

Should Donation Appeals Emphasize Restoration or Improvement? The Moderating Role of Event Controllability

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Abstract

The recipient's situation constitutes a critical element of donation appeal messages. While different descriptions of this situation should logically influence fundraising effectiveness, this factor has not received adequate scholarly attention. Based on varying depictions of the change process in the recipient's circumstances, this research classifies donation appeals into two categories: "restoration/rebuilding" (emphasizing that the recipient's previous situation was favorable, has now severely deteriorated, and donations can restore them from this loss state to their original condition) and "improvement/enhancement" (emphasizing that donations can transform the recipient's current dire situation into a better one). Through one secondary dataset (N = 978, Study 1) and six experiments (N = 1163, Studies 2/3a/3b/4/5a/5b), we find that "restoration/rebuilding" (vs. "improvement/enhancement") descriptions lead donors to perceive charitable projects as more beneficial for recipients' loss reduction (vs. gain augmentation), and when donors confront uncontrollable (vs. controllable) events, they similarly focus more on loss reduction (vs. gain augmentation). Consequently, based on regulatory focus matching, employing "restoration/rebuilding" (vs. "improvement/enhancement") descriptions for uncontrollable events and "improvement/enhancement" (vs. "restoration/rebuilding") descriptions for controllable events yields higher individual donation intention (Study 5) and actual donations (secondary data). This paper theoretically proposes a novel classification of donation appeal messages and demonstrates its subsequent effects, and practically can guide charitable organizations to rationally design donation appeals based on event controllability.

Full Text

Preamble

Emphasizing Recovery or Improvement in Charitable Appeals: The Moderating Role of Event Controllability

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Abstract

The description of a beneficiary's situation constitutes a crucial element of charitable appeals, and different ways of describing this situation should logically affect fundraising outcomes, yet this has received scant attention from scholars. Based on different descriptions of the change process in a beneficiary's situation, this research classifies charitable appeals into two categories: "recovery/reconstruction" (emphasizing that the beneficiary's past situation was good, the current situation has become very bad, and donations help restore the beneficiary from a state of loss to the original state) and "improvement/enhancement" (emphasizing that donations help beneficiaries move from a very poor current situation to a better one). Through one secondary data analysis (N = 978, Study 1) and six experiments (N = 1,163, Studies 2/3a/3b/4/5a/5b), we found that "recovery/reconstruction" (vs. "improvement/enhancement") descriptions lead donors to perceive charitable projects as more effective at reducing loss (vs. increasing gain), while donors facing uncontrollable (vs. controllable) events also focus more on reducing loss (vs. increasing gain). Therefore, based on regulatory focus

matching, using “recovery/reconstruction” (vs. “improvement/enhancement”) descriptions for uncontrollable events and “improvement/enhancement” (vs. “recovery/reconstruction”) descriptions for controllable events yields higher donation willingness (Study 5) and actual donations (secondary data). This paper theoretically proposes a new classification of charitable appeals and demonstrates its subsequent effects, while practically guiding charitable organizations to design appeals according to event controllability.

Keywords: recovery/reconstruction appeal, improvement/enhancement appeal, event controllability, regulatory fit, donation willingness

Classification Code: F713.55

1. Introduction

Philanthropy serves as a crucial pillar of social equity, and motivating individuals to voluntarily donate part of their disposable income for public welfare is essential for achieving common prosperity for the Chinese nation. However, the *2019 China Charitable Donation Report* shows that per capita donations in China that year amounted to 107.81 yuan, representing a 4.5% increase from 2018, yet falling short of the 5.8% growth rate in per capita disposable income reported by the National Bureau of Statistics for the same period. This indicates considerable room for growth in individual charitable giving. In fact, Chinese people have never lacked the fundamental motivation to “do good for others.” For instance, when a torrential rainstorm struck Zhengzhou on July 20, 2021, causing severe flooding, numerous individuals and corporations immediately made charitable donations to support the disaster area. Therefore, one possible reason for insufficient individual donations may be that charitable appeals lack persuasiveness and fail to effectively move potential donors. As a key element in the information persuasion process, charitable appeals represent the most direct way to demonstrate need to potential donors (McGuire, 1969), making it practically significant to explore how content presentation can enhance individual donation willingness.

Previous research has classified charitable appeals across multiple dimensions, such as emphasizing self versus others as beneficiaries (White & Peloza, 2009), focusing on positive versus negative framing valence (Chang & Lee, 2009), and highlighting emotional versus functional benefits (Moran & Bagchi, 2019), all of which have been shown to affect fundraising effectiveness. However, the description of beneficiaries’ situations, as an important component of charitable appeals, has received relatively little attention. This study classifies charitable appeals into two categories based on different descriptions of the change process in beneficiaries’ situations: “recovery/reconstruction” (emphasizing that the beneficiary’s past situation was good, the current situation has become very bad, and donations help restore the beneficiary from a state of loss to the original state) and “improvement/enhancement” (emphasizing that donations help ben-

eficiaries move from a very poor current situation to a better one). We explore and validate the reasonableness of this classification standard. Additionally, based on the different emphases of the two types of appeals, we examine their impact on individuals' perceptions of charitable project functions.

Furthermore, previous research has explored the role of fundraising contexts, such as beneficiary type (group vs. individual) (Friedrich & McGuire, 2010; Small et al., 2007) and whether events are sudden disasters or ongoing tragedies (Vanhamme et al., 2012; Zheng et al., 2019), in affecting fundraising outcomes. As an important part of the fundraising context, we argue that event controllability deserves attention. Specifically, the events that cause beneficiaries' predicaments (e.g., disasters) may originate from "human actions that can be controlled by humans" or from "natural or accidental causes that cannot be controlled by humans" (Hildebrand et al., 2017; Winterich & Zhang, 2014). For example, fires caused by human factors such as picnics or burning fields are generally considered controllable, while fires caused by natural factors such as high temperatures and drought are considered uncontrollable. In this paper, event controllability specifically refers to whether the cause of the predicament is human-controllable. We will subsequently explore its impact on individuals' focus of attention.

In reality, observation of real charitable appeals published by charitable organizations reveals that "improvement/enhancement" descriptions are more common for predicaments caused by controllable events, while "recovery/reconstruction" descriptions are more common for predicaments caused by uncontrollable events. Does this mean that such information presentation is more effective? If so, what role do perceived charitable project functions (affected by appeal type) and individuals' focus of attention (affected by event controllability) play in this process? Based on regulatory fit theory, this paper employs seven studies, including one secondary data analysis and six experiments, to address two sets of issues. First, we discuss four exploratory questions: (1) Can charitable appeals in fundraising practice be distinguished using a "recovery/reconstruction" versus "improvement/enhancement" framework? (2) Do natural associations exist in fundraising practice and individual memory between "recovery/reconstruction" appeals and uncontrollable events, and between "improvement/enhancement" appeals and controllable events? (3) How do different types of charitable appeals affect perceived charitable project functions? (4) How does event controllability affect individuals' focus of attention? Second, we test one causal question: (5) Does matching charitable appeal type with event controllability enhance individual donation willingness?

1.1 The Effect of Charitable Appeal Type on Perceived Charitable Project Function

In marketing, individual donation refers to behavior where individuals provide resources to beneficiaries or charitable organizations without expecting returns, belonging to the category of prosocial behavior (Batson & Powell, 2003; Winterich et al., 2013). This includes monetary, time, and in-kind donations; this study focuses on monetary donations to unrelated individuals in need (Ran et al., 2021; Liu, 2019). Charitable appeal refers to persuasive information presented by charitable organizations or beneficiaries during social marketing communication, aiming to convince the public to donate to charitable causes (Chang, 2011). Previous research has classified charitable appeals across multiple dimensions, with beneficiary focus and framing valence receiving particular attention (Feiler et al., 2012; White & Pelozo, 2009). Beneficiary focus refers to whether the appeal highlights self-benefit (benefits to the donor) or other-benefit (benefits to the recipient) (Park & Lee, 2015). Scholars generally believe that other-benefit appeals more easily trigger empathy and yield better fundraising results (Fisher et al., 2008; Kulow & Kramer, 2016). However, recent research finds that self-benefit appeals better match materialists with strong self-interest motives, improving fundraising effectiveness by satisfying their self-esteem needs (Ryoo et al., 2020). Framing valence refers to whether the appeal emphasizes the potential benefits of donating (positive framing) or the negative consequences of not donating (negative framing) (Chang & Lee, 2009). Positive framing highlights the positive impact of donations and is more effective at promoting donation decisions (Erlandsson et al., 2018). However, when individuals have already decided to donate, negative framing can increase donation amounts (Chang & Lee, 2009). Real-world charitable appeals commonly adopt other-benefit positive framing with detailed descriptions of beneficiaries' situation changes, yet no research has classified appeals based on different descriptions of the change process in beneficiaries' situations.

Through observation and induction of numerous real charitable appeals in daily life, this study finds that although all charitable fundraising aims to help beneficiaries escape predicaments, in practice, some appeals emphasize "recovery/reconstruction" while others stress "improvement/enhancement." As shown in Figure 1 [Figure 1: see original paper], from the perspective of situation change, "recovery/reconstruction" (Recovery) descriptions encompass the process of a beneficiary's situation changing from good to bad, emphasizing helping the beneficiary restore from a state of loss to the original state (past → present → future). For example, when a beneficiary's life suddenly changes and the situation deteriorates rapidly, the appeal calls on people to help them return to their former good life, such as supporting disaster area reconstruction or helping students return to school. In contrast, "improvement/enhancement" (Improvement) descriptions do not involve the process of a beneficiary's situation changing from good to bad, but instead focus on describing the current poor situation and how donations can help improve it, emphasizing

making the beneficiary's poor current situation better (present \rightarrow future). For example, when a beneficiary lives in poverty, the appeal requests help to improve living conditions and ignite hope for the future. Additionally, at the semantic level, the expressions differ significantly. Words like recovery, rehabilitation, and reconstruction containing the character “复” (re-) inherently imply restoration, renewal, and recurrence, emphasizing the restoration from a poor present state to a good past state, including a temporal dimension with a gap between past and future transformation. In contrast, words like improvement and enhancement intuitively suggest development toward a better future, not including retrospection of the past in their temporal dimension. Accordingly, this study proposes that charitable appeals can be divided into “recovery/reconstruction” and “improvement/enhancement” categories.

Furthermore, based on the different emphases of the two appeal types, individuals also perceive their functions differently. Research on loss aversion suggests that what influences individual decision-making is not the absolute state of outcomes, but changes in outcomes relative to a reference point (Kahneman & Tversky, 1979). Depending on the reference point, individuals may perceive a certain outcome as a loss or as a gain (Kahneman et al., 1991). This study proposes that “recovery/reconstruction” and “improvement/enhancement” descriptions provide different reference points for donation outcomes, leading individuals to perceive the functions of the two types of charitable projects differently. “Recovery/reconstruction” descriptions emphasize that the beneficiary's situation has changed from good to bad, using the “good past” as a reference point, thus highlighting the loss suffered by the beneficiary in this misfortune and how donations can help reduce that loss. Therefore, when individuals encounter charitable projects using such descriptions, they perceive their function as helping beneficiaries reduce loss (Focus on Loss). In contrast, “improvement/enhancement” descriptions emphasize making the beneficiary's situation develop from a poor present to a better future, using the “poor present” as a reference point, highlighting how donations can increase gains for beneficiaries. Thus, when individuals encounter charitable projects using such descriptions, they perceive their function as helping beneficiaries increase gain (Focus on Gain). Accordingly, we hypothesize:

H1: Charitable appeal type (“recovery/reconstruction” vs. “improvement/enhancement”) affects individuals' perceived charitable project function (reduce loss & increase gain). Individuals perceive “recovery/reconstruction” descriptions as more effective than “improvement/enhancement” descriptions at helping beneficiaries reduce loss (vs. increase gain), while perceiving “improvement/enhancement” descriptions as more effective than “recovery/reconstruction” descriptions at helping beneficiaries increase gain (vs. reduce loss).

1.2 The Effect of Event Controllability on Individuals' Focus of Attention

The purpose of public welfare and philanthropy is to help beneficiaries escape predicaments, and the events causing these predicaments vary in controllability. Event controllability refers to whether a human agent could control the occurrence of the event (Hildebrand et al., 2017; Winterich & Zhang, 2014). In other words, events causing predicaments may originate from human behavior or from non-human natural or accidental factors. For example, fires causing beneficiaries' predicaments can result from human factors such as picnics or field burning, or from natural causes such as high temperatures and drought. It is important to clarify that the "event" in event controllability refers to the event causing the beneficiary's predicament, while "controllability" refers to whether a human agent could influence the occurrence of that event. Perceived controllability determines the extent to which individuals believe the event could have been foreseen or prevented (Alicke, 2000). This paper does not discuss who is responsible for the event, nor whether the consequences of the event are controllable. Using fire as an example, this paper focuses on whether the event causing the fire was human-controllable, not whether the beneficiary should be held responsible for the fire, nor whether the disaster situation is controllable.

Moreover, event controllability affects individual donation behavior. Disaster relief research shows that natural disasters receive more aid and support than human-caused disasters (see review by Zagefka & James, 2015). Additionally, research finds that when events are uncontrollable, people feel responsible for providing help to beneficiaries; however, when events are controllable, individuals high in power distance have lower donation willingness because they tolerate inequality and view it as a reasonable phenomenon in a fair social order, while those low in power distance show the opposite pattern (Winterich & Zhang, 2014; Yang et al., 2017). Furthermore, Hildebrand et al. (2017) found that when events are uncontrollable, corporate monetary donations to beneficiaries receive higher evaluations; when events are controllable, equivalent in-kind donations are evaluated more favorably.

When implementing helping actions, event controllability influences individuals' focus of attention. Regulatory Focus Theory proposes that individuals have two self-regulatory orientations when pursuing goals: prevention focus and promotion focus. The former focuses more on safety and responsibility needs, is more sensitive to whether negative outcomes occur, and employs vigilant behavioral strategies that emphasize avoiding mistakes; the latter focuses more on advancement and achievement needs, is more sensitive to whether positive outcomes occur, employs eager behavioral strategies, and emphasizes making correct responses (Higgins, 1997). Therefore, when individuals are in a prevention focus, they are more sensitive to negative outcomes due to safety needs and focus more on reducing loss; when in a promotion focus, they are more sensitive to positive outcomes due to advancement needs and focus more on increasing gain (Higgins, 1997).

On one hand, individuals facing uncontrollable situations feel a lack of control (Kay et al., 2009). Lack of control leads to anxiety and a sense of insecurity (Whitson & Galinsky, 2008), prompting individuals to vigilantly seek ways to compensate for and restore control, thereby increasing safety needs (Kay et al., 2009). That is, when lacking control, individuals adopt a prevention-focused self-regulatory orientation and vigilant behavioral strategies. As a filter for information, prevention focus makes individuals more sensitive to the negative and loss aspects of information (Wang & Lee, 2006). Therefore, when facing uncontrollable events, individuals activate prevention focus due to lack of control, consequently focusing more on loss and how to reduce it (Focus on Loss).

On the other hand, individuals facing controllable situations experience a sense of control (Kay et al., 2009), which can motivate them to take positive action and trigger advancement needs (Bateson, 1985). In other words, when experiencing control, individuals adopt a promotion-focused self-regulatory orientation and eager behavioral strategies, becoming more sensitive to the positive and gain aspects of information (Wang & Lee, 2006). Therefore, when facing controllable events, individuals activate promotion focus due to the experience of control, consequently focusing more on gain and how to increase it (Focus on Gain). In summary, we hypothesize:

H2: Event controllability (uncontrollable vs. controllable) affects individuals' focus of attention (reduce loss & increase gain). Individuals facing uncontrollable events focus more on reducing loss than those facing controllable events, while individuals facing controllable events focus more on increasing gain than those facing uncontrollable events.

1.3 Regulatory Fit Between Charitable Appeal Type and Event Controllability

Regulatory Fit Theory suggests that when message content matches an individual's current regulatory orientation, information processing becomes more fluent, thereby enhancing message persuasiveness (Higgins et al., 2001; Aaker & Lee, 2001). When individuals are promotion-focused, they focus more on increasing gain due to advancement needs; if the message uses a promotion frame emphasizing how to achieve positive outcomes, persuasiveness increases. Conversely, when individuals are prevention-focused, they focus more on reducing loss due to safety needs; if the message uses a prevention frame emphasizing how to avoid negative outcomes, persuasiveness is stronger (Aaker & Lee, 2001; Cesario et al., 2004). For example, Ryoo et al. (2020) found that because friends are usually associated with personal interests, describing relationships with friends activates individuals' promotion focus, making them focus more on gain; in this case, advertisements using a promotion frame can enhance product evaluation and purchase intention. In contrast, family is more associated with responsibilities and obligations, describing interactions with family activates individuals'

prevention focus, making them focus on loss; in this case, prevention frame advertisements have better persuasiveness. Meanwhile, e-commerce research shows that promotion-focused individuals browsing websites emphasizing hedonic shopping experiences (with more aesthetic images and videos) produce higher platform evaluation and consumption intention due to the high engagement from regulatory fit; prevention-focused individuals show the same effect when browsing websites emphasizing utilitarian shopping experiences (convenient search, built-in security features) (Ashraf & Thongpapanl, 2015).

Based on regulatory fit theory and the preceding analysis, uncontrollable events activate recipients' current prevention focus, sensitizing them to the loss aspect of the event. Simultaneously, compared to "improvement/enhancement" descriptions, "recovery/reconstruction" descriptions emphasize using the "good past" as a reference point to contrast with the "poor present," highlighting beneficiaries' losses and the function of donations in helping them reduce loss. Therefore, "recovery/reconstruction" descriptions exactly match the psychological representation state of individuals facing uncontrollable events; regulatory fit enhances the persuasiveness of charitable appeals (Higgins et al., 2001; Aaker & Lee, 2001), thereby strengthening potential donors' action motivation and increasing donation willingness. Similarly, controllable events activate recipients' promotion focus, causing them to focus more on the gain aspect of the event. Compared to "recovery/reconstruction" descriptions, "improvement/enhancement" descriptions use the "poor present" as a reference point to contrast with the "good future," emphasizing the function of donations in helping beneficiaries increase gain. Therefore, "improvement/enhancement" descriptions exactly match the psychological representation state of individuals facing controllable events, consequently enhancing individual donation willingness. Thus, we hypothesize:

H3: The match between charitable appeal type ("recovery/reconstruction" vs. "improvement/enhancement") and event controllability (uncontrollable vs. controllable) affects individual donation willingness. For uncontrollable events, "recovery/reconstruction" descriptions lead to higher individual donation willingness than "improvement/enhancement" descriptions; for controllable events, "improvement/enhancement" descriptions lead to higher individual donation willingness than "recovery/reconstruction" descriptions.

The research framework of this paper is shown in Figure 2 [Figure 2: see original paper]. This paper designed one secondary data analysis and six experiments to test the above hypotheses. Study 1 used secondary data to confirm that classifying charitable appeals into "recovery/reconstruction" and "improvement/enhancement" is reasonable, and found that in reality, "recovery/reconstruction" frequently co-occurs with uncontrollable events, and "improvement/enhancement" frequently co-occurs with controllable events. Study 2 used an experiment requiring individuals to recall "recovery/reconstruction" or "improvement/enhancement" charitable appeals, again verifying the covariation between appeal type and event controllability. Studies

3a and 3b demonstrated that “recovery/reconstruction” appeals are more effective than “improvement/enhancement” appeals at reducing loss but less effective at increasing gain. Study 4 showed that uncontrollable events lead individuals to focus more on reducing loss and less on increasing gain compared to controllable events. Studies 5a and 5b verified that matching charitable appeal type with event controllability can enhance individual donation willingness.

2. Study 1: Secondary Data: Classification Validity and Covariation with Event Controllability

Since the classification of charitable appeals in this research originates from real-life observation and induction, to verify the validity of this classification, this study used web scraping technology to capture real charitable appeals and conducted coding to examine whether appeals emphasizing only “recovery/reconstruction” or “improvement/enhancement” exist in reality. This can both verify that individuals can distinguish between the two types of descriptions and demonstrate that using a “recovery-improvement” framework to classify charitable appeals has practical significance. Additionally, if people naturally distinguish between these two types of descriptions in reality and perceive a match between appeal type and event controllability, then covariation between charitable appeal type and event controllability may exist in real fundraising—that is, “recovery/reconstruction” descriptions may appear more frequently in appeals for uncontrollable events and less frequently in appeals for controllable events. This study explores the covariation relationship between appeal classification and event controllability in real charitable appeals and the effect of their match on actual donations.

2.1 Data Source

This study used web scraping technology on November 24, 2021, to capture publicly available information and data from Alipay Charity Platform (<https://love.alipay.com/donate/index.htm>), a representative fundraising platform in China. We scraped all project introductions, detailed descriptions, amount raised, and number of donors for projects on the platform from May 24, 2016, to November 24, 2021, obtaining information on 978 charitable projects.

2.2 Data Analysis and Results

Coding of Charitable Appeal Type. To confirm the proportion of projects that could be classified using the “recovery-improvement” framework, we invited two independent coders to categorize projects into three types based on descriptions of the change process in beneficiaries’ situations in the “project introduction”: “recovery/reconstruction,” “improvement/enhancement,” and other. Inter-rater reliability was good ($\kappa = 0.42$, $p < 0.001$). Specifically, “recovery/reconstruction” appeals used words like “recover,” “reconstruct,” “return,”

and their synonyms, such as “Provide assistance funds to women in post-disaster distressed families in Shaanxi to help them rebuild their homes.” “Improvement/enhancement” appeals used words like “improve,” “enhance,” “upgrade,” and their synonyms, such as “Provide living subsidies to disadvantaged groups to help them improve their lives.” The “other” category used other descriptive dimensions or described both recovery and improvement simultaneously, such as “Life with Love—Leukemia Patient Rescue Plan” (coding instructions and keywords are detailed in Appendix 1). The results showed that among 978 project introductions, 84 were “recovery/reconstruction” appeals, 154 were “improvement/enhancement” appeals, and 740 were “other.” A total of 238 projects could be classified using the “recovery-improvement” framework, accounting for 24.34%, indicating that in reality, appeals emphasizing only “recovery/reconstruction” or “improvement/enhancement” do exist, and this classification standard has practical significance.

Coding of Event Controllability. For the 238 charitable projects that could be classified using the “recovery-improvement” framework, we invited two additional independent coders to categorize the fundraising contexts in the “project description” into three types based on whether the event causing the beneficiary’s predicament was human-controllable (Winterich & Zhang, 2014): controllable, uncontrollable, and unclear. Inter-rater reliability was good ($\kappa = 0.62$, $p < 0.001$). Specifically, controllable events included lack of sex education for children and difficulties faced by children in reconstituted families; uncontrollable events included congenital heart disease and sudden rainstorm and flood disasters (coding instructions and examples are detailed in Appendix 1). The results showed that among the 238 projects, 140 involved controllable events, 93 involved uncontrollable events, and 5 were unclear.

Covariation Between Charitable Appeal Type and Event Controllability. We then examined the covariation between charitable appeal type and event controllability in reality. Chi-square analysis showed that event controllability indeed differed across appeal types, $\chi^2(2) = 144.04$, $p < 0.001$, $\phi = 0.78$, exceeding the medium effect size criterion of 0.30 (Cohen, 1988). As shown in Table 1, two-proportion z-test results indicated that, excluding unclear cases, “recovery/reconstruction” (vs. “improvement/enhancement”) descriptions were more often used for uncontrollable events, while “improvement/enhancement” (vs. “recovery/reconstruction”) descriptions were more often used for controllable events.

Table 1. Covariation Between Charitable Appeal Type and Event Controllability

Charitable Appeal Type	Event Controllability	n (%)	Two-proportion z-test (Controllable vs. Uncontrollable)
“Recovery/Reconstruction”	Controllable:	z = -	0.001,
	Uncontrollable:	10.65,	
“Improvement/Enhancement”	Controllable:	p <	95%
	Uncontrollable:	0.001,	
	clear: 6 (7.1%)	95% CI:	
		[-	
		0.91,	
		-	
		0.74]	
“Recovery/Reconstruction”	Controllable:	z =	0.001,
	Uncontrollable:	13.22,	
“Improvement/Enhancement”	Controllable:	p <	95%
	Uncontrollable:	0.001,	
	clear: 2 (1.3%)	95% CI:	
		[0.68,	
		0.83]	

Note: Data in parentheses represent the proportion of events with different controllability levels within each appeal type.

Effect of Matching on Donation Willingness. For the 233 charitable projects coded as having controllable or uncontrollable events, we used average donation per person (amount raised divided by number of donors) as an indicator of individual donation willingness to explore the effect of matching. Following Leys et al. (2013), we used the MAD method to handle outliers in average donation per person. Within 2 MAD ranges, 182 data points were retained (“recovery/reconstruction”—uncontrollable: 53; “recovery/reconstruction”—controllable: 4; “improvement/enhancement”—uncontrollable: 15; “improvement/enhancement”—controllable: 110).

A two-way ANOVA on these 182 data points showed a significant main effect of event controllability ($F(1, 178) = 6.12, p = 0.014, \eta^2 = 0.03, 90\% \text{ CI}: [0.00, 0.09]$), while the main effect of charitable appeal type was not significant ($F(1, 178) = 0.03, p = 0.855, \eta^2 < 0.001, 90\% \text{ CI}: [0.00, 0.01]$). Importantly, the interaction effect was marginally significant, $F(1, 178) = 3.40, p = 0.067, \eta^2 = 0.02, 90\% \text{ CI}: [0.00, 0.06]$. Since F-tests in ANOVA are one-tailed and η^2 and η^2 cannot be negative, confidence intervals for ANOVA effect sizes are typically reported at 90% rather than 95% (Steiger, 2004; Wang et al., 2019). Simple effects analysis showed (Figure 3 [Figure 3: see original paper]) that when events were uncontrollable, “recovery/reconstruction” descriptions yielded higher average donation per person than “improvement/enhancement” descrip-

tions ($M_{\text{recovery}} = 2.19$, $SE = 0.11$; $M_{\text{improvement}} = 1.70$, $SE = 0.21$; $F(1, 178) = 4.14$, $p = 0.043$, $\eta^2 = 0.02$, 90% CI: [0.00, 0.07]). When events were controllable, the mean average donation per person was lower for “recovery/reconstruction” than for “improvement/enhancement,” but the difference was not significant ($M_{\text{recovery}} = 1.14$, $SE = 0.41$; $M_{\text{improvement}} = 1.54$, $SE = 0.08$; $F(1, 178) = 0.92$, $p = 0.339$, $\eta^2 = 0.01$, 90% CI: [0.00, 0.04]), possibly due to the small sample size in the “recovery/reconstruction” group ($n_{\text{recovery}} = 4$) resulting in overly large standard errors.

2.3 Discussion

Using secondary data, this study found that real charitable appeals can be distinguished using a “recovery-improvement” framework, demonstrating that this classification has practical significance. Additionally, the study found that “recovery/reconstruction” descriptions more frequently co-occur with uncontrollable events, while “improvement/enhancement” descriptions more frequently co-occur with controllable events, again showing that individuals can distinguish between the two types of descriptions and that fundraisers naturally match appeal type with event controllability. Moreover, this study preliminarily verified that matching charitable appeal type with event controllability enhances donation willingness, indicating that in reality, using matched appeals for different event controllability levels indeed yields better fundraising results.

3. Study 2: Covariation Between Charitable Appeal Type and Event Controllability

Study 1 used real charitable appeals to confirm that classification using the “recovery-improvement” framework is reasonable and preliminarily found covariation between appeal type and event controllability. Information on fundraising platforms may be written by charity professionals. To demonstrate that ordinary individuals can also perceive the covariation between charitable appeal type and event controllability, Study 2 required participants to recall charitable appeals containing “recovery/reconstruction” or “improvement/enhancement” descriptions and code event controllability based on recalled content, thereby showing that ordinary individuals closely associate “recovery/reconstruction” with uncontrollable events and “improvement/enhancement” with controllable events.

3.1 Experimental Procedure and Measures

Study 2 used a one-factor (charitable appeal type: recovery/reconstruction vs. improvement/enhancement) between-subjects design. We recruited 102 participants through “Marketing Research Lab” online, obtaining 88 valid samples (14 participants failed to complete the recall task as required), with 40 in the “recovery/reconstruction” group and 48 in the “improvement/enhancement” group.

Among them, 62.5% were female, with ages ranging from 18 to 33 ($M = 23.56$, $SD = 3.08$).

First, Study 2 manipulated charitable appeal type using a recall method. In the “recovery/reconstruction” condition, participants were guided to recall a recent charitable appeal they had seen that helped beneficiaries (people/animals/plants) return to their previous living or survival state, and were asked to write down the main content of the appeal, when they saw it, and their feelings after reading it. In the “improvement/enhancement” condition, the recalled content was changed to helping beneficiaries obtain better living or survival conditions. Subsequently, participants were asked about their willingness to donate to the beneficiaries (1 = very unwilling, 7 = very willing) and completed two items measuring perceived appeal type: “To what extent do you think this appeal can help beneficiaries return to their previous/improve their current living or survival state?” (1 = not at all, 7 = completely). Finally, participants reported gender, age, and other personal information and guessed the experimental purpose.

3.2 Data Analysis and Results

Manipulation Check of Charitable Appeal Type. One-way ANOVA showed that the manipulation of charitable appeal type was effective. The “recovery/reconstruction” group ($M = 4.90$, $SD = 1.48$) believed the recalled appeal could help beneficiaries return to their previous living or survival state more than the “improvement/enhancement” group ($M = 3.50$, $SD = 1.87$), $F(1, 86) = 14.73$, $p < 0.001$, $\eta^2 = 0.15$, 90% CI: [0.05, 0.26], exceeding the medium effect size criterion of 0.06 (Cohen, 1988). Conversely, the “improvement/enhancement” group ($M = 5.83$, $SD = 1.10$) believed the recalled appeal could help beneficiaries improve their current living or survival state more than the “recovery/reconstruction” group ($M = 5.10$, $SD = 1.19$), $F(1, 86) = 8.99$, $p = 0.004$, $\eta^2 = 0.10$, 90% CI: [0.02, 0.20], with a medium effect size.

Donation Willingness. One-way ANOVA indicated no significant difference in donation willingness between the “recovery/reconstruction” group ($M = 6.10$, $SD = 1.03$) and the “improvement/enhancement” group ($M = 6.17$, $SD = 0.81$), $F(1, 86) = 0.12$, $p = 0.735$, $\eta^2 = 0.001$, 90% CI: [0.00, 0.04], suggesting that charitable appeal type does not directly affect individual donation willingness.

Covariation Between Charitable Appeal Type and Event Controllability. We invited two independent coders to categorize participants’ recalled content by event controllability into three types using the same criteria as Study 1: controllable, uncontrollable, and unclear. Inter-rater reliability was good ($\kappa = 0.73$, $p < 0.001$). Specifically, among the 88 appeals, 39 involved controllable events, 28 involved uncontrollable events, and 21 were unclear. Chi-square analysis showed that appeal type led to differences in event controllability, $\chi^2(2) = 12.36$, $p = 0.002$, $\phi = 0.38$, with a medium effect size (Cohen, 1988). Additionally, two-proportion z-test results (Table 1)

showed that participants were more likely to think of uncontrollable events when recalling “recovery/reconstruction” (vs. “improvement/enhancement”) appeals, and more likely to think of controllable events when recalling “improvement/enhancement” (vs. “recovery/reconstruction”) appeals.

3.3 Discussion

Studies 1 and 2 used two methods to demonstrate that people closely associate “recovery/reconstruction” with uncontrollable events and “improvement/enhancement” with controllable events, supporting the covariation relationship between charitable appeal type and event controllability. Study 3 verifies that charitable appeal type affects whether individuals perceive charitable project functions as reducing loss or increasing gain, and Study 4 verifies that event controllability affects whether individuals’ focus of attention is on reducing loss or increasing gain, thereby demonstrating that charitable appeal type and event controllability align on the dimension of reducing loss vs. increasing gain. Study 5 will verify that this matching enhances individual donation willingness (i.e., H3).

4. Study 3: Charitable Appeal Type Affects Perceived Charitable Project Function

Study 3 uses charitable appeals obtained from Studies 1 and 2 as experimental materials to verify two aspects. First, it replicates the finding that individuals can distinguish between the two types of charitable appeals. Second, it tests hypothesis H1: Charitable appeal type affects individuals’ perceived charitable project function—individuals perceive “recovery/reconstruction” descriptions as more effective than “improvement/enhancement” descriptions at helping beneficiaries reduce loss (vs. increase gain), while perceiving “improvement/enhancement” descriptions as more effective than “recovery/reconstruction” descriptions at helping beneficiaries increase gain (vs. reduce loss). Study 3 used a one-factor (charitable appeal type: recovery/reconstruction vs. improvement/enhancement) within-subjects design. To avoid insufficient statistical power due to inadequate sample size, we used G*Power 3.1 (Faul et al., 2007) to calculate required sample size for all subsequent experiments. For the paired-samples t-test used in this experiment, with a significance level of $\alpha = 0.05$ and medium effect size ($d = 0.50$), a total sample size of at least 34 was needed to achieve 80% statistical power.

4.1.1 Experimental Procedure and Measures

We recruited 80 participants through the Credamo Data Market, meeting the sample size requirement, and provided cash compensation after the experiment. Among them, 32 were female (40%), with ages ranging from 18 to 51 ($M = 28.63$,

SD = 6.51). We randomly selected six appeals each from the “project introductions” coded as “recovery/reconstruction” and “improvement/enhancement” in the secondary data for use as materials in Study 3a (see Appendix 2). For each appeal, we first measured perceived charitable project function with two items: “To what extent will this charitable project help beneficiaries reduce loss/increase gain?” (1 = to a very small extent, 8 = to a very large extent) (Jain et al., 2007). Next, we measured perceived appeal type with two items: “This charitable project will help beneficiaries return to their previous living state/improve their current living state” (1 = strongly disagree, 7 = strongly agree). Finally, participants completed demographic information and guessed the experimental purpose.

4.1.2 Data Analysis and Results

Appeal Type Differentiation. We averaged participants’ ratings of perceived appeal type for the two types of charitable projects and conducted paired-samples t-tests (Table 2). Results showed that participants believed “recovery/reconstruction” descriptions could better help beneficiaries return to their previous living state ($M_{\text{recovery}} = 5.95$, $SD = 0.70$; $M_{\text{improvement}} = 3.60$, $SD = 1.41$), $t(79) = 13.08$, $p < 0.001$, Cohen’s $d = 2.11$, 95% CI: [1.57, 2.64], exceeding the 0.80 criterion for a large effect size (Cohen, 1988). Conversely, they believed “improvement/enhancement” descriptions could better help beneficiaries improve their current living state ($M_{\text{recovery}} = 5.29$, $SD = 1.27$; $M_{\text{improvement}} = 6.25$, $SD = 0.64$), $t(79) = -6.16$, $p < 0.001$, Cohen’s $d = -0.96$, 95% CI: [-1.44, -0.47].

Perceived Charitable Project Function. Similarly, paired-samples t-test results showed that participants believed “recovery/reconstruction” descriptions were more helpful for reducing loss ($M_{\text{recovery}} = 5.80$, $SD = 1.12$; $M_{\text{improvement}} = 4.45$, $SD = 1.48$), $t(79) = 9.88$, $p < 0.001$, Cohen’s $d = 1.03$, 95% CI: [0.64, 1.42]. In contrast, “improvement/enhancement” descriptions were more helpful for increasing gain ($M_{\text{recovery}} = 5.79$, $SD = 1.20$; $M_{\text{improvement}} = 6.68$, $SD = 0.95$), $t(79) = -6.84$, $p < 0.001$, Cohen’s $d = -0.82$, 95% CI: [-1.27, -0.37]. This indicates that individuals can perceive differences in charitable project functions between the two types of appeals, supporting hypothesis H1.

Table 2. Manipulation Check of Charitable Appeal Type and Effect on Perceived Charitable Project Function

	“Recovery/Reconstruction”	Improvement/Enhancement	Paired-samples
Measure M (SD)	M (SD)		t-test
Perceived Appeal Type			

	“Recovery/Reconstruction” Measure M (SD)	“Improvement/Enhancement” M (SD)	Paired-samples t-test
Study 3a: Re- turn to pre- vious state	5.95 (0.70)	3.60 (1.41)	$t(79) = 13.08, p < 0.001$
Study 3a: Im- prove cur- rent state	5.29 (1.27)	6.25 (0.64)	$t(79) = -6.16, p < 0.001$
Perceived Func- tion			
Study 3a: Re- duce loss	5.80 (1.12)	4.45 (1.48)	$t(79) = 9.88, p < 0.001$
Study 3a: In- crease gain	5.79 (1.20)	6.68 (0.95)	$t(79) = -6.84, p < 0.001$
Study 3b: De- gree of im- prove- ment (vs. re- cov- ery)	3.76 (1.46)	5.88 (0.67)	$t(99) = -13.10, p < 0.001$

	“Recovery/Reconstruction” Measure M (SD)	“Improvement/Enhancement” M (SD)	Paired-samples t-test
Study 3b: Increase gain (vs. reduce loss)	3.57 (1.51)	5.93 (0.76)	$t(99) = -13.83$, $p < 0.001$

Note: α represents internal consistency reliability for multiple charitable projects on corresponding items for “recovery/reconstruction” and “improvement/enhancement” respectively.

4.2.1 Experimental Procedure and Measures

We recruited 100 participants through “Marketing Research Lab,” meeting the basic sample requirement, and provided cash compensation after the experiment. Among them, 63 were female (63.0%), with ages ranging from 19 to 55 ($M = 25.26$, $SD = 6.45$). Referencing previous research (Bhattacharjee & Mogilner, 2014; Van Boven & Gilovich, 2003), we randomly selected seven appeals each from the two types of charitable appeals in Study 2, removed keywords like “recover,” “reconstruct,” “improve,” and “enhance,” and used them as materials in Study 3b (see Appendix 2). For each appeal, participants first judged its category: “Will this charitable project help beneficiaries return to their previous living state or improve their current living state?” (1 = return to previous living state, 7 = improve current living state). Then they evaluated its function: “Will this charitable project help beneficiaries reduce loss or increase gain?” (1 = reduce loss, 7 = increase gain). Finally, participants completed demographic information and guessed the experimental purpose.

4.2.2 Data Analysis and Results

Appeal Type Differentiation. We averaged participants’ category judgments for the two types of charitable appeals and conducted paired-samples t-tests (Table 2). Results showed that participants believed “recovery/reconstruction” descriptions ($M = 3.76$, $SD = 1.46$) were more likely than “improvement/enhancement” descriptions ($M = 5.88$, $SD = 0.67$) to help beneficiaries return to their previous living state rather than improve their current living state, $t(99) = -13.10$, $p < 0.001$, Cohen’s $d = -1.87$, 95% CI: [-2.31, -1.41], with a large effect size.

Perceived Charitable Project Function. Similarly, paired-samples t-test results showed that participants believed “recovery/reconstruction” descriptions

($M = 3.57$, $SD = 1.51$) were more helpful for reducing loss rather than increasing gain compared to “improvement/enhancement” descriptions ($M = 5.93$, $SD = 0.76$), $t(99) = -13.83$, $p < 0.001$, Cohen’s $d = -1.97$, 95% CI: [-2.42, -1.53], with a large effect size, supporting H1.

4.3 Discussion

Study 3 used both real and recalled charitable appeals to demonstrate that charitable appeal type affects individuals’ perceived charitable project function. Individuals perceive “recovery/reconstruction” descriptions as more effective than “improvement/enhancement” descriptions at helping beneficiaries reduce loss (vs. increase gain), while perceiving “improvement/enhancement” descriptions as more effective than “recovery/reconstruction” descriptions at helping beneficiaries increase gain (vs. reduce loss).

5. Study 4: Event Controllability Affects Individuals’ Focus of Attention

Study 4 aims to test the effect of event controllability on individuals’ focus of attention: individuals facing uncontrollable events focus more on reducing loss than those facing controllable events, while individuals facing controllable events focus more on increasing gain than those facing uncontrollable events (i.e., H2).

5.1 Experimental Procedure and Measures

Study 4 used a one-factor (event controllability: uncontrollable vs. controllable) between-subjects design. According to G*Power 3.1 (Faul et al., 2007), for a between-subjects one-way ANOVA, with significance level $\alpha = 0.05$, medium effect size ($f = 0.25$), and statistical power of 80%, a total sample size of at least 128 was needed. We recruited 144 participants through the Credamo Data Market, obtaining 137 valid samples (7 participants failed the attention check), with 67 in the uncontrollable group and 70 in the controllable group, meeting the basic sample requirement. Among them, 86 were female (62.8%), with ages ranging from 18 to 66 ($M = 28.59$, $SD = 7.89$).

Drawing on previous research (Baum & Fleming, 1993; Hildebrand et al., 2017; Zagefka & James, 2015), Study 4 adapted experimental materials (California avalanches in the U.S.) to the Chinese context. First, participants were asked to imagine seeing a micro-charity project for fire relief on Weibo (see Appendix 3). In the controllable condition, the fire was caused by Mr. Li accidentally starting a fire while burning leaves for a picnic; in the uncontrollable condition, the fire was caused by lightning igniting surface vegetation. Next, participants’ focus of attention was measured with two items: “When reading this Weibo post, to what extent did you focus on helping Lingkou Town reduce loss/increase gain?” (1 = to a very small extent, 8 = to a very large extent) (Jain et al., 2007).

Participants then completed a manipulation check for event controllability ($\alpha = 0.94$): “This fire was preventable”; “This fire was avoidable”; “Someone had the ability to prevent this fire”; “Someone should be held responsible for this fire” (1 = strongly disagree, 7 = strongly agree) (Hildebrand et al., 2017). To control for potential individual differences in regulatory focus, we measured promotion focus ($\alpha = 0.80$) and prevention focus ($\alpha = 0.75$) with four items each, using the difference between their means to represent regulatory focus (Lockwood et al., 2002). Finally, participants completed demographic information and guessed the experimental purpose.

5.2 Data Analysis and Results

Manipulation Check of Event Controllability. One-way ANOVA showed that compared to participants in the uncontrollable event group ($M = 3.07$, $SD = 1.54$), those in the controllable event group ($M = 6.08$, $SD = 0.71$) were more likely to believe the fire’s cause was human-controllable, $F(1, 135) = 219.06$, $p < 0.001$, $\eta^2 = 0.62$, 90% CI: [0.54, 0.68], indicating successful manipulation.

Focus of Attention. One-way ANCOVA with regulatory focus as a covariate showed that uncontrollable group participants ($M = 6.65$, $SE = 0.16$) focused more on helping victims reduce loss than controllable group participants ($M = 6.04$, $SE = 0.16$), $F(1, 134) = 7.28$, $p = 0.008$, $\eta^2 = 0.05$, 90% CI: [0.01, 0.12]. Meanwhile, controllable group participants ($M = 5.92$, $SE = 0.23$) focused more on helping victims increase gain than uncontrollable group participants ($M = 5.28$, $SE = 0.24$), $F(1, 134) = 3.66$, $p = 0.058$, $\eta^2 = 0.03$, 90% CI: [0.00, 0.09].

5.3 Discussion

Study 4 verified that individuals facing uncontrollable events focus more on reducing loss than those facing controllable events, while individuals facing controllable events focus more on increasing gain than those facing uncontrollable events. Combined with the results of Studies 3 and 4, we can see that uncontrollable events activate individuals’ focus on reducing loss, which is also the focus of “recovery/reconstruction” appeals. Similarly, controllable events activate individuals’ focus on increasing gain, which is also the focus of “improvement/enhancement” appeals. Charitable appeal type and event controllability exhibit regulatory focus matching. Study 5 will verify that this matching enhances individual donation willingness (i.e., H3).

6. Study 5: The Enhancing Effect of Matching on Donation Willingness

Study 5 verifies the effect of matching charitable appeal type with event controllability on individual donation willingness (i.e., H3). For uncontrollable

events, “recovery/reconstruction” descriptions lead to higher individual donation willingness than “improvement/enhancement” descriptions; for controllable events, “improvement/enhancement” descriptions lead to higher individual donation willingness than “recovery/reconstruction” descriptions. Research shows that whether beneficiaries are groups or individuals and whether events are sudden disasters (e.g., earthquakes, floods) or ongoing tragedies (e.g., diseases, environmental pollution) can affect individual donation willingness (Friedrich & McGuire, 2010; Small et al., 2007; Vanhamme et al., 2012; Zheng et al., 2019), making the representativeness of results from a single donation context susceptible to challenge. Study 5a adopts a disaster relief context with group beneficiaries and sudden disasters; Study 5b adopts a disease assistance context with individual beneficiaries and ongoing tragedies. Verifying the enhancing effect of matching charitable appeal type with event controllability on donation willingness across different contexts can improve the external validity of the research.

6.1.1 Experimental Procedure and Measures

Study 5a used a 2 (event controllability: uncontrollable vs. controllable) \times 2 (charitable appeal type: recovery/reconstruction vs. improvement/enhancement) \times 2 (disaster context: flood vs. fire) between-subjects design. We recruited 500 participants through the “Marketing Research Lab” WeChat account, obtaining 441 valid samples (59 participants failed the attention check or incorrectly answered recall questions). Among them, 290 were female (65.76%), with ages ranging from 18 to 46 ($M = 24.52$, $SD = 3.95$).

Participants first saw a disaster news report. In the flood context, the controllable flood was caused by contractors cutting corners on reservoir dam construction, while the uncontrollable flood was caused by continuous heavy rainfall. In the fire context, the controllable fire was caused by Mr. Tian accidentally starting a fire while burning leaves to smoke out squirrels, while the uncontrollable fire was caused by lightning. Participants were then shown a disaster relief appeal, with charitable appeal type manipulated through corresponding language descriptions. In the “recovery/reconstruction” condition, the key message was: “We hope you will lend a helping hand to help the disaster victims rebuild their homes and restore their previously warm and hopeful lives!” In the “improvement/enhancement” condition, the key message was: “We hope you will lend a helping hand to help the disaster victims improve their current situation and make their lives warmer and more hopeful!” (see Appendix 4).

Next, we measured participants’ donation willingness (“How willing are you to donate to the beneficiaries in the above appeal?” 1 = very unwilling, 7 = very willing) and perceived appeal type (same as Study 3b), and completed a manipulation check for event controllability ($\alpha = 0.93$, same as Study 4). Finally, participants completed demographic information and guessed the experimental purpose.

6.1.2 Data Analysis and Results

Manipulation Checks. One-way ANOVA showed that participants in the “recovery/reconstruction” group ($M = 2.36$, $SD = 2.08$) believed the charitable project could help beneficiaries return to their previous living state rather than improve their current living state more than those in the “improvement/enhancement” group ($M = 4.69$, $SD = 2.24$), $F(1, 439) = 128.80$, $p < 0.001$, $\eta^2 = 0.23$, 90% CI: [0.17, 0.28], indicating successful manipulation of charitable appeal type. Similarly, compared to participants in the uncontrollable event group ($M = 3.39$, $SD = 1.48$), those in the controllable event group ($M = 5.84$, $SD = 1.14$) were more likely to believe the disaster cause was human-controllable, $F(1, 439) = 380.75$, $p < 0.001$, $\eta^2 = 0.46$, 90% CI: [0.41, 0.51], indicating successful manipulation of event controllability.

Donation Willingness. Three-way ANOVA showed that the main effects of event controllability ($p = 0.411$) and charitable appeal type ($p = 0.454$) were not significant, and the interactions between event controllability and disaster context ($p = 0.763$), charitable appeal type and disaster context ($p = 0.520$), and the three-way interaction ($p = 0.825$) were all not significant. Supporting H3, the interaction between event controllability and charitable appeal type was significant, $F(1, 433) = 27.28$, $p < 0.001$, $\eta^2 = 0.06$, 90% CI: [0.03, 0.10]. Simple effects analysis showed (Figure 4 [Figure 4: see original paper]) that when events were controllable, “improvement/enhancement” led to higher donation willingness than “recovery/reconstruction” ($M_{\text{recovery}} = 5.16$, $SE = 0.11$; $M_{\text{improvement}} = 5.65$, $SE = 0.11$; $F(1, 433) = 10.34$, $p = 0.001$, $\eta^2 = 0.02$, 90% CI: [0.01, 0.05]). Conversely, when events were uncontrollable, “recovery/reconstruction” led to higher donation willingness than “improvement/enhancement” ($M_{\text{recovery}} = 5.64$, $SE = 0.11$; $M_{\text{improvement}} = 4.98$, $SE = 0.12$; $F(1, 433) = 17.28$, $p < 0.001$, $\eta^2 = 0.04$, 90% CI: [0.01, 0.07]).

Additionally, the main effect of disaster context was significant ($M_{\text{flood}} = 5.11$, $M_{\text{fire}} = 5.61$, $F(1, 433) = 20.61$, $p < 0.001$, $\eta^2 = 0.05$, 90% CI: [0.02, 0.08]). However, results of separate tests by context in Appendix 4 showed consistent results across both contexts, supporting hypothesis H3.

6.2.1 Experimental Procedure and Measures

Study 5b used a 2 (event controllability: uncontrollable vs. controllable) \times 2 (charitable appeal type: recovery/reconstruction vs. improvement/enhancement) between-subjects design. According to G*Power 3.1 (Faul et al., 2007), for a between-subjects two-way ANOVA, with significance level $\alpha = 0.05$ and medium effect size ($f = 0.25$), a minimum sample size of 128 was needed to achieve 80% statistical power. We recruited 360 participants through the Credamo Data Market, obtaining 317 valid samples (43 participants failed the attention check or incorrectly answered recall content), meeting the basic sample requirement. Among them, 185 were female (58.4%), with ages ranging from 18 to 39 ($M = 25.51$, $SD = 4.77$).

This study used the real charitable project “Love’s Decibel for Deaf Children Rescue Plan” as experimental material. The project background was: “Three-year-old Yangyang suffers from severe deafness and needs a cochlear implant, but cannot afford the astronomical medical expenses.” In the controllable condition, the deafness was caused by a misdiagnosis by the attending physician; in the uncontrollable condition, it was a congenital disease. Charitable appeal type was manipulated using descriptions similar to Study 5a, and subsequent measures were the same as in Study 5a (see Appendix 4).

6.2.2 Data Analysis and Results

Manipulation Checks. One-way ANOVA showed successful manipulation of appeal type ($M_{\text{recovery}} = 2.19$, $SD = 1.95$; $M_{\text{improvement}} = 5.24$, $SD = 2.14$; $F(1, 315) = 174.52$, $p < 0.001$, $\eta^2 = 0.36$, 90% CI: [0.29, 0.42]) and event controllability ($M_{\text{uncontrollable}} = 3.11$, $SD = 1.45$; $M_{\text{controllable}} = 5.91$, $SD = 0.96$; $F(1, 315) = 401.50$, $p < 0.001$, $\eta^2 = 0.56$, 90% CI: [0.50, 0.61]).

Donation Willingness. Two-way ANOVA showed that the main effects of event controllability ($F(1, 313) = 0.41$, $p = 0.522$, $\eta^2 = 0.001$, 90% CI: [0.00, 0.02]) and charitable appeal type ($F(1, 313) = 2.70$, $p = 0.102$, $\eta^2 = 0.01$, 90% CI: [0.00, 0.03]) were not significant, while their interaction effect was significant, $F(1, 313) = 52.04$, $p < 0.001$, $\eta^2 = 0.14$, 90% CI: [0.09, 0.20]. Simple effects analysis showed (Figure 4) that when events were controllable, “improvement/enhancement” led to higher donation willingness than “recovery/reconstruction” ($M_{\text{recovery}} = 4.93$, $SE = 0.13$; $M_{\text{improvement}} = 6.02$, $SE = 0.12$; $F(1, 313) = 37.29$, $p < 0.001$, $\eta^2 = 0.11$, 90% CI: [0.01, 0.07]). When events were uncontrollable, “recovery/reconstruction” led to higher donation willingness than “improvement/enhancement” ($M_{\text{recovery}} = 5.90$, $SE = 0.12$; $M_{\text{improvement}} = 5.21$, $SE = 0.12$; $F(1, 313) = 16.37$, $p < 0.001$, $\eta^2 = 0.05$, 90% CI: [0.02, 0.09]).

6.3 Discussion

Study 5 verified the enhancing effect of matching charitable appeal type with event controllability on individual donation willingness in both disaster relief and disease assistance contexts. In particular, Study 5b extended the experimental context from disaster relief to the more common disease assistance context in daily life, demonstrating the robustness of the matching effect and enhancing the external validity of the research.

7. General Discussion

This research classifies charitable appeals into “recovery/reconstruction” and “improvement/enhancement” categories. Through one secondary data analy-

sis and six experiments, we found: First, the above classification of charitable appeals is reasonable (Study 1), and in real charitable appeals and people's memories, "recovery/reconstruction" more frequently co-occurs with uncontrollable events, while "improvement/enhancement" more frequently co-occurs with controllable events (Studies 1, 2). Second, "recovery/reconstruction" (vs. "improvement/enhancement") descriptions lead donors to perceive charitable projects as more effective at reducing loss (vs. increasing gain) (Studies 3a, 3b), and donors facing uncontrollable (vs. controllable) events also focus more on reducing loss (vs. increasing gain) (Study 4). Finally, based on regulatory focus matching, using "recovery/reconstruction" (vs. "improvement/enhancement") descriptions for uncontrollable events and "improvement/enhancement" (vs. "recovery/reconstruction") descriptions for controllable events yields higher individual donation willingness (Studies 5a, 5b) and actual donations (Study 1).

7.1 Theoretical Contributions

First, this research broadens the perspective on classifying charitable appeals and verifies their impact on individuals' perceived charitable project functions. Previous research has classified charitable appeals across multiple dimensions, including beneficiary focus (self vs. other) (White & Peloza, 2009), framing valence (positive vs. negative) (Chang & Lee, 2009), emphasis on individual humanity vs. group norms (Smith et al., 2014), highlighting emotional vs. functional benefits (Moran & Bagchi, 2019), and using hedonic vs. utilitarian products as references (Savary et al., 2014). However, no research has specifically focused on descriptions of the change process in beneficiaries' situations. This study synthesizes observations of real-world phenomena and classifies charitable appeals based on "different emphases on the change process in beneficiaries' situations" into "recovery/reconstruction" (emphasizing that the beneficiary's past situation was good, the current situation has become very bad, and donations help restore the beneficiary from a state of loss to the original state) and "improvement/enhancement" (emphasizing that donations help beneficiaries move from a very poor current situation to a better one), opening a new classification perspective. Additionally, drawing on loss aversion effects, we propose that based on different reference points for donation outcomes, the two types of appeals lead donors to perceive charitable project functions differently. "Recovery/reconstruction" descriptions use the "good past" as a reference point and are perceived as more effective at helping beneficiaries reduce loss; "improvement/enhancement" descriptions use the "poor present" as a reference point and are perceived as more effective at helping beneficiaries increase gain, which then matches with event controllability to affect individual donation willingness. Starting from observations of everyday phenomena and gradually refining to the theoretical level, the "recovery-improvement" framework proposed in this research broadens the scope of considerations for classifying charitable appeals and demonstrates differences in perceived charitable project functions. Previous research shows that using whether beneficiaries receive help (not donating as a loss) and not receiving help (donating as a gain) as reference points af-

ffects individual donation behavior (Chang & Lee, 2009). This study shows that different time-point states can serve as reference points, expanding our understanding of how information framing affects fundraising effectiveness. This further suggests that future research could consider introducing other reference points, such as whether potential donors are individuals or groups, which may also affect fundraising outcomes.

Second, this research introduces the matching effect of event controllability, demonstrating its interaction with charitable appeal type in affecting individual donation willingness. Previous research finds that whether events causing beneficiaries' predicaments are human-controllable affects individual donations—when events are uncontrollable, individuals' helping willingness and sense of responsibility are relatively high (Winterich & Zhang, 2014; Zagefka & James, 2015). However, how to use charitable appeal design to increase helping willingness for beneficiaries facing controllable events is often overlooked. This study finds that individuals' focus of attention differs based on event controllability. When facing uncontrollable (vs. controllable) events, individuals lack (vs. have) control, which increases safety (vs. advancement) needs and activates prevention (vs. promotion) focus (Higgins, 1997; Whitson & Galinsky, 2008; Wang & Lee, 2006), verifying that individuals facing uncontrollable (vs. controllable) events focus more on reducing loss (vs. increasing gain). This matching with charitable appeals then positively affects individual donation willingness. These findings also provide new research ideas for other domains involving controllability and state changes, such as service failure recovery and medical health decision-making (Swanson & Hsu, 2011; Lavery & Valerie, 1996). For example, in service failure contexts, there may also be a matching relationship between failure controllability and appeal type (“recovery/reconstruction” vs. “improvement/enhancement”) that affects consumer satisfaction with service recovery.

Finally, this research verifies the important role of regulatory fit in enhancing information persuasiveness in the charitable fundraising domain, expanding regulatory fit research (Higgins et al., 2001; Aaker & Lee, 2001) and supplementing research on how matching between elements affects persuasiveness. Existing research shows that matching between message content and recipients' goals and motivational orientations, emotional and cognitive states, personality and cultural orientations can enhance persuasiveness and affect attitudes and behaviors (Kidwell et al., 2013; see review by Rothman et al., 2019). However, relatively few studies in the fundraising domain consider matching effects. This research provides a novel exploration of element matching in charitable appeals, using regulatory fit theory to theoretically explain the matching between charitable appeal type and event controllability. Specifically, based on the logic that perceived charitable project functions from appeals and individuals' focus of attention affected by event controllability both concern reducing loss vs. increasing gain, we verified that “recovery/reconstruction—uncontrollable” and “improvement/enhancement—controllable” matching enhances information persuasiveness and increases individual donation willingness. This also suggests that future research could consider other dimensions of matching in charitable

fundraising, such as matching between donation usage time and psychological or geographical distance to beneficiaries (Huang et al., 2017).

7.2 Practical Implications

This research provides practical guidance for relevant departments, charitable organizations, and beneficiaries to effectively promote individual monetary donations. First, charitable organizations or beneficiaries should carefully consider appeal content design based on specific causes and contexts to enhance potential donors' donation willingness. From traditional charitable organizations like the China Red Cross Foundation and China Foundation for Poverty Alleviation to new internet-based charity platforms like Alibaba Charity and Tencent Charity, charitable appeals remain a crucial source for demonstrating needs to the public and shaping impressions and value judgments of beneficiaries. This study's results show that different types of charitable appeals can match with different event controllability levels to enhance individual donation willingness. Therefore, charitable organizations and beneficiaries should adopt different appeal types for different events. For example, for natural disasters like earthquakes and floods caused by uncontrollable factors, "recovery/reconstruction" descriptions are more appropriate for donation appeals; for education and poverty alleviation scenarios caused by controllable factors, "improvement/enhancement" descriptions are more effective. This research provides a new perspective for charitable appeal design, with strong practical application value, especially in the era of internet-based charity with high-speed information dissemination.

7.3 Limitations and Future Directions

Although this research confirmed the robustness of conclusions through secondary data and multiple experiments, several limitations remain, providing directions for future research. First, the secondary data included cases where a single appeal mixed both types of descriptions, which we did not examine. We only investigated cases emphasizing only "recovery/reconstruction" or "improvement/enhancement." Future research could explore the fundraising effectiveness of mixed appeals. Second, the experimental stimuli used only text and images, while in today's well-developed internet charity environment, interactive communication methods such as video and virtual reality are increasingly applied in charitable information dissemination. Future research could use more novel formats to verify the research questions. Third, the experiments did not measure actual donation behavior. Although we strictly controlled experimental procedures and conducted manipulation checks on stimulus materials, and research shows that virtual scenarios can effectively simulate real responses (Cohen et al., 2008), there may still be deviations from real situations. Future research could add field experiments to measure participants' actual donation behavior, enhancing the robustness of conclusions. Additionally, the research selected representative disaster relief and disease assistance contexts; future research could cover more assistance types such as education and poverty alleviation,

enhancing ecological validity through broader contextual experiments. Finally, this research was conducted in the Chinese context, yet enhancing individual donation willingness is not a unique goal of Chinese charity. We believe the conclusions can be generalized more broadly, and future research could consider cultural differences across countries and conduct experiments in cross-cultural contexts to make conclusions more persuasive.

8. Conclusion

Through one secondary data analysis and six experiments, this paper explored the reasonableness of classifying charitable appeals using a “recovery-improvement” framework and its impact on fundraising effectiveness, reaching the following conclusions: (1) Charitable appeals can be distinguished into “recovery/reconstruction” and “improvement/enhancement” categories based on different descriptions of beneficiaries’ situation changes; (2) For uncontrollable events, “recovery/reconstruction” (vs. “improvement/enhancement”) descriptions yield better fundraising results, while for controllable events, “improvement/enhancement” (vs. “recovery/reconstruction”) descriptions yield better results; (3) This effect occurs because uncontrollable (controllable) events lead individuals to focus more on reducing loss (increasing gain), while “recovery/reconstruction” (“improvement/enhancement”) descriptions are perceived as more effective at reducing loss (increasing gain). The regulatory fit between event controllability and charitable appeal type enhances individual donation willingness.

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Appendices

Appendix 1. Coding Instructions and Keywords

1.1 Coding Instructions for Charitable Appeal Type Please classify the following charitable appeals based on descriptions of the “change process in the beneficiary’s situation (individual, group, animal, plant, etc.).”

1. **“Recovery/Reconstruction” category:** “Situation changes from good to bad, emphasizing restoration from loss to original state”
 - Appeals that reflect the process of a beneficiary’s situation changing from good to bad, such as when a beneficiary’s life suddenly changes, the situation deteriorates rapidly, and the appeal calls on people to help them escape the predicament, e.g., supporting disaster area reconstruction, helping refugees return home, etc.
2. **“Improvement/Enhancement” category:** “Current situation is very poor, emphasizing that donations make it better”
 - Appeals that emphasize the beneficiary’s current poor situation and how people can help improve it, without including the process of the beneficiary’s situation deteriorating, e.g., helping beneficiaries

improve their lives, enhance their capabilities, support their growth, etc.

1.2 Coding Keywords

1. **“Recovery/Reconstruction” keywords:** “恢复” (recover), “康复” (rehabilitate), “重建” (reconstruct), “重返” (return), “重获” (regain), “重现” (reappear), “重拾” (retrieve), “重见” (see again), “重新” (renew), “重回” (go back), etc.
2. **“Improvement/Enhancement” keywords:** “改善” (improve), “完善” (perfect), “提高” (enhance), “提升” (elevate), “增强” (strengthen), “增长” (increase), “增加” (add), “增添” (supplement), “加强” (intensify), “促进” (promote), etc.

2.1 Coding Instructions for Event Controllability Please classify the charitable appeals based on “whether the event causing the beneficiary’s predicament (individual, group, animal, plant, etc.) in the appeal is human-controllable.”

Note: Only consider whether the event causing the beneficiary’s predicament is controllable, regardless of whether the predicament itself is controllable or whether the beneficiary is responsible for their current situation.

2.2 Examples Controllable Event Examples: - “Lost mother at a young age, father remarried, stepmother is domineering. To avoid more ‘warfare’ at home, she chose to reduce visits home while boarding at high school. At an age when other children only need to study hard, she worked part-time as a waitress, handing out flyers, and selling clothes to earn living expenses.” - “Why are so many children suffering sexual abuse? And victims are getting younger, perpetrators’ methods increasingly despicable. On one hand, rural parents and children lack sex education knowledge, ‘avoid talking about sex,’ and child protection, especially sexual protection, is lacking. On the other hand, schools have no sex education curriculum, and children and parents cannot access appropriate professional knowledge, resulting in weak awareness of sexual abuse prevention.”

Uncontrollable Event Examples: - “Six years later, misfortune struck the family again. Xinxin was diagnosed with congenital heart disease and needed immediate surgery. At this time, the grandfather, already penniless and with an empty house, really couldn’t afford the child’s treatment. The surgery cost of tens of thousands of yuan for congenital heart disease is astronomical for this impoverished family.” - “The July 20 Henan flood disaster affected 145.316 million people in 1,663 towns across 150 counties (cities, districts). 30,106 households with 89,001 rooms collapsed. Silt removal and disinfection work is still ongoing in many villages and towns, and the superimposed disasters in late August have added greater difficulty to post-disaster recovery. After the flood, damaged

houses, scrapped appliances, moldy grain, and destroyed daily necessities... one problem after another lies before disaster-stricken people, with rural families and poor families facing even more severe post-disaster recovery challenges.”

Appendix 2. Materials for Studies 3a and 3b

Study 3a Materials “Recovery/Reconstruction” Group: - Help earthquake victims in Luzhou return to normal life as soon as possible. - Promote post-disaster reconstruction in Henan disaster areas and ensure school resumption. - Work together to clear invasive species, replant mangroves, and rebuild maritime forests. - Drops of love converge into an ocean, helping families with serious illnesses reignite hope. - You guarded my safety, I’ll guard your health—help disabled veterans return to health. - Work together to help families with serious illnesses in poverty, helping patients recover health as soon as possible.

“Improvement/Enhancement” Group: - Help farmers increase income and embark on the broad road of rural revitalization. - Gather micro-love into great kindness, helping impoverished children grow better. - Help schools improve and enhance drinking water quality. - Raise love hygiene packages for children in mountainous areas, cultivate good hygiene habits, and help children grow up healthy and happy. - Improve the quality of life for the elderly, letting them live a peaceful and safe later life. - Provide digital hearing aids and fitting services for hearing-impaired people in difficult families, enhancing their quality of life.

Note: The presentation order of all charitable appeal introductions was randomized.

Study 3b Materials “Recovery/Reconstruction” Group: - Help impoverished children with leukemia. Treatment requires huge expenses; the family’s savings have all been used for the child’s treatment, leaving considerable debt. A family of three that was originally reasonably well-off has fallen into difficulty. - Help animals at Nanjing Hongshan Zoo. Due to the pandemic impact, park visitor income has declined, while wildlife feeding and care requires substantial investment. The zoo’s deficit has caused animals to fall into difficulty. - Participate in last year’s anti-epidemic activities supporting Hubei, charity live broadcasts, and consumption-based poverty alleviation projects. Watch and help each other, dedicate love, and help Hubei escape the haze of COVID-19. - Help impoverished rural residents whose houses collapsed and farmland was washed away in floods, helping them raise basic living funds. - Help a child who became blind due to an accident undergo eye surgery to see the light of the world again. - Help an impoverished patient who became vegetative after a sudden car accident. Treatment requires huge expenses; the family’s savings have all been used for his treatment, leaving considerable debt. A family that was originally reasonably well-off has fallen into difficulty.

“Improvement/Enhancement” Group: - Help congenitally deaf impoverished children get cochlear implants so they can hear the sounds of the world like normal people. - Donate to build a love library for children in an impoverished mountainous area in Yunnan to help them broaden their horizons and learn knowledge. - Donate nutritious meals to children in impoverished areas so they can eat healthily. - Help build “capillary” roads in a remote, impoverished area to connect the village with multiple highways. - Donate goji berry tree seeds to an impoverished county in Ningxia—this cash crop can help them earn income. - Install solar street lights in a mountainous area in Guizhou to light up children’s way to school. - Install water purification equipment in a nationally designated impoverished county in Shaanxi so people no longer have to drink well water. - Donate to an endangered animal protection project to protect animal habitats and conduct public education and science popularization.

Note: The presentation order of all charitable appeal introductions was randomized.

Appendix 3. Materials for Study 4

Uncontrollable Condition:

Event controllability manipulation materials

Appendix 4. Materials for Study 5

Event Controllability Manipulation and Charitable Appeal Type Manipulation (Experimental Scenarios)

Scenario	Uncontrollable Condition	Controllable Condition
Study 5a (Flood)	Caused by continuous heavy rainfall	Caused by contractors cutting corners on reservoir dam construction
Study 5a (Fire)	Caused by lightning	Caused by Mr. Tian accidentally starting fire while burning leaves to smoke out squirrels
Study 5b (Disease)	Congenital disease	Misdiagnosis by attending physician

Study 5a: Separate Analysis Results for Flood and Fire Contexts

Flood Context. A two-way ANOVA on donation willingness showed that the main effects of event controllability ($F(1, 221) = 0.56, p = 0.453, \eta^2 = 0.003$,

90% CI: [0.00, 0.02]) and charitable appeal type ($F(1, 221) = 0.87, p = 0.353, \eta^2 = 0.004, 90\% \text{ CI: } [0.00, 0.03]$) were not significant, while their interaction effect was significant, $F(1, 221) = 13.23, p < 0.001, \eta^2 = 0.06, 90\% \text{ CI: } [0.02, 0.11]$, approaching a medium effect size. Simple effects analysis showed that when events were controllable, “improvement/enhancement” led to higher donation willingness than “recovery/reconstruction” ($M_{\text{recovery}} = 4.94, SE = 0.17; M_{\text{improvement}} = 5.39, SE = 0.15; F(1, 221) = 4.04, p = 0.046, \eta^2 = 0.02, 90\% \text{ CI: } [0.00, 0.06]$). Conversely, when events were uncontrollable, “recovery/reconstruction” led to higher donation willingness than “improvement/enhancement” ($M_{\text{recovery}} = 5.42, SE = 0.16; M_{\text{improvement}} = 4.67, SE = 0.18; F(1, 221) = 9.55, p = 0.002, \eta^2 = 0.04, 90\% \text{ CI: } [0.01, 0.09]$).

Fire Context. A two-way ANOVA showed that the main effects of event controllability ($F(1, 212) = 0.16, p = 0.693, \eta^2 = 0.001, 90\% \text{ CI: } [0.00, 0.02]$) and charitable appeal type ($F(1, 212) = 0.01, p = 0.937, \eta^2 < 0.001, 90\% \text{ CI: } [0.00, 0.01]$) were not significant, while their interaction effect was significant, $F(1, 212) = 14.35, p < 0.001, \eta^2 = 0.06, 90\% \text{ CI: } [0.02, 0.12]$, with a medium effect size. Simple effects analysis showed that when events were controllable, “improvement/enhancement” led to higher donation willingness than “recovery/reconstruction” ($M_{\text{recovery}} = 5.37, SE = 0.15; M_{\text{improvement}} = 5.91, SE = 0.15; F(1, 212) = 6.69, p = 0.010, \eta^2 = 0.03, 90\% \text{ CI: } [0.00, 0.08]$). Conversely, when events were uncontrollable, “recovery/reconstruction” led to higher donation willingness than “improvement/enhancement” ($M_{\text{recovery}} = 5.86, SE = 0.14; M_{\text{improvement}} = 5.30, SE = 0.15; F(1, 212) = 7.69, p = 0.006, \eta^2 = 0.04, 90\% \text{ CI: } [0.01, 0.08]$).

Note: Figure translations are in progress. See original paper for figures.

Source: ChinaXiv — Machine translation. Verify with original.