through the online platform Prolific Academic. We retained 240 participants (166 females,  $M_{\text{age}} = 35.58$ , age range: 18–60,  $SD = 11.05$ ) after removing 5 participants who failed the attention-check questions (Oppenheimer, Meyvis, and Davidenko 2009). Study 2 employed a 2 (social class: high versus low)  $\times$  2 (donation type: time versus money) between-subjects design by randomly assigning participants to one of four conditions.

### 5.1.2. Procedures and measures

Participants were asked to read a hypothetical news article about storm damage and recovery efforts in England. Below the article was a charity campaign aimed at helping flood-hit communities. The organization is known for its reliable and transparent operations, with many people supporting its work to restore homes and businesses affected by severe storms and flooding. After reading the article, participants came across an interview with one of the donors, urging others to contribute to the cause. Depending on the scenario, participants were exposed to one of four combinations of the donor's social class (high versus low) and donation type (time versus money). Study 2 followed procedures similar to Study 1, but with improvements to ensure external validity. Different occupational groups were presented as stimuli, and absolute amounts of money were used instead of relative figures based on salary levels. Specifically, the donor in the higher (lower)-class condition was introduced as a lawyer at a prestigious law firm in London (house cleaner). The donors were portrayed as either volunteering day or night in recovery efforts in the most affected communities (time donation) or providing financial support worth £10,000 to storm victims (monetary donations). All other experimental

factors were kept identical, except for the manipulation of the donor's social class and donation type.

After reading the news articles, participants briefly described their thoughts on the donors' lifestyles to reinforce the effect of social class manipulation. Their charity donation intentions were recorded (White and Pelozo 2009). The perceived donor sacrificial costs and perceived authenticity of the donor's prosocial motivation (modified from Barasch et al. 2014) were measured as potential mediators influencing donation intentions. To control for individual variations in response to the scenario, we assessed attitudes toward charity campaigns and the importance of charitable causes (Cha, Yi, and Lee 2020). We used the same items as in Study 1 for the manipulation check of the donors' socioeconomic status. We also developed measures to assess attitudes toward the given occupations and suspicion toward charitable organizations as potential confounders. Subjective time value (Reed, Aquino, and Levy 2007) and financial constraints (Ailawadi, Neslin, and Gedenk 2001) were measured as chronic individual differences. By including these variables in the analysis, we attempted to control for not only attitudes toward the experimental stimuli (i.e., donors and charities) but also participants' usual thoughts about their resources. Several questions were added for attention and realism checks. Finally, participants answered the same demographic questions as in Study 1. All measures and their reliability values are listed in Table 1.

## 5.2. Results

### 5.2.1. Manipulation and control checks

Manipulation checks of the donors' social class yielded a highly significant social class-priming effect. Participants in the higher-class donor condition perceived the donor's social class to be significantly higher than those in the lower-class donor condition ( $M_{\text{high}} = 8.07$  versus  $M_{\text{low}} = 4.96$ ,  $F(1, 238) = 236.96$ ,

$p < 0.001$ ). Realism checks confirmed participants' acceptance of the given scenario as realistic ( $M = 6.06$ ,  $SD = 1.89$ ). Additional ANOVAs on confounding factors showed no significant differences between the groups based on social class: attitudes toward charity campaigns ( $p > 0.1$ ), importance of charitable causes ( $p > 0.5$ ), suspicion toward charitable organizations ( $p > 0.7$ ), subjective time value ( $p > 0.1$ ), and subjective financial constraints ( $p > 0.4$ ). An ANOVA of attitudes toward the given occupations revealed significant differences, indicating that participants had relatively less positive attitudes toward the donor in the higher-class condition ( $M_{\text{high}} = 5.91$  versus  $M_{\text{low}} = 7.33$ ,  $F(1, 238) = 58.32$ ,  $p < 0.001$ ). In analyzing the moderated mediation effect as follows, we considered all these related variables and examined their impact on our main hypotheses.

### 5.2.2. Moderated mediation through perceived sacrificial costs

To investigate the impact of donors' social class and donation type on observers' donation intentions through the perceived sacrificial costs, we conducted a moderated mediation analysis (Hayes 2017; Model 7; 5,000 bootstrap resamples). Social class was designated as the independent variable ( $X$ : 1 = high class, 0 = low class), donation type as the first-stage moderator ( $W$ : 1 = time, 0 = money), perceived sacrificial costs as the mediator ( $M$ ), and donation intentions as the dependent variable ( $Y$ ).

As illustrated in Fig. 3, the donor's social class and donation type yielded a significant interaction effect on the observer's perceived sacrificial costs ( $b = 1.01$ ,  $p = 0.009$ , boot SE = 0.39, 95% CI = [0.2467, 1.7644]). Specifically, a monetary donation from the lower-class donor was considered to bear higher sacrificial costs ( $M_{\text{high}} = 6.03$  versus  $M_{\text{low}} = 7.50$ ,  $p < 0.001$ , 95% CI = [-2.0029, -0.9478]), whereas a time donation did not differ in the perceived sacrificial costs by donor social class ( $M_{\text{high}} = 6.47$  versus  $M_{\text{low}} = 6.94$ ,  $p >$

0.1, 95% CI = [-1.0153, 0.0756]). The perception of sacrificial costs significantly influenced donation intention ( $b = 0.47$ ,  $p < 0.001$ , boot SE = 0.09, 95% CI = [0.2968, 0.6497]). The moderated mediation index was also significant (index = 0.48, 95% CI = [0.1163, 0.8955]). Specifically, under the monetary donation condition, the lower-class effect on donation intention was mediated by the perceived sacrificial costs (95% CI = [-1.1018, -0.3427]). Conversely, in the time donation condition, the indirect effect of social class via the perceived sacrificial costs was not significant (95% CI = [-0.4701, 0.0019]). The same moderated mediation analyses were employed to estimate the effects of potentially confounding variables, including attitudes toward charity campaigns, importance of charitable causes, attitudes toward occupations, suspicion toward charitable organizations, subjective time value, and subjective financial constraints. The results showed that none of these variables altered the pattern of our findings, despite some control variables significantly affecting the perceived sacrificial costs (i.e., attitudes toward charity campaigns [ $t(230) = 2.48$ ,  $p = 0.014$ ] and attitudes toward occupations [ $t(230) = 3.22$ ,  $p = 0.002$ ]). Notably, even after controlling for differences in attitudes toward the campaigns and occupations, the main findings remained statistically significant.

### 5.2.3. Alternative explanation through perceived prosocial motivation

We propose perceived prosocial motivation as an alternative explanation, focusing on observers' negative interpretations of donors' charitable giving (Barasch et al. 2014). Previous studies have found that a lower-class donor increases charitable giving in private settings, whereas a higher-class donor increases charitable giving in public settings where reputational concerns are prominent (Kraus and Callaghan 2016). Moreover, people often view time commitment as a more virtuous form of giving than financial

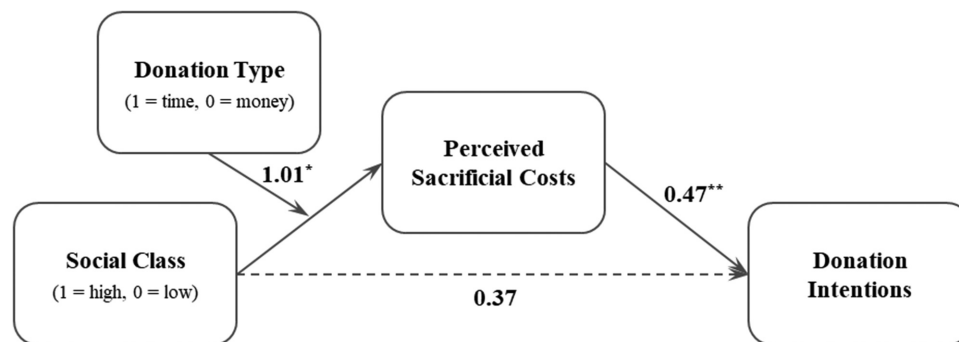


Fig. 3. The moderated mediation through the perceived sacrificial costs (Study 2).  
Note. \*denotes  $p < .01$ ; \*\*denotes  $p < .001$ . The numbers represent unstandardized regression coefficients.



support (Reed, Aquino, and Levy 2007). Therefore, we predict that the donor social class–donation type interaction may impact the perceived prosocial motivation (i.e., how authentic and genuine the donation is) and consequently, influence donation intentions.

To test this prediction, we adopted a parallel moderated mediation model (Hayes 2017; Model 7; 5,000 bootstrap resamples), which was identical to the previous model but included perceived prosocial motivation (M2). Donors' social class and donation type showed no interaction effect on the perceived prosocial motivation ( $b = 0.38, p > 0.2$ , boot SE = 0.33, 95% CI = [−0.2763, 1.0388]). The perceived prosocial motivation had no significant effect on donation intentions ( $b = 0.11, p > 0.3$ , boot SE = 0.12, 95% CI = [−0.1302, 0.3563]). Therefore, the moderated mediation index was not significant (index = 0.04, 95% CI = [−0.0829, 0.2467]). By contrast, the perceived sacrificial costs played a significant mediating role in the parallel mediation process (index = 0.42, 95% CI = [0.0797, 0.8603]). Additionally, the same moderated mediation analyses with covariates yielded no significant effects, which indicates that the potential confounding factors did not affect the results.

### 5.3. Discussion

Study 2 supports H2, thus confirming that the donor social class–donation type interaction influences the perceived sacrificial costs, which, in turn, affects subsequent donation intentions. The findings rule out an alternative explanation and suggest that observers are more likely to donate based on their perception of the sacrificial costs rather than an authentic prosocial motivation in the proposed interaction context. Notably, when examining the effect of donors' social class on the perceived sacrificial costs by donation type, a significant conditional effect of social class was found only for monetary donations. This finding suggests that lower-class donors' monetary contributions can significantly enhance the followership of potential donors. Interestingly, the perceived sacrificial costs for time donations did not vary by donor social class.

## 6. Study 3: Moderated mediation of hourly wages and the desire for a moral self-identity

In Study 3, we explored the boundary conditions that influence the donor social class–donation type interaction and inspire people who observe higher-class donors' giving behavior to become morally committed individuals. We investigated a possible moderating role for hourly wages by providing par-

ticipants with cues to convert money into time (DeVoe and Pfeffer 2007; Lee and Yi 2022). We conjectured that the hourly wage moderates the donor social class–donation type interaction and affects the desire for a moral self-identity, and subsequently, donation intentions. Specifically, when the hourly wage is emphasized, people tend to have a greater desire for a moral self-identity, as elicited by the monetary donations of higher-class donors, thus resulting in increased donation intentions (H3). As in previous studies, we conducted rigorous experiments and analyses to generalize our findings. We varied donation-related contextual cues such as charity situation and donor occupation, and controlled for confounding factors.

### 6.1. Method

#### 6.1.1. Participants and design

A total of 321 UK citizens were recruited through the online platform Prolific Academic. We retained 317 participants (203 females,  $M_{\text{age}} = 38.90$ , age range: 20–60, SD = 10.94) after removing 4 participants who failed attention checks (Oppenheimer, Meyvis, and Davidenko 2009). Study 3 employed a 2 (social class: high versus low)  $\times$  2 (donation type: time versus money)  $\times$  2 (wage status: hourly versus non-hourly) between-subjects design by randomly assigning participants to one of eight conditions.

#### 6.1.2. Procedures and measures

At the beginning of the survey, participants were informed that two separate news articles would be presented. The first was a hypothetical article titled "Average [Hourly/Annual] Wages in the UK: See Where UK Stands 2023," reconstructed from actual wage statistics from the UK Department of Labor. It was presented to give participants an idea of the wage levels each occupational group receives and to assess the impact of emphasizing either hourly wages or annual salaries (non-hourly). The second was a fictitious newspaper column written by a donor titled, "[Volunteering in/Donation to] the Childhood Cancer Support Shop Opened My Eyes to the Daily Miracles." We chose different occupations from previous studies to manipulate the donors' social classes. The higher (lower)-class donor was depicted as an investor and partner in a private equity firm (administrative assistant in a small firm). For the time donation condition, the donor was portrayed as someone who has committed several hours each week as a sales assistant at the aforementioned shop. For the monetary donation condition, the donor was described as contributing 10% of their income to support that shop. Participants were presented with one of eight

scenarios based on a combination of the donor's social class (high versus low), donation type (time versus money), and wage status (hourly versus non-hourly). The experimental settings were carefully designed to be identical in all aspects, except for the manipulation of the donor's social class, donation type, and hourly wage status.

Participants followed the same procedures and measures as those in Studies 1 and 2. They reported their donation intentions, perceived donor sacrificial costs, and desire for a moral self-identity. Attitudes toward charity campaigns and the importance of charitable causes were assessed to control for individual reactions to the scenario, followed by a social-class manipulation check. Participants also addressed all confounding factors, including their attitudes toward the given occupations, suspicion toward charitable organizations, subjective time value, and financial constraints. After completing the attention and realism checks, participants provided their demographic information. All measures and their reliability values are presented in Table 1.

## 6.2. Results

### 6.2.1. Manipulation and control checks

Manipulation checks for the donor's social class were successful, with participants perceiving the higher-class donor as having a higher social status than the lower-class donor ( $M_{\text{high}} = 7.75$  versus  $M_{\text{low}} = 3.87$ ,  $F(1, 315) = 643.43$ ,  $p < 0.001$ ). Participants also found the scenario realistic ( $M = 6.15$ ,  $SD = 1.57$ ). Additional ANOVAs showed no significant differences between the groups based on social class for the importance of charitable causes ( $p > 0.6$ ), suspicion toward charitable organizations ( $p > 0.3$ ), subjective time value ( $p > 0.2$ ), and subjective financial con-

straints ( $p > 0.9$ ). The ANOVAs on attitudes toward charity campaigns and occupations indicated significant differences, showing participants who viewed donation requests more positively in the lower-class donor condition ( $M_{\text{high}} = 5.51$  versus  $M_{\text{low}} = 5.96$ ,  $F(1, 315) = 4.60$ ,  $p = 0.033$ ) and felt less favorably about donors in the higher-class donor condition ( $M_{\text{high}} = 4.88$  versus  $M_{\text{low}} = 6.63$ ,  $F(1, 315) = 105.36$ ,  $p < 0.001$ ). We included these potential confounding factors in the model and thoroughly analyzed whether they affected our hypotheses.

### 6.2.2. Moderated mediation through the desire for a moral self-identity by hourly wages

We investigated the effect of donors' social class–donation type interaction on observers' donation intentions through the desire for a moral self-identity depending on the hourly wage status. In the three-way interaction with the hourly wage status, we conjectured that the desire for a moral self-identity would take over the mediating role of the perceived sacrificial costs. To validate this prediction, we performed a parallel moderated mediation model (Hayes 2017; Model 11; 5,000 bootstrap resamples). The model included social class as the independent variable ( $X$ : 1 = high class, 0 = low class), donation type as the first moderator ( $W$ : 1 = time, 0 = money), wage status as the second moderator ( $Z$ : 1 = hourly, 0 = non-hourly), perceived sacrificial costs ( $M1$ ) and desire for a moral self-identity ( $M2$ ) as the mediators, and donation intentions as the dependent variable ( $Y$ ). As shown in Fig. 4, a significant three-way social class–donation type–wage status interaction on the desire for a moral self-identity was found ( $b = -1.66$ ,  $p = 0.006$ , boot  $SE = 0.60$ , 95%  $CI = [-2.8486, -0.4688]$ ). In turn, the desire for a moral self-identity significantly influenced donation intentions ( $b = 0.62$ ,  $p < 0.001$ , boot

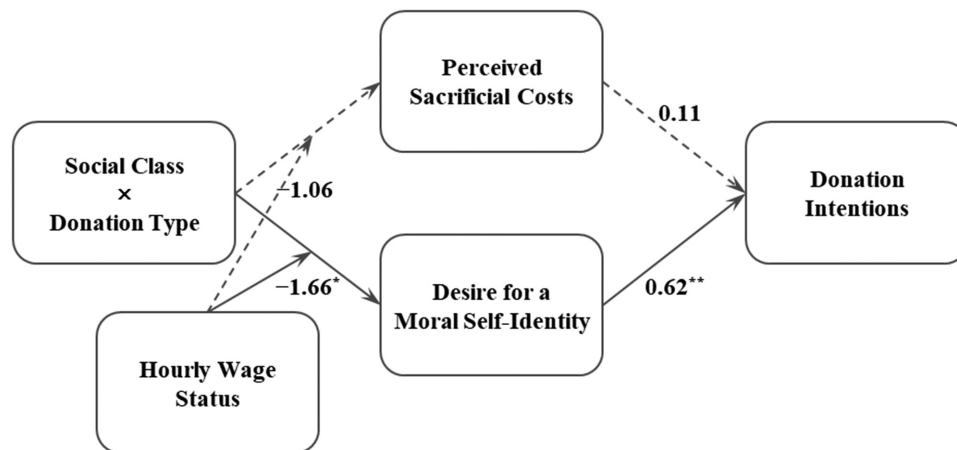


Fig. 4. The moderated mediation of hourly wages and the desire for a moral self-identity (Study 3).  
Note. \*denotes  $p < .01$ ; \*\*denotes  $p < .001$ . The numbers represent unstandardized regression coefficients.

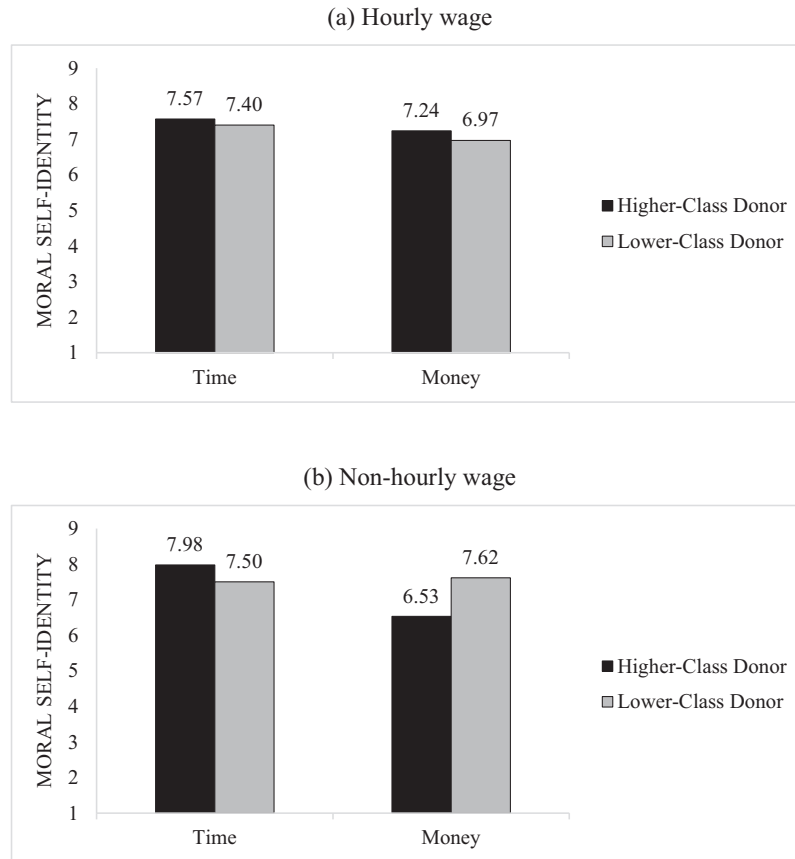


Fig. 5. Moderating role of wage status (Study 3)—(a) Hourly wage, (b) Non-hourly wage.

SE = 0.08, 95% CI = [0.4573, 0.7828]). The moderated mediation index confirmed the significant moderating effect of hourly wage status (index =  $-1.03$ , 95% CI =  $[-1.8268, -0.2804]$ ).

The conditional moderated mediation analysis revealed significant results. Specifically, the mediating effect of the desire for a moral self-identity was not significant for participants exposed to hourly wages (index =  $-0.06$ , 95% CI =  $[-0.5719, 0.4600]$ ; Fig. 5, top panel). Meanwhile, the effect was significant for participants exposed to non-hourly wages (index =  $0.97$ , 95% CI =  $[0.4067, 1.5737]$ ; Fig. 5, bottom panel). The results indicated that people tended to be morally uninspired by monetary donations from higher-class individuals who were highly paid annually (non-hourly) (95% CI =  $[-1.1419, -0.2103]$ ). However, when hourly wages were emphasized, the difference in the desire for a moral self-identity by social class disappeared, even in the money-giving context (95% CI =  $[-0.2233, 0.5514]$ ).

Meanwhile, a significant three-way social class–donation type–wage status interaction on the perceived sacrificial costs was not found ( $b = -1.06$ ,  $p > 0.05$ , boot SE = 0.60, 95% CI =  $[-2.2481, 0.1298]$ ). The perceived sacrificial costs had no significant effect

on donation intentions ( $b = 0.11$ ,  $p > 0.2$ , boot SE = 0.08, 95% CI =  $[-0.0599, 0.2702]$ ). Therefore, the moderated mediation index was not significant (index =  $-0.11$ , 95% CI =  $[-0.4234, 0.0837]$ ). Additionally, the same moderated mediation analyses with covariates yielded no significant effects, which suggests that the potential confounding factors did not affect the results.

### 6.3. Discussion

The results of Study 3 support H3 and delineate hourly wage status as a boundary condition. The donor social class–donation type interaction was moderated by the prominence of the hourly wage. As expected, when people were reminded of the effort and dedication inherent in one's salaries through the access to hourly wage information, they felt a greater desire to become morally better individuals, even inspired by monetary donations from higher-class individuals, thus leading to increased motivation to donate to charity. In the three-way interaction of donor social class–donation type–wage status, the perceived sacrificial costs no longer played a mediating role. Despite variations in attitudes toward

charitable campaigns and occupations and differences in some control variables related to the desire for a moral self-identity, the moderated mediation effect remained significant, even after controlling for all stereotypes and confounding factors.

## 7. General discussion

Across the three studies, we demonstrated that the donor social class–donation type interaction influenced observers' cognitive and psychological responses and donation intentions. Study 1 verified the interaction effect on the perceived sacrificial costs, particularly in monetary donations, where lower-class donors were perceived to have higher sacrificial costs, whereas no significant difference was observed in time donations by donor social class. Study 2 revealed that the perceived sacrificial costs served as a mediator in our proposed model, indicating that people were more motivated to donate based on their perception of sacrificial costs than authentic prosocial motivation. Study 3 examined the role of hourly wage status as a boundary condition and showed that when the hourly wage was emphasized, the monetary donations of higher-class donors inspired the desire for a moral self-identity, thus influencing observers' subsequent donation intentions.

### 7.1. Theoretical contributions

This study extends the existing literature in several respects and demonstrates theoretically rigorous methods. First, we focused on the donor's social class effect on the diffusion of prosocial behaviors, taking a step forward in the literature on charitable giving and social class. While prior studies have explored the individual characteristics and situational factors affecting charitable giving, research on the cognitive and/or psychological reactions of observers witnessing donations and their subsequent donation intentions is limited (Cha, Yi, and Lee 2020, for exceptions). This study expands our understanding of charitable giving by examining the influence of social class among previous donors, in line with the concept that people are influenced to engage in cascading prosocial behaviors by observing others' philanthropy (Croson and Shang 2008; Schnall, Roper, and Fessler 2010).

Second, this study introduces new perspectives to the charitable donation literature by examining the interaction effects of the donor's social class with donation types. To explain this phenomenon, we proposed "perceived sacrificial costs" and "desire for a moral self-identity" as mechanisms. Our differentiated moderated mediation model clarified

that people infer higher sacrificial costs for monetary donations from lower-class individuals and consequently, are more inclined to engage in similar prosocial behaviors themselves (martyrdom effect; Olivola and Shafir 2013). However, people do not perceive sacrificial costs differently for time donations depending on donor social class, thus showing no pattern of disparaging commitment from higher-class individuals. Additionally, we explored the moderating role of the hourly wage in elevating the desire for a moral self-identity, even for monetary donations from higher-class individuals, thus ensuring that their contributions are not undervalued.

Third, this study consisted of three methodologically rigorous and systematic experimental studies. Study 1 examined the potential variables related to the donor social class–donation type interaction to eliminate competing explanations. Study 2 directly tested the mediating role of the perceived sacrificial costs in influencing donation intention, ruling out alternative processes. Studies 2 and 3 included potential confounders as covariates to ensure the internal validity of our experiments. Additionally, we sought to enhance external validity by presenting diverse contexts of prosocial campaigns in each sub-study (e.g., donations for poor households, flood-hit communities, and childhood cancer).

### 7.2. Practical implications

This research has managerial and public-interest implications for achieving the common good of society and the goals of non-profit companies. First, we propose detailed approaches for increasing the total amount of donations, and offer practical guidance on effective storytelling to engage potential donors in charity campaigns. Our findings reveal that emphasizing the financial contributions of lower-class individuals leads observers to perceive greater sacrificial costs and encourages similar altruistic behaviors. Thus, fundraising advertisements should highlight the good deeds of lower-class individuals to promote donations. By contrast, for donations of time—a resource distributed fairly to everyone and difficult to quantify in economic terms—there is no difference in persuasiveness based on the donor's social class. Consequently, advertisers may design messages using endorsers from all social classes to encourage charitable activities. In summary, philanthropic organizations may strategically use the social class information of previous donors and design more persuasive donation campaigns by considering the donation type.

We also propose a strategy to enhance the impact of donations from higher-class individuals. Socially,



“influential” individuals with higher-than-average status, occupation, or education tend to inspire others to identify with them (Argo, Dahl, and Morales 2008; Strotbeck, James, and Hawkins 1957). However, prosocial actions and their influences are sometimes undervalued in the context of charitable giving. To address this issue, we implemented a nudge to help people recognize the labor value of money, thus enabling the proper evaluation of monetary donations from higher-class individuals.

### 7.3. Directions for future research

In reviewing the limitations of this research, we also identify avenues for further study. First, our findings primarily stem from scenario-based experiments, as we attempted to address the limitations of this approach. Response reliability was ensured using a credible survey platform (Peer et al. 2017), and we included filler items and control variables in all the experiments. We also presented diverse donation contexts in three experiments, thus strengthening the generalizability of our results across various charitable situations. However, donation intentions may not fully reflect actual donation behavior. For greater external validity, future research should investigate the effect of donors’ social class on observers’ charitable giving using actual donations in real-world settings.

We used a between-subjects design presenting two donation types and asking for the corresponding donation intentions. For monetary donations, we assessed the participants’ willingness to fundraise and for time donations, we measured their willingness to volunteer. Future research could measure the willingness to donate both resources and observe practical results. Regarding the outcomes, we believe that conflicting predictions are possible. Inspired by altruistic behavior, whether through time or money donations, if greater sacrifices and/or moral identity are triggered, the observers’ donation intentions may increase. Conversely, a licensing effect could appear, in which an increase in the willingness to donate one type of resource leads to a decrease in the willingness to donate the other (Blanken, Van De Ven, and Zeelenberg 2015). The direct testing of these hypotheses is of interest.

### Conflict of interest

The authors have no known conflict of interest.

### References

Adler, Nancy E., Elissa S. Epel, Grace Castellazzo, and Jeannette R. Ickovics (2000), “Relationship of Subjective and Objective Social Status with Psychological and Physiological Functioning:

- Preliminary Data in Healthy White Women,” *Health Psychology*, 19 (6), 586–592.
- Ailawadi, Kusum L., Scott A. Neslin, and Karen Gedenk (2001), “Pursuing the Value-Conscious Consumer: Store Brands Versus National Brand Promotions,” *Journal of Marketing*, 65 (1), 71–89.
- Aquino, Karl, Dan Freeman, Americus Reed II, Vivien K. G. Lim, and Will Felps (2009), “Testing a Social-Cognitive Model of Moral Behavior: The Interactive Influence of Situations and Moral Identity Centrality,” *Journal of Personality and Social Psychology*, 97 (1), 123–141.
- Argo, Jennifer J., Darren W. Dahl, and Andrea C. Morales (2008), “Positive Consumer Contagion: Responses to Attractive Others in a Retail Context,” *Journal of Marketing Research*, 45 (6), 690–701.
- Bagozzi, Richard P., Daniel Belanche, Luis V. Casaló, and Carlos Flavián (2016), “The Role of Anticipated Emotions in Purchase Intentions,” *Psychology & Marketing*, 33 (8), 629–645.
- Bandura, Albert and Daniel Cervone (1986), “Differential Engagement of Self-Reactive Influences in Cognitive Motivation,” *Organizational Behavior and Human Decision Processes*, 38 (1), 92–113.
- Barasch, Alixandra, Emma E. Levine, Jonathan Z. Berman, and Deborah A. Small (2014), “Selfish or Selfless? On the Signal Value of Emotion in Altruistic Behavior,” *Journal of Personality and Social Psychology*, 107 (3), 393–413.
- Blanken, Irene, Niels Van De Ven, and Marcel Zeelenberg (2015), “A Meta-Analytic Review of Moral Licensing,” *Personality and Social Psychology Bulletin*, 41 (4), 540–558.
- Brislin, Richard W. and Eugene S. Kim (2003), “Cultural Diversity in People’s Understanding and Uses of Time,” *Applied Psychology*, 52 (3), 363–382.
- Cha, Moon-Kyung, Youjae Yi, and Jaehoon Lee (2020), “When People Low in Social Class Become a Persuasive Source of Communication: Social Class of Other Donors and Charitable Donations,” *Journal of Business Research*, 112, 45–55.
- Croson, Rachel and Jen Shang (2008), “The Impact of Downward Social Information on Contribution Decisions,” *Experimental Economics*, 11 (3), 221–233.
- DeVoe, Sanford E. and Jeffrey Pfeffer (2007), “Hourly Payment and Volunteering: The Effect of Organizational Practices on Decisions About Time Use,” *Academy of Management Journal*, 50 (4), 783–798.
- Dunn, Elizabeth W., Lara B. Aknin, and Michael I. Norton (2008), “Spending Money on Others Promotes Happiness,” *Science*, 319 (5870), 1687–1688.
- Gino, Francesca, and Cassie Mogilner (2014), “Time, Money, and Morality,” *Psychological Science*, 25 (2), 414–421.
- Hayes, Andrew F. (2017), *Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression-Based Approach*. Guilford Publications.
- Kirman, Amna (1990), “The Effect of Perceived Advertising Costs on Brand Perceptions,” *Journal of Consumer Research*, 17 (2), 160–171.
- Kraus, Michael W. and Bennett Callaghan (2016), “Social Class and Prosocial Behavior: The Moderating Role of Public Versus Private Contexts,” *Social Psychological and Personality Science*, 7 (8), 769–777.
- Kraus, Michael W. and Dacher Keltner (2009), “Signs of Socioeconomic Status: A Thin-Slicing Approach,” *Psychological Science*, 20 (1), 99–106.
- Kraus, Michael W., Paul K. Piff, Rodolfo Mendoza-Denton, Michelle L. Rheinschmidt, and Dacher Keltner (2012), “Social Class, Solipsism, and Contextualism: How the Rich are Different from The Poor,” *Psychological Review*, 119 (3), 546–572.
- Lachman, Margie E. and Suzanne L. Weaver (1998), “The Sense of Control as a Moderator of Social Class Differences in Health and Well-Being,” *Journal of Personality and Social Psychology*, 74 (3), 763–773.
- Leclerc, France, Bernd H. Schmitt, and Laurette Dube (1995), “Waiting Time and Decision Making: Is Time Like Money?,” *Journal of Consumer Research*, 22 (1), 110–119.



- Lee, Shinhyoung and Youjae Yi (2022), "Is Returning a Product Worth My Time? The Impact of Time Cues on Consumer Product Returns," *Psychology & Marketing*, 39 (7), 1413-1427.
- Liu, Wendy and Jennifer Aaker (2008), "The Happiness of Giving: The Time-Ask Effect," *Journal of Consumer Research*, 35 (3), 543-557.
- Macdonnell, Rhiannon and Katherine White (2015), "How Construals of Money Versus Time Impact Consumer Charitable Giving," *Journal of Consumer Research*, 42 (4), 551-563.
- Miller, Jonas G., Sarah Kahle, and Paul D. Hastings (2015), "Roots and Benefits of Costly Giving: Children Who Are More Altruistic Have Greater Autonomic Flexibility and Less Family Wealth," *Psychological Science*, 26 (7), 1038-1045.
- Mogilner, Cassie (2010), "The Pursuit of Happiness: Time, Money, and Social Connection," *Psychological Science*, 21 (9), 1348-1354.
- Oakes, J. Michael and Peter H. Rossi (2003), "The Measurement of SES in Health Research: Current Practice and Steps Toward a New Approach," *Social Science & Medicine*, 56 (4), 769-784.
- Okada, Erica Mina and Stephen J. Hoch (2004), "Spending Time Versus Spending Money," *Journal of Consumer Research*, 31 (2), 313-323.
- Olivola, Christopher Y. and Eldar Shafir (2013), "The Martyrdom Effect: When Pain and Effort Increase Prosocial Contributions," *Journal of Behavioral Decision Making*, 26 (1), 91-105.
- Oppenheimer, Daniel M., Tom Meyvis, and Nicolas Davidenko (2009), "Instructional Manipulation Checks: Detecting Satisficing to Increase Statistical Power," *Journal of Experimental Social Psychology*, 45 (4), 867-872.
- Peer, Eyal, Laura Brandimarte, Sonam Samat, and Alessandro Acquisti (2017), "Beyond the Turk: Alternative Platforms for Crowdsourcing Behavioral Research," *Journal of Experimental Social Psychology*, 70, 153-163.
- Piff, Paul K., Michael W. Kraus, Stéphane Côté, Bonnie Hayden Cheng, and Dacher Keltner (2010), "Having Less, Giving More: The Influence of Social Class on Prosocial Behavior," *Journal of Personality and Social Psychology*, 99 (5), 771-784.
- Reed II, Americus, Karl Aquino, and Eric Levy (2007), "Moral Identity and Judgments of Charitable Behaviors," *Journal of Marketing*, 71 (1), 178-193.
- Schnall, Simone, Jean Roper, and Daniel M.T. Fessler (2010), "Elevation Leads to Altruistic Behavior," *Psychological Science*, 21 (3), 315-320.
- Snibbe, Alana Conner and Hazel Rose Markus (2005), "You Can't Always Get What You Want: Educational Attainment, Agency, and Choice," *Journal of Personality and Social Psychology*, 88 (4), 703-720.
- Soman, Dilip (2001), "The Mental Accounting of Sunk Time Costs: Why Time Is Not Like Money," *Journal of Behavioral Decision Making*, 14 (3), 169-185.
- Stephens, Nicole M., Hazel Rose Markus, and L. Taylor Phillips (2014), "Social Class Culture Cycles: How Three Gateway Contexts Shape Selves and Fuel Inequality," *Annual Review of Psychology*, 65, 611-634.
- Stephens, Nicole M., Hazel Rose Markus, and Sarah S.M. Townsend (2007), "Choice as an Act of Meaning: The Case of Social Class," *Journal of Personality and Social Psychology*, 93 (5), 814-830.
- Strodtbeck, Fred L., Rita M. James, and Charles Hawkins (1957), "Social Status in Jury Deliberations," *American Sociological Review*, 22 (6), 713-719.
- Van Doesum, Niels J., Joshua M. Tybur, and Paul A.M. Van Lange (2017), "Class Impressions: Higher Social Class Elicits Lower Prosociality," *Journal of Experimental Social Psychology*, 68, 11-20.
- Van Doesum, Niels J., Dion A.W. Van Lange, and Paul A.M. Van Lange (2013), "Social Mindfulness: Skill and Will to Navigate the Social World," *Journal of Personality and Social Psychology*, 105 (1), 86-103.
- Vohs, Kathleen D., Nicole L. Mead, and Miranda R. Goode (2008), "Merely Activating the Concept of Money Changes Personal and Interpersonal Behavior," *Current Directions in Psychological Science*, 17 (3), 208-212.
- Wheley, Paul and Richenda Wilson (1989), "Social Relationships and the Unacceptability of Money as a Gift," *Journal of Social Psychology*, 129 (1), 85-91.
- White, Katherine and John Peloza (2009), "Self-Benefit Versus Other-Benefit Marketing Appeals: Their Effectiveness in Generating Charitable Support," *Journal of Marketing*, 73 (4), 109-124.