Should Donation Appeals Emphasize Restoration or Improvement? Moderated by Event Controllability

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Abstract

The recipient' s situation constitutes a crucial element of charitable appeal messages. While different descriptions of this situation should logically influence donation effectiveness, this factor has not attracted scholarly attention. This study classifies charitable appeals into two categories based on divergent descriptions of the change process in the recipient' s situation: "restoration/reconstruction" (emphasizing that the recipient' s previous situation was favorable, has currently deteriorated severely, and donations enable recovery from this loss state to the original condition) and "improvement/enhancement" (emphasizing that donations enable the recipient to improve from the current severely disadvantaged situation to 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/reconstruction" (vs. "improvement/enhancement") descriptions lead donors to perceive charitable projects as more beneficial for recipients in terms of loss reduction (vs. gain acquisition), and that donors confronting uncontrollable (vs. controllable) events similarly focus more on loss reduction (vs. gain acquisition). Consequently, based on regulatory focus matching, employing "restoration/reconstruction" (vs. "improvement/enhancement") descriptions for uncontrollable events and "improvement/enhancement" (vs. "restoration/reconstruction") descriptions for controllable events yields higher individual donation intention (Study 5) and actual donations (secondary data). This paper theoretically proposes a novel classification of charitable appeal messages and demonstrates its subsequent effects, and practically offers guidance for charitable organizations to design appeal messages appropriately according to event controllability.

Full Text

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

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Abstract

The portrayal of a beneficiary' s circumstances constitutes a crucial element of charitable fundraising appeals. While different descriptions of these circumstances should logically influence fundraising effectiveness, this aspect has received limited scholarly attention. This research classifies fundraising appeals into two categories based on how they describe changes in beneficiaries' circumstances: "recovery/reconstruction" appeals (which emphasize that the beneficiary' s circumstances were previously good, have recently deteriorated, and that donations will restore them to their original state) and "improvement/enhancement" appeals (which emphasize that donations will make the beneficiary' s currently poor circumstances better). Through one secondary data analysis (N = 978, Study 1) and six experiments (N = 1163, Studies 2/3a/3b/4/5a/5b), we find that recovery (vs. improvement) appeals lead donors to perceive charitable projects as more effective at reducing losses (vs. increasing gains) for beneficiaries. Moreover, when donors encounter uncontrollable (vs. controllable) events, they also focus more on reducing losses (vs. increasing gains). Therefore, based on regulatory focus matching, using recovery (vs. improvement) appeals for uncontrollable events and improvement (vs. recovery) appeals for controllable events yields higher donation intentions (Study 5) and actual donations (secondary data). This research theoretically proposes a new classification of fundraising appeals and demonstrates its consequences, while practically guiding charitable organizations to design appeals according to event controllability.

Keywords: recovery appeal, improvement appeal, event controllability, regulatory fit, donation intention
Classification Code: F713.55

1. Introduction

Charitable giving serves as a crucial pillar of social equity. Encouraging individuals to voluntarily donate part of their disposable income to public welfare carries significant importance for achieving common prosperity in China. However, the *2019 China Charitable Donation Report* shows that per capita donations in China reached 107.81 yuan that year, representing only a 4.5% increase from 2018—well below 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 citizens are not lacking in fundamental motivation to "do good for others." For instance, when a catastrophic rainstorm struck Zhengzhou on July 20, 2021, causing severe flooding, numerous individuals and corporations immediately made charitable donations to support disaster relief. Therefore, one possible reason for insufficient individual donations may be that fundraising 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). Investigating how to enhance individual donation intentions through message content presentation thus holds important practical significance.

Previous research has classified fundraising appeals across multiple dimensions, such as emphasizing oneself 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 influence fundraising effectiveness. However, the description of beneficiaries' circumstances—an important component of fundraising appeals—has received relatively little attention. This study classifies fundraising appeals into two categories based on different descriptions of the change process in beneficiaries' circumstances: "recovery/reconstruction" (emphasizing that the beneficiary's circumstances were previously good, have become very poor, and that donations will restore them from this loss state to their original condition) and "improvement/enhancement" (emphasizing that donations will make the beneficiary's currently poor circumstances better). Through one secondary data analysis and six experiments, we explore and validate the reasonableness of this classification scheme. Additionally, based on the different emphases of the two appeal types, we examine their impact on individuals' perceptions of charitable project functions.

Furthermore, previous research has explored the role of fundraising contexts, such as whether beneficiaries are groups or individuals (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 influencing fundraising effectiveness. As an important component 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 picnicking or burning fields are typically considered controllable, whereas 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 subject to human control; we will subsequently explore its impact on individuals' focus of attention.

In reality, observation of actual fundraising appeals released by charitable organizations reveals that improvement appeals are more common for predicaments

caused by controllable events, while recovery appeals are more common for predicaments caused by uncontrollable events. Does this mean such information presentation is more effective? If so, what roles do perceived charitable project functions (influenced by appeal type) and individuals' focus of attention (influenced by event controllability) play? Based on regulatory fit theory and through seven studies (including one secondary data analysis and six experiments), this paper attempts to address two sets of questions. First, we discuss four exploratory questions: (1) Can fundraising appeals in practice be distinguished using the recovery-improvement framework? (2) Do natural associations exist in practice and individual memory between recovery appeals and uncontrollable events, and between improvement appeals and controllable events? (3) How do different types of fundraising appeals affect perceived charitable project functions? (4) How does event controllability influence individuals' focus of attention? Second, we test one causal question: (5) Does matching between fundraising appeal type and event controllability enhance individual donation intentions?

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

In marketing, individual donation refers to behavior where individuals give 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 appeals refer to persuasive messages displayed by charitable organizations or beneficiaries during social marketing communication, aimed at convincing the public to donate to charitable causes (Chang, 2011). Previous research has classified fundraising appeals across multiple dimensions, with beneficiary focus and framing valence receiving particular attention (Feiler et al., 2012; White & Peloza, 2009). Beneficiary focus refers to whether appeals highlight self-benefit (benefits to the donor) or other-benefit (benefits to the recipient) (Park & Lee, 2015). Scholars typically believe that other-benefit appeals more easily evoke sympathy and yield better fundraising results (Fisher et al., 2008; Kulow & Kramer, 2016). However, recent research finds that self-benefit appeals better match materialistic individuals with strong self-interest motives, enhancing fundraising effectiveness by satisfying their self-esteem needs (Ryoo et al., 2020). Framing valence refers to whether appeals emphasize 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). In practice, common fundraising appeals typically adopt other-benefit positive framing with detailed descriptions of beneficiaries' circumstances, yet no research has classified appeals based on different descriptions of the change

process in beneficiaries' circumstances.

Through observation and induction of numerous real-world fundraising appeals, 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 circumstance change, recovery appeals encompass the process of beneficiaries' circumstances deteriorating from good to bad, emphasizing helping beneficiaries restore from a loss state to their original condition (past → present → future). For example, when beneficiaries' lives suddenly change and circumstances deteriorate dramatically, the appeal calls for help to restore their former good life, such as supporting disaster area reconstruction or helping students return to school. In contrast, improvement appeals do not involve the process of circumstances deteriorating from good to bad, instead focusing on describing the currently poor situation and how donations can improve it, emphasizing making beneficiaries' poor current circumstances better (present → future). For instance, when beneficiaries live in poverty, the appeal requests help to improve their living conditions and ignite hope for the future. Additionally, at the semantic level, clear differences exist in expression. Words like "recover," "rebuild," and "rehabilitate" inherently contain meanings of restoration, renewal, and recurrence, emphasizing returning from a poor present state to a good past state, and include both the temporal 落差 and future transformation process. In contrast, words like "improve" and "enhance" intuitively suggest development toward a better future, without including retrospection of the past in their temporal dimension. Accordingly, this study proposes that fundraising appeals can be classified into "recovery/reconstruction" and "improvement/enhancement" categories.

Furthermore, based on the different emphases of the two appeal types, individuals also perceive their functions differently. Loss aversion research suggests that what influences individual decision-making is not the absolute state of outcomes, but changes relative to a reference point (Kahneman & Tversky, 1979). Depending on the reference point, individuals may perceive a result as a loss or as a gain (Kahneman et al., 1991). This study proposes that recovery and improvement appeals provide different reference points for donation outcomes, leading individuals to perceive the functions of charitable projects differently. Recovery appeals emphasize that beneficiaries' circumstances have deteriorated from good to bad, using the "good past" as a reference point, thus highlighting the losses suffered in this misfortune and how donations can help reduce these losses. Therefore, when individuals encounter charitable projects using such appeals, they perceive their function as helping beneficiaries reduce losses (Focus on Loss). In contrast, improvement appeals emphasize making beneficiaries' circumstances better from a poor present state to a good future state, using the "poor present" as a reference point, highlighting how donations can increase gains for beneficiaries. Thus, when individuals encounter charitable projects using such appeals, they perceive their function as helping beneficiaries increase

gains (Focus on Gain). Accordingly, we hypothesize:

H1: Fundraising appeal type (recovery/reconstruction vs. improvement/enhancement) influences perceived charitable project function (loss reduction & gain increase): Individuals perceive recovery appeals as more effective than improvement appeals at helping beneficiaries reduce losses (vs. increase gains), while perceiving improvement appeals as more effective than recovery appeals at helping beneficiaries increase gains (vs. reduce losses).

1.2 The Effect of Event Controllability on Individual Focus

The purpose of public charity is to help beneficiaries escape predicaments, yet the events causing these predicaments vary in controllability. Event controllability refers to whether human agents exist who could control the event' s occurrence (Hildebrand et al., 2017; Winterich & Zhang, 2014). In other words, predicament-causing events may stem from human behavior or from non-human natural or accidental factors. For example, fires causing beneficiaries' predicaments can result from human factors like picnicking or field burning, or from natural causes like 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 human agents could influence the event' s occurrence. This paper does not discuss who is responsible for the event, nor whether the consequences of the predicament are controllable. Using fire as an example, this paper focuses on whether the fire-causing event was subject to human control, not whether beneficiaries should be held responsible for the fire, nor whether the disaster situation is controllable.

Moreover, event controllability influences 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 helping beneficiaries; however, when events are controllable, high power distance individuals, who tolerate inequality more, view this as a reasonable phenomenon under social fairness and show lower donation intentions, while low power distance individuals show the opposite pattern (Winterich & Zhang, 2014; Yang et al., 2017). Furthermore, Hildebrand et al. (2017) find that when events are uncontrollable, corporate monetary donations receive higher evaluations; when events are controllable, equivalent in-kind donations receive better evaluations.

Event controllability affects individuals' focus when providing help. Regulatory Focus Theory proposes that individuals have two self-regulatory orientations when pursuing goals: prevention focus and promotion focus. The former emphasizes safety and responsibility needs, is more sensitive to whether negative outcomes occur, and employs vigilant strategies focused on avoiding mistakes; the latter emphasizes advancement and achievement needs, is more sensitive to whether positive outcomes occur, and employs eager strategies focused on making correct responses (Higgins, 1997). Therefore, when individuals are in a

prevention focus, they are more sensitive to negative outcomes and more concerned with reducing losses due to safety needs; when in a promotion focus, they are more sensitive to positive outcomes and more concerned with increasing gains due to advancement needs (Higgins, 1997).

On one hand, individuals facing uncontrollable situations feel a lack of control (Kay et al., 2009). Control deprivation leads to anxiety and a sense of insecurity (Whitson & Galinsky, 2008), prompting vigilant efforts 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 control deprivation, focusing more on losses and how to reduce them (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 their sense of control, focusing more on gains and how to increase them (Focus on Gain). In summary, we hypothesize:

H2: Event controllability (uncontrollable vs. controllable) influences individual focus (loss reduction & gain increase): Individuals focus more on reducing losses when facing uncontrollable versus controllable events, and focus more on increasing gains when facing controllable versus uncontrollable events.

1.3 Regulatory Fit Between Fundraising Appeal Type and Event Controllability

Regulatory Fit Theory posits that when message content matches individuals' 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 gains due to advancement needs; if messages use a promotion frame emphasizing how to achieve positive outcomes, persuasiveness increases. Conversely, when individuals are prevention-focused, they focus more on reducing losses due to safety needs; if messages use a prevention frame emphasizing how to avoid negative outcomes, persuasiveness improves (Aaker & Lee, 2001; Cesario et al., 2004). For example, Ryoo et al. (2020) find that because friends are typically associated with personal interests, describing relationships with friends activates individuals' promotion focus, making them focus more on gains; in such cases, advertisements using a promotion frame enhance product evaluations and pur-

chase intentions. In contrast, family is more associated with responsibilities and obligations, describing interactions with family activates prevention focus and loss concerns, making prevention frame advertisements more effective. Similarly, e-commerce research shows that promotion-focused individuals browsing websites emphasizing hedonic shopping experiences (with more aesthetic images and videos) generate higher platform evaluations and consumption intentions due to regulatory fit-induced engagement, while 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 aspects of events. Moreover, compared to improvement appeals, recovery appeals emphasize using the "good past" as a reference point to contrast with the "poor present," highlighting beneficiaries' losses and how donations can help reduce them. Therefore, recovery appeals precisely match the psychological representation state of individuals facing uncontrollable events. Regulatory fit enhances the persuasiveness of fundraising appeals (Higgins et al., 2001; Aaker & Lee, 2001), thereby strengthening potential donors' motivation to act and increasing donation intentions. Similarly, controllable events activate recipients' promotion focus, leading them to focus more on gain aspects. Compared to recovery appeals, improvement appeals use the "poor present" as a reference point to contrast with the "good future," emphasizing how donations can help beneficiaries increase gains. Therefore, improvement appeals precisely match the psychological representation state of individuals facing controllable events, thereby enhancing donation intentions. Thus, we hypothesize:

H3: The match between fundraising appeal type (recovery/reconstruction vs. improvement/enhancement) and event controllability (uncontrollable vs. controllable) influences individual donation intentions. For uncontrollable events, recovery appeals lead to higher donation intentions than improvement appeals; for controllable events, improvement appeals lead to higher donation intentions than recovery appeals.

The overall research framework is shown in Figure 2 [Figure 2: see original paper].

This paper designed one secondary data analysis and six experiments to test these hypotheses. Study 1 used secondary data to confirm that classifying fundraising appeals into recovery and improvement categories is reasonable, and found that recovery appeals and uncontrollable events, as well as improvement appeals and controllable events, frequently co-occur in reality. Study 2 experimentally asked individuals to recall recovery or improvement appeals, again verifying the covariation between appeal type and event controllability. Studies 3a and 3b demonstrated that recovery appeals are more effective at reducing losses but less effective at increasing gains compared to improvement appeals. Study 4 showed that uncontrollable events lead individuals to focus more on

reducing losses and less on increasing gains compared to controllable events. Studies 5a and 5b verified that matching fundraising appeal type with event controllability enhances individual donation intentions.

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

Since the classification of fundraising appeals in this research derives from real-world observation and induction, we used web scraping to collect actual fundraising appeals and conduct coding to examine whether appeals emphasizing only recovery/reconstruction or improvement/enhancement exist in reality. This both verifies that individuals can distinguish between the two appeal types and demonstrates the practical significance of using the recovery-improvement framework. Additionally, if people naturally distinguish between these appeal descriptions and perceive a match between appeal type and event controllability, then covariation between appeal type and event controllability may exist in actual fundraising—that is, recovery appeals may appear more frequently for uncontrollable events and less frequently for controllable events. This study explores the covariation between appeal classification and event controllability in real fundraising appeals and the effect of their match on actual donations.

2.1 Data Source

Using web scraping technology, we crawled public information and data from Alipay Charity Platform (https://love.alipay.com/donate/index.htm), a representative fundraising platform in China, on November 24, 2021. We collected project summaries, detailed descriptions, amount raised, and number of donors for all 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 fundraising 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 based on descriptions of changes in beneficiaries' circumstances (individuals/groups/animals/plants) in project summaries into three categories: recovery/reconstruction, improvement/enhancement, and other. Inter-rater reliability was good (= 0.42, $p < 0.001$). Specifically, recovery/reconstruction appeals used words like "recover," "reconstruct," and "return," such as "Provide assistance funds to women in post-disaster predicament families in multiple Shaanxi locations to help them rebuild their homes." Improvement/enhancement appeals used words like "improve," "enhance," and "upgrade," such as "Provide living subsidies to disadvantaged groups to help them improve their lives." The "other" category used alternative description dimensions or described both recovery and improvement, such as "Life with Love—Leukemia Patient Rescue

Plan" (coding instructions and keywords are detailed in Appendix 1). Results showed that among 978 project summaries, 84 were recovery appeals, 154 were improvement appeals, and 740 were other. A total of 238 projects (24.34%) could be classified using the recovery-improvement framework, indicating that appeals emphasizing only recovery or improvement do exist in reality, giving this classification scheme practical significance.

Coding of event controllability. For the 238 projects classifiable by the recovery-improvement framework, we invited two additional independent coders to categorize the fundraising contexts in project descriptions based on whether the predicament-causing event was subject to human control (Winterich & Zhang, 2014) into three categories: controllable, uncontrollable, and unclear. Inter-rater reliability was good (= 0.62, p < 0.001). Specifically, controllable events included lack of childhood sex education and difficulties faced by children in reconstituted families; uncontrollable events included congenital heart disease and sudden rainstorm flooding (coding instructions and examples are detailed in Appendix 1). Results showed that among 238 projects, 140 involved controllable events, 93 involved uncontrollable events, and 5 were unclear.

Covariation between appeal type and event controllability. We then examined the covariation between appeal type and event controllability in reality. Chi-square analysis revealed significant differences in event controllability across different appeal types, $^2(2) = 144.04$, p < 0.001, $\phi = 0.78$, exceeding the medium effect size threshold of 0.30 (Cohen, 1988). As shown in Table 1 , two-proportion z-tests indicated that, excluding unclear cases, recovery (vs. improvement) appeals were more often used for uncontrollable events, while improvement (vs. recovery) appeals were more often used for controllable events.

Effect of matching on donation intentions. For the 233 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 donation intention to explore the matching effect. Following Leys et al.' s (2013) recommendation, we used the MAD method to handle outliers in average donation per person. Within 2 MADs, 182 data points remained (recovery-uncontrollable: 53, recovery-controllable: 4, improvement-uncontrollable: 15, improvement-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, $p^2 = 0.03$, 90% CI: [0.00, 0.09]), while the main effect of appeal type was not significant (F(1, 178) = 0.03, p = 0.855, $p^2 < 0.001$, 90% CI: [0.00, 0.01]). Importantly, the interaction effect was marginally significant, F(1, 178) = 3.40, p = 0.067, $p^2 = 0.02$, 90% CI: [0.00, 0.06]. Since F-tests in ANOVA are one-tailed and ^{2} and p^2 cannot be negative, confidence intervals for ANOVA effect sizes typically report 90% rather than 95% (Steiger, 2004; Wang et al., 2019). Simple effects analysis showed (Figure 3 [Figure 3: see original paper]) that for uncontrollable events, recovery appeals yielded higher average donation per person than improvement appeals (M_{recovery} = 2.19, SE = 0.11; M_{improvement} = 1.70, SE = 0.21; F(1,

178) = 4.14, p = 0.043, p^2 = 0.02, 90% CI: [0.00, 0.07]). For controllable events, the mean average donation per person was lower for recovery than improvement appeals, but the difference was not significant (M_{recovery} = 1.14, SE = 0.41; M_{improvement} = 1.54, SE = 0.08; F(1, 178) = 0.92, p = 0.339, p^2 = 0.01, 90% CI: [0.00, 0.04]), possibly due to the small sample size for the recovery group (n_{recovery} = 4) resulting in excessively large standard errors.

2.3 Discussion

Using secondary data, this study found that real fundraising appeals can be distinguished using the recovery-improvement framework, demonstrating the practical significance of this classification. Additionally, the study found that recovery appeals more often co-occur with uncontrollable events, while improvement appeals more often co-occur with controllable events, again showing that individuals can distinguish between the two appeal types and that fundraisers naturally match appeal type with event controllability. Furthermore, this study preliminarily verified that matching between appeal type and event controllability enhances donation intentions, indicating that in reality, using matched appeals for different event controllability levels does yield better fundraising results.

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

Study 1 used real fundraising appeals to confirm the validity of the recovery-improvement classification and preliminarily found covariation between appeal type and event controllability. Appeals on fundraising platforms may be written by charity professionals. To demonstrate that ordinary individuals can also perceive this covariation relationship, Study 2 asked participants to recall fundraising appeals containing recovery or improvement descriptions and coded the recalled events for controllability, thereby showing that ordinary individuals closely associate recovery with uncontrollable events and improvement with controllable events.

3.1 Experimental Procedure and Measures

Study 2 used a one-factor between-subjects design (fundraising appeal type: recovery vs. improvement). We recruited 102 participants through an online "Marketing Research Lab," yielding 88 valid samples (14 participants failed to complete the recall task as instructed), with 40 in the recovery group and 48 in the improvement group. The sample was 62.5% female, with ages ranging from 18 to 33 (M = 23.56, SD = 3.08).

First, Study 2 manipulated appeal type using a recall method. In the recovery condition, participants were guided to recall a recent fundraising 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, when

they saw it, and their feelings after reading it. In the improvement condition, the recalled content was changed to helping beneficiaries obtain better living or survival conditions. Subsequently, participants rated their willingness to donate to the beneficiaries (1 = very unwilling, 7 = very willing) and completed two manipulation check items for perceived appeal type: "To what extent do you think this message can help beneficiaries return to their previous/improve their current living or survival state?" (1 = not at all, 7 = completely). Finally, participants reported demographic information and guessed the experimental purpose.

3.2 Data Analysis and Results

Manipulation check for appeal type. One-way ANOVA showed successful manipulation: the recovery group (M_{recovery} = 4.90, SD = 1.48) rated the recalled message as more able to help beneficiaries return to their previous state than the improvement group (M_{improvement} = 3.50, SD = 1.87), F(1, 86) = 14.73, p < 0.001, ^{2} = 0.15, 90% CI: [0.05, 0.26], exceeding the medium effect size threshold of 0.06 (Cohen, 1988). Conversely, the improvement group (M_{improvement} = 5.83, SD = 1.10) rated the message as more able to help beneficiaries improve their current state than the recovery group (M_{recovery} = 5.10, SD = 1.19), F(1, 86) = 8.99, p = 0.004, ^{2} = 0.10, 90% CI: [0.02, 0.20], with a medium effect size.

Donation intention. One-way ANOVA indicated no significant difference in donation intentions between the recovery group (M_{recovery} = 6.10, SD = 1.03) and improvement group (M_{improvement} = 6.17, SD = 0.81), F(1, 86) = 0.12, p = 0.735, p^2 = 0.001, 90% CI: [0.00, 0.04], suggesting that appeal type does not directly affect donation intentions.

Covariation between appeal type and event controllability. We invited two independent coders to categorize participants' recalled content by event controllability using the same criteria as Study 1 into three categories: controllable, uncontrollable, and unclear. Inter-rater reliability was good (= 0.73, p < 0.001). Among the 88 recalled messages, 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, $^{2}(2)$ = 12.36, p = 0.002, ϕ = 0.38, with a medium effect size (Cohen, 1988). Additionally, two-proportion z-test results (Table 1) showed that participants were more likely to recall uncontrollable events when prompted to recall recovery (vs. improvement) appeals, and more likely to recall controllable events when prompted to recall improvement (vs. recovery) appeals.

3.3 Discussion

Studies 1 and 2 used two methods to demonstrate that people closely associate recovery with uncontrollable events and improvement with controllable events, supporting the covariation relationship between appeal type and event controlla-

bility. Study 3 verifies that appeal type influences whether individuals perceive charitable project functions as reducing losses or increasing gains, while Study 4 verifies that event controllability influences whether individuals focus on reducing losses or increasing gains, thereby demonstrating that appeal type and event controllability align on the dimension of loss reduction vs. gain increase.

4. Study 3: The Effect of Fundraising Appeal Type on Perceived Charitable Project Function

Study 3 uses fundraising appeals obtained from Studies 1 and 2 as experimental materials to verify two aspects. First, it replicates that individuals can distinguish between the two appeal types. Second, it tests H1: Fundraising appeal type influences perceived charitable project function—individuals perceive recovery appeals as more effective than improvement appeals at helping beneficiaries reduce losses (vs. increase gains), and perceive improvement appeals as more effective than recovery appeals at helping beneficiaries increase gains (vs. reduce losses). Study 3 used a one-factor within-subjects design (appeal type: recovery vs. improvement). To avoid low statistical power due to insufficient 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-tests used in this experiment, with $\alpha = 0.05$ and medium effect size (d = 0.50), a minimum total sample of 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 paid them cash compensation after the experiment. The sample was 40% female, with ages ranging from 18 to 51 (M = 28.63, SD = 6.51). We randomly selected six appeals each from the project summaries coded as recovery and improvement in the secondary data for use as materials in Study 3a (see Appendix 2). For each summary, we first measured perceived charitable project function with two items: "To what extent will this charitable project help beneficiaries reduce losses/increase gains?" (1 = to a very small extent, 8 = to a very large extent) (Jain et al., 2007). Then, we measured perceived appeal type with two manipulation check 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 discrimination. We averaged participants' ratings of perceived appeal type for the two appeal categories and conducted paired-samples t-tests (Table 2). Results showed that participants rated recovery appeals as more able to help beneficiaries return to their previous living state (M_{recovery} = 5.95, SD = 0.70; M_{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 threshold for a large effect size (Cohen, 1988). Conversely, they rated improvement appeals as more able to help beneficiaries improve their current living state (M_{recovery} = 5.29, SD = 1.27; M_{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-tests showed that participants rated recovery appeals as more helpful for reducing losses (M_{recovery} = 5.80, SD = 1.12; M_{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, they rated improvement appeals as more helpful for increasing gains (M_{recovery} = 5.79, SD = 1.20; M_{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 appeal types, supporting H1.

4.2.1 Experimental Procedure and Measures

We recruited 100 participants through the Marketing Research Lab, meeting the basic sample requirement, and paid cash compensation after the experiment. The sample was 63% female, with ages ranging from 19 to 55 (M = 25.26, SD = 6.45). Following previous research (Bhattacharjee & Mogilner, 2014; Van Boven & Gilovich, 2003), we randomly selected seven appeals each from the two categories 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 categorized it: "Will this charitable project help beneficiaries return to their previous living state or improve their current living state?" (1 = return to previous state, 7 = improve current state). Then they evaluated its function: "Will this charitable project help beneficiaries reduce losses or increase gains?" (1 = reduce losses, 7 = increase gains). Finally, participants completed demographic information and guessed the experimental purpose.

4.2.2 Data Analysis and Results

Appeal type discrimination. We averaged participants' categorization ratings for the two appeal types and conducted paired-samples t-tests (Table 2). Results showed that participants rated recovery appeals (M_{recovery} = 3.76, SD = 1.46) as more likely than improvement appeals (M_{improvement} = 5.88, SD = 0.67) to help beneficiaries return to their previous 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], indicating a large effect size.

Perceived charitable project function. Similarly, paired-samples t-tests showed that participants rated recovery appeals (M_{recovery} = 3.57, SD = 1.51) as more likely than improvement appeals (M_{improvement} = 5.93, SD = 0.76) to help beneficiaries reduce losses rather than increase gains, t(99) =

-13.83, p < 0.001, Cohen' s d = -1.97, 95% CI: [-2.42, -1.53], indicating a large effect size and supporting H1.

4.3 Discussion

Study 3 used both real and recalled fundraising appeals to demonstrate that appeal type influences perceived charitable project function. Individuals perceive recovery appeals as more effective than improvement appeals at helping beneficiaries reduce losses (vs. increase gains), and perceive improvement appeals as more effective than recovery appeals at helping beneficiaries increase gains (vs. reduce losses).

5. Study 4: The Effect of Event Controllability on Individual Focus

Study 4 aims to test the effect of event controllability on individual focus: individuals focus more on reducing losses when facing uncontrollable versus controllable events, and focus more on increasing gains when facing controllable versus uncontrollable events (H2).

5.1 Experimental Procedure and Measures

Study 4 used a one-factor between-subjects design (event controllability: uncontrollable vs. controllable). Using G*Power 3.1 (Faul et al., 2007), we calculated that for a between-subjects one-way ANOVA with $\alpha = 0.05$, medium effect size (f = 0.25), and 80% statistical power, a minimum total sample of 128 was needed. We recruited 144 participants through the Credamo data market, yielding 137 valid samples (7 participants failed attention checks), with 67 in the uncontrollable group and 70 in the controllable group, meeting the sample requirement. The sample was 62.8% female, 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 (originally about avalanches in California) to the Chinese context. First, participants imagined seeing a micro-charity project on Weibo seeking donations for a fire (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 striking vegetation. Then, we measured participants'focus with two items: "When reading this Weibo post, to what extent did you focus on helping Lingkou Town reduce losses/increase gains?" (1 = to a very small extent, 8 = to a very large extent) (Jain et al., 2007).

Next, participants completed a manipulation check for event controllability (α = 0.94): "This fire could have been prevented"; "This fire could have been avoided" ; "Someone had the ability to prevent this fire from happening" ; "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 index regulatory focus (Lockwood et al., 2002). Finally, participants completed demographic information and guessed the experimental purpose.

5.2 Data Analysis and Results

Manipulation check for event controllability. One-way ANOVA showed that compared to the uncontrollable group (M_{uncontrollable} = 3.07, SD = 1.54), the controllable group (M_{controllable} = 6.08, SD = 0.71) was more likely to view the fire cause as subject to human control, F(1, 135) = 219.06, p $<$ 0.001, ^{2} = 0.62, 90% CI: [0.54, 0.68], indicating successful manipulation.

Focus of attention. A one-way ANCOVA controlling for regulatory focus showed that the uncontrollable group (M_{uncontrollable} = 6.65, SE = 0.16) focused more on helping victims reduce losses than the controllable group (M_{controllable} = 6.04, SE = 0.16), F(1, 134) = 7.28, p = 0.008, ^{2} = 0.05, 90% CI: [0.01, 0.12]. Meanwhile, the controllable group (M_{controllable} = 5.92, SE = 0.23) focused more on helping victims increase gains than the uncontrollable group (M_{uncontrollable} = 5.28, SE = 0.24), F(1, 134) = 3.66, p = 0.058, ^{2} = 0.03, 90% CI: [0.00, 0.09].

5.3 Discussion

Study 4 verified that individuals focus more on reducing losses when facing uncontrollable versus controllable events, and focus more on increasing gains when facing controllable versus uncontrollable events. Combined with Study 3' s results, we find that uncontrollable events activate individuals' focus on loss reduction, which is also the focus of recovery appeals. Similarly, controllable events activate individuals' focus on gain increase, which is also the focus of improvement appeals. Fundraising appeal type and event controllability exhibit regulatory focus matching. Study 5 will verify that this matching enhances donation intentions (H3).

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

Study 5 tests the effect of matching fundraising appeal type with event controllability on donation intentions (H3) in both disaster relief and disease assistance contexts. For uncontrollable events, recovery appeals should lead to higher donation intentions than improvement appeals; for controllable events, improvement appeals should lead to higher donation intentions than recovery appeals. 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 influence donation intentions (Friedrich & McGuire, 2010; Small et al., 2007; Vanhamme et al., 2012; Zheng et al., 2019).

Therefore, results from a single donation context may lack representativeness. Study 5a uses a disaster relief context with group beneficiaries and sudden disasters; Study 5b uses a disease assistance context with individual beneficiaries and ongoing tragedies. Verifying the enhancing effect of matching across different contexts improves external validity.

6.1.1 Experimental Procedure and Measures

Study 5a used a 2 (event controllability: uncontrollable vs. controllable) × 2 (appeal type: recovery vs. improvement) × 2 (disaster context: flood vs. fire) between-subjects design. We recruited 500 participants through the Marketing Research Lab WeChat public account, yielding 441 valid samples (59 participants failed attention checks or incorrectly completed recall tasks). The sample was 65.76% female, with ages ranging from 18 to 46 (M = 24.52, SD = 3.95).

Participants first viewed 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 Tian accidentally starting a fire while burning leaves to smoke out squirrels, while the uncontrollable fire was caused by lightning. Participants then viewed a donation appeal for the disaster, with appeal type manipulated through corresponding language. In the recovery condition, the key message was: "We hope you will lend a helping hand to help disaster victims rebuild their homes and restore their previously warm and hopeful lives!" In the improvement condition, the key message was: "We hope you will lend a helping hand to help disaster victims improve their current situation and make their lives warmer and more hopeful!" (see Appendix 4).

Next, we measured participants' donation intentions ("How willing are you to donate to the beneficiaries in this 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 the recovery group (M_{recovery} = 2.36, SD = 2.08) rated the charitable project as more likely to help beneficiaries return to their previous rather than improve their current living state compared to the improvement group (M_{improvement} = 4.69, SD = 2.24), F(1, 439) = 128.80, p < 0.001, ^{2} = 0.23, 90% CI: [0.17, 0.28], indicating successful appeal type manipulation. Similarly, the controllable group (M_{controllable} = 5.84, SD = 1.14) was more likely than the uncontrollable group (M_{uncontrollable} = 3.39, SD = 1.48) to view the disaster cause as subject to human control, F(1, 439) = 380.75, p < 0.001, ^{2} = 0.46, 90% CI: [0.41, 0.51], indicating successful event controllability manipulation.

Donation intentions. Three-way ANOVA showed non-significant main effects of event controllability (p = 0.411) and appeal type (p = 0.454), and non-significant interactions between event controllability and disaster context (p = 0.763), appeal type and disaster context (p = 0.520), and the three-way interaction (p = 0.825). Supporting H3, the interaction between event controllability and appeal type was significant, F(1, 433) = 27.28, p < 0.001, p^2 = 0.06, 90% CI: [0.03, 0.10]. Simple effects analysis (Figure 4 [Figure 4: see original paper]) showed that for controllable events, improvement appeals yielded higher donation intentions than recovery appeals (M_{recovery} = 5.16, SE = 0.11; M_{improvement} = 5.65, SE = 0.11; F(1, 433) = 10.34, p = 0.001, p^2 = 0.02, 90% CI: [0.01, 0.05]). Conversely, for uncontrollable events, recovery appeals yielded higher donation intentions than improvement appeals (M_{recovery} = 5.64, SE = 0.11; M_{improvement} = 4.98, SE = 0.12; F(1, 433) = 17.28, p < 0.001, p^2 = 0.04, 90% CI: [0.01, 0.07]).

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

6.2.1 Experimental Procedure and Measures

Study 5b used a 2 (event controllability: uncontrollable vs. controllable) × 2 (appeal type: recovery vs. improvement) between-subjects design. Using G*Power 3.1 (Faul et al., 2007), we calculated that for a two-way between-subjects ANOVA with $\alpha = 0.05$ and medium effect size (f = 0.25), a minimum sample of 128 was needed to achieve 80% statistical power. We recruited 360 participants through the Credamo data market, yielding 317 valid samples (43 participants failed attention checks or incorrectly completed recall tasks), meeting the basic sample requirement. The sample was 58.4% female, with ages ranging from 18 to 39 (M = 25.51, SD = 4.77).

This study adapted the real charitable project "Love' s Decibel—Deaf Children Rescue Program" as experimental material, with the background: "Three-year-old Yangyang suffers from severe deafness and needs a cochlear implant, but the family cannot afford the astronomical medical costs." In the controllable condition, the deafness was caused by a doctor' s misdiagnosis; in the uncontrollable condition, it was congenital. Appeal type was manipulated using descriptions similar to Study 5a, and subsequent measures were identical to Study 5a (see Appendix 4).

6.2.2 Data Analysis and Results

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

= 5.91, SD = 0.96; F(1, 315) = 401.50, p < 0.001, ^{2} = 0.56, 90% CI: [0.50, 0.61]).

Donation intentions. Two-way ANOVA showed non-significant main effects of event controllability (F(1, 313) = 0.41, p = 0.522, p^2 = 0.001, 90% CI: [0.00, 0.02]) and appeal type (F(1, 313) = 2.70, p = 0.102, p^2 = 0.01, 90% CI: [0.00, 0.03]). The interaction effect was significant, F(1, 313) = 52.04, p < 0.001, p^2 = 0.14, 90% CI: [0.09, 0.20]. Simple effects analysis (Figure 4) showed that for controllable events, improvement appeals yielded higher donation intentions than recovery appeals (M_{recovery} = 4.93, SE = 0.13; M_{improvement} = 6.02, SE = 0.12; F(1, 313) = 37.29, p < 0.001, p^2 = 0.11, 90% CI: [0.01, 0.07]). For uncontrollable events, recovery appeals yielded higher donation intentions than improvement appeals (M_{recovery} = 5.90, SE = 0.12; M_{improvement} = 5.21, SE = 0.12; F(1, 313) = 16.37, p < 0.001, p^2 = 0.05, 90% CI: [0.02, 0.09]).

6.3 Discussion

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

7. General Discussion

This research classifies fundraising appeals into recovery and improvement categories. Through one secondary data analysis and six experiments, we find: First, this classification is valid (Study 1), and in real fundraising appeals and people' s memories, recovery appeals more often co-occur with uncontrollable events while improvement appeals more often co-occur with controllable events (Studies 1, 2). Second, recovery (vs. improvement) appeals lead donors to perceive charitable projects as more effective at reducing losses (vs. increasing gains) (Studies 3a, 3b), and donors facing uncontrollable (vs. controllable) events also focus more on reducing losses (vs. increasing gains) (Study 4). Finally, based on regulatory focus matching, using recovery (vs. improvement) appeals for uncontrollable events and improvement (vs. recovery) appeals for controllable events yields higher donation intentions (Studies 5a, 5b) and actual donations (Study 1).

7.1 Theoretical Contributions

First, this research broadens the perspective on classifying fundraising appeals and verifies their impact on perceived charitable project function. Previous research has classified appeals across dimensions including beneficiary focus (self vs. other) (White & Peloza, 2009), framing valence (positive vs. negative) (Chang & Lee, 2009), individual humanitarian vs. group normative appeals

(Smith et al., 2014), emotional vs. functional benefits (Moran & Bagchi, 2019), and hedonic vs. utilitarian product references (Savary et al., 2014). However, no research has specifically focused on descriptions of the change process in beneficiaries' circumstances. This study synthesizes observations of real-world phenomena and classifies appeals based on "different emphases on the change process in beneficiaries' circumstances" into recovery (emphasizing that beneficiaries' circumstances were previously good, have become very poor, and donations will restore them from loss to original state) and improvement (emphasizing that donations will make beneficiaries' currently poor circumstances better). This opens a new classification perspective. Additionally, drawing on loss aversion, we propose that different reference points for donation outcomes lead donors to perceive different functions for the two appeal types. Recovery appeals use the "good past" as a reference point and are perceived as more effective at helping beneficiaries reduce losses; improvement appeals use the "poor present" as a reference point and are perceived as more effective at helping beneficiaries increase gains, which then matches with event controllability to influence donation intentions. Starting from observation 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 fundraising appeals and demonstrates differences in perceived functions. Previous research shows that using whether beneficiaries receive help (not donating as a loss) versus do not receive help (donating as a gain) as reference points influences donation behavior (Chang & Lee, 2009). This study shows that different time points can serve as reference points, expanding our understanding of how message framing influences fundraising effectiveness. This also suggests that future research could consider introducing other reference points, such as whether potential donors are individuals or groups, which may also influence fundraising effectiveness.

Second, this research introduces the matching effect of event controllability, demonstrating its interaction with appeal type in influencing donation intentions. Previous research finds that whether predicament-causing events are subject to human control influences donation behavior; when events are uncontrollable, individuals' helping intentions and sense of responsibility are relatively high (Winterich & Zhang, 2014; Zagefka & James, 2015). However, how to design fundraising appeals to increase willingness to help beneficiaries of controllable events has often been neglected. This study finds that individuals' focus varies depending 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 focus more on reducing losses (vs. increasing gains) when facing uncontrollable (vs. controllable) events. This matching with appeal type then positively influences donation intentions. These findings also provide new research directions for other domains involving controllability and state changes, such as service failure recovery and medical health decisions (Swanson & Hsu, 2011; Lavery & Valerie, 1996). For instance, service failures may also involve a

matching relationship between failure controllability and message type (recovery vs. improvement), which could influence consumer satisfaction with service recovery.

Finally, this research verifies the important role of regulatory fit in enhancing message persuasiveness in the charitable fundraising domain, expanding regulatory fit research (Higgins et al., 2001; Aaker & Lee, 2001) and complementing research on how matching between elements influences persuasion effectiveness. Existing research shows that matching between message content and recipients' goals and motivational orientations, emotional and cognitive states, and personality and cultural orientations can enhance persuasion and influence attitudes and behaviors (Kidwell et al., 2013; see review by Rothman et al., 2019). However, relatively few studies have examined matching effects in fundraising. This research provides a novel exploration of element matching in fundraising appeals, using regulatory fit theory to explain the underlying mechanism of matching between appeal type and event controllability. Specifically, based on the logic that perceived charitable project functions from appeals and individual focus of attention influenced by event controllability center on reducing losses versus increasing gains, we verify that recovery-uncontrollable and improvement-controllable matches enhance message persuasiveness and increase donation intentions. This also suggests that future research could consider other dimensions of matching in charitable fundraising, such as matching between donation usage timing and geographic or psychological 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 monetary donations. First, charitable organizations or beneficiaries should carefully consider message content design based on specific causes and contexts when releasing fundraising appeals to enhance potential donors' intentions. From traditional charities like the Red Cross Foundation and China Foundation for Poverty Alleviation to new internet-based platforms like Alibaba Charity and Tencent Charity, fundraising appeals remain a crucial source for demonstrating need to the public and shaping impressions and value judgments of beneficiaries. This study' s results show that different appeal types can match different event controllability levels to enhance donation intentions. Therefore, charitable organizations and beneficiaries should adopt different appeal types for different events: for natural disasters like earthquakes and floods caused by uncontrollable factors, recovery appeals are more appropriate; for education and poverty alleviation scenarios caused by controllable factors, improvement appeals are more effective. This research provides a new perspective for fundraising appeal design, with strong practical value especially in the era of internet-based charity where information spreads rapidly.

7.3 Limitations and Future Directions

Although this research demonstrates robust conclusions through secondary data and multiple experiments, several limitations remain, offering directions for future research. First, the secondary data included appeals that mixed both description types, which we did not examine. We only investigated appeals emphasizing recovery or improvement exclusively; future research could explore the effectiveness of mixed appeals. Second, experimental stimuli used text and images, whereas video, virtual reality, and other interactive communication methods are increasingly used in internet-based charity. Future research could validate these questions using more novel formats. Third, experiments did not measure actual donation behavior. Although we strictly controlled experimental procedures and conducted manipulation checks, and research shows that virtual scenarios can effectively simulate real responses (Cohen et al., 2008), deviations from real situations remain. Future research could add field experiments measuring actual donation behavior to enhance conclusion robustness. Additionally, while we selected representative disaster relief and disease assistance contexts, future research could cover more assistance types like education and poverty alleviation to improve ecological validity through broader contextual experiments. Finally, this research was conducted in the Chinese context, yet enhancing individual donation intentions is not unique to Chinese charity. We believe the conclusions can be generalized more broadly, and future research considering cultural differences across countries in cross-cultural experiments would make the conclusions more persuasive.

8. Conclusion

Through one secondary data analysis and six experiments, this paper explores the validity of classifying fundraising appeals using the recovery-improvement framework and its impact on fundraising effectiveness, reaching the following conclusions: (1) Fundraising appeals can be distinguished into recovery/reconstruction and improvement/enhancement categories based on different descriptions of changes in beneficiaries' circumstances; (2) For uncontrollable events, recovery (vs. improvement) appeals are more effective, while for controllable events, improvement (vs. recovery) appeals are more effective; (3) This effect occurs because uncontrollable (controllable) events lead individuals to focus more on reducing losses (increasing gains), while recovery (improvement) appeals are perceived as more effective at reducing losses (increasing gains). The regulatory fit between event controllability and appeal type enhances donation intentions.

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Appendix 1: Coding Instructions and Keywords

1.1 Coding Instructions for Appeal Type

Please classify the following fundraising appeals based on descriptions of the change process in beneficiaries' circumstances (individuals, groups, animals, plants, etc.).

1. **Recovery/reconstruction:** "Circumstances deteriorate from good to bad, emphasizing restoration from loss to original state"
   Appeals that reflect the process of beneficiaries' circumstances deteriorating from good to bad, such as when beneficiaries' lives suddenly change, circumstances deteriorate dramatically, and the appeal calls for help to restore their former good life, like supporting disaster area reconstruction or helping refugees return home.
2. **Improvement/enhancement:** "Current circumstances are very poor, emphasizing that donations will make them better"
   Appeals that emphasize beneficiaries' currently poor circumstances and how people can help improve them, without including the process of circumstances deteriorating, such as helping beneficiaries improve their lives, enhance their capabilities, or support their growth.

1.2 Coding Keywords

1. **Recovery/reconstruction keywords:** "recover," "rehabilitate," "reconstruct," "return," "regain," "recreate," "retrieve," "re-see," "re-," "re-enter," etc.
2. **Improvement/enhancement keywords:** "improve," "perfect," "enhance," "upgrade," "strengthen," "increase," "add," "augment," "boost," "promote," etc.

2.1 Coding Instructions for Event Controllability

Please classify fundraising appeals based on "whether the event causing the beneficiary' s predicament (individuals, groups, animals, plants, etc.) is subject to human control."

Note: Only consider whether the event causing the predicament is controllable, not whether the predicament itself is controllable, nor whether beneficiaries are responsible for their current situation.

2.2 Examples

1. **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 works part-time as a server, handing out flyers, selling clothes, etc., to earn living expenses."
   "Why do so many children suffer sexual abuse? And victims are getting younger, perpetrators' methods more 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 par-

ents cannot access appropriate professional knowledge, resulting in weak awareness of sexual abuse prevention."

2. **Uncontrollable event examples:**
"Six years later, misfortune struck the family again: Xinxin was diagnosed with congenital heart disease and urgently needed surgery. At this point, the grandfather, already penniless and destitute, truly could not 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 disaster 叠加 in late August has added greater difficulty to post-disaster recovery. After the flood, damaged houses, scrapped appliances, moldy grain, and destroyed daily necessities···one problem after another faces disaster-stricken people, with rural and poor families facing even more severe post-disaster recovery challenges."

Appendix 2: Experimental Materials

Study 3a Materials

Recovery group appeal summaries:
- Help earthquake victims in Luzhou return to normal life as soon as possible.
- Promote post-disaster reconstruction in Henan disaster areas to 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 poor families with serious illnesses, helping patients recover health as soon as possible.

Improvement group appeal summaries:
- Help farmers increase income and embark on the road to rural revitalization.
- Gather micro-love into great kindness, helping poor children grow better.
- Help schools improve and upgrade drinking water quality.
- Raise love hygiene kits for mountain area children, cultivate good hygiene habits, and help children grow healthily and happily.
- Improve elderly people' s quality of life, letting them live a peaceful and safe old age.
- Provide digital hearing aids and fitting services for hearing-impaired disabled people in poor families to improve their quality of life.

Note: All appeal summaries were presented in random order.

Study 3b Materials

Recovery group appeal summaries:
- Help poor children with leukemia. Treatment requires huge expenses; the family has used all savings and incurred debts, plunging the originally well-off family of three into difficulty.
- Help animals at Nanjing Hongshan Zoo. Due to the pandemic, park visitor revenue has declined, while wildlife care requires substantial investment, leaving the zoo unable to make ends meet and animals in difficulty.
- Participate in last year' s anti-epidemic activities supporting Hubei, charity livestreams, and consumption-based poverty alleviation projects, watching and helping each other, dedicating love to help Hubei emerge from the shadow of COVID-19.
- Help poor rural residents whose houses collapsed and farmland was washed away in floods, helping them raise basic living expenses.
- Help a child who became blind due to an accident get eye surgery to see the world' s light.
- Help a poor patient who became vegetative after a sudden car accident. Treatment requires huge expenses; the family has used all savings and incurred debts, plunging the originally well-off family into difficulty.

Improvement group appeal summaries:
- Help congenitally deaf poor children get cochlear implants so they can hear the world' s sounds like normal people.
- Donate to build a love library for children in a poor mountainous area in Yunnan to help them broaden their horizons and learn knowledge.
- Donate nutritious meals to children in poor areas so they can eat healthily.
- Help build "capillary" roads in a remote poor area to connect the village with multiple highways.
- Donate goji tree seeds to a poor county in Ningxia—this cash crop can help them earn income.
- Install solar street lights in a mountainous area in Guizhou to light children' s way to school.
- Install water purification equipment in a nationally designated poor 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: All appeal summaries were presented in random order.

Appendix 3: Study 4 Materials

Uncontrollable Condition

Event controllability manipulation:
[Materials describing the fire as caused by lightning strike]

Appendix 4: Study 5 Materials

Event Controllability Manipulation and Appeal Type Manipulation by Experimental Condition

Uncontrollable condition:
- **Recovery appeal:** "We hope you will lend a helping hand to help disaster victims rebuild their homes and restore their previously warm and hopeful lives!"
- **Improvement appeal:** "We hope you will lend a helping hand to help disaster victims improve their current situation and make their lives warmer and more hopeful!"

Controllable condition:
[Corresponding materials with controllable event causes]

Study 5a: Separate Analyses for Flood and Fire Contexts

Flood context. A 2 (event controllability) × 2 (appeal type) ANOVA on donation intentions showed non-significant main effects of event controllability ($F(1, 221) = 0.56$, $p = 0.453$, $p^2 = 0.003$, 90% CI: [0.00, 0.02]) and appeal type ($F(1, 221) = 0.87$, $p = 0.353$, $p^2 = 0.004$, 90% CI: [0.00, 0.03]). The interaction effect was significant, $F(1, 221) = 13.23$, $p < 0.001$, $p^2 = 0.06$, 90% CI: [0.02, 0.11], approaching medium effect size. Simple effects analysis showed that for controllable events, improvement appeals yielded higher donation intentions than recovery appeals ($M_{recovery} = 4.94$, $SE = 0.17$; $M_{improvement} = 5.39$, $SE = 0.15$; $F(1, 221) = 4.04$, $p = 0.046$, $p^2 = 0.02$, 90% CI: [0.00, 0.06]). Conversely, for uncontrollable events, recovery appeals yielded higher donation intentions than improvement appeals ($M_{recovery} = 5.42$, $SE = 0.16$; $M_{improvement} = 4.67$, $SE = 0.18$; $F(1, 221) = 9.55$, $p = 0.002$, $p^2 = 0.04$, 90% CI: [0.01, 0.09]).

Fire context. A similar two-way ANOVA showed non-significant main effects of event controllability ($F(1, 212) = 0.16$, $p = 0.693$, $p^2 = 0.001$, 90% CI: [0.00, 0.02]) and appeal type ($F(1, 212) = 0.01$, $p = 0.937$, $p^2 < 0.001$, 90% CI: [0.00, 0.01]). The interaction effect was significant, $F(1, 212) = 14.35$, $p < 0.001$, $p^2 = 0.06$, 90% CI: [0.02, 0.12], with medium effect size. Simple effects analysis showed that for controllable events, improvement appeals yielded higher donation intentions than recovery appeals ($M_{recovery} = 5.37$, $SE = 0.15$; $M_{improvement} = 5.91$, $SE = 0.15$; $F(1, 212) = 6.69$, $p = 0.010$, $p^2 = 0.03$, 90% CI: [0.00, 0.08]). Conversely, for uncontrollable events, recovery appeals yielded higher donation intentions than improvement appeals ($M_{recovery} = 5.86$, $SE = 0.14$; $M_{improvement} = 5.30$, $SE = 0.15$; $F(1, 212) = 7.69$, $p = 0.006$, $p^2 = 0.04$, 90% CI: [0.01, 0.08]).

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