

Hope, Urgency, and Ethics: The Role of Valence-Arousal in Crowdfunding

Abstract

This research explores the ethical implications of valence-arousal conflicts in crowdfunding campaigns, where hope and urgency often collide. Through an examination of emotional appeals in various crowdfunding initiatives, the study highlights how these conflicting emotions impact donor behavior and ethical decision-making. The findings underscore the importance of balanced emotional appeals and provide practical guidelines for addressing ethical concerns. Ultimately, this work aims to deepen our understanding of the ethical dimensions in crowdfunding, aiding both campaigners and contributors in navigating emotional conflicts.

Keywords: Valence-Arousal Conflict; Crowdfunding; Non-Profit Campaigns; Moral Imperatives; Emotional Persuasion

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Introduction

Crowdfunding forges connections between geographically dispersed backers and project creators, raising billions of dollars annually to fund entrepreneurial, charitable, and cultural initiatives (Kuppuswamy & Bayus, 2017; Mollick, 2014). Although campaign success partly depends on tangible factors such as project quality or creator reputation, research consistently finds that emotional framing can be at least as pivotal (Chen, Thomas, & Kohli, 2016; Liang, Chen, & Hong, 2022). Emotions shape how backers interpret urgency, feasibility, and trustworthiness, ultimately prompting them to pledge—or to scroll past—an appeal. Yet, scholarly views diverge on whether valence-arousal *congruence* or valence-arousal *conflict* offers a more potent route to persuasion (Allison, Warnick, Davis, & Cardon, 2022; Albouy, 2017).

Valence-arousal congruence (VACOG) pairs positive valence with low arousal (e.g., calm reassurance) or negative valence with high arousal (e.g., urgent alarm), aligning the intensity of an emotional message with its valence (Allison et al., 2022). Proponents suggest that congruence clarifies the campaign's emotional tone by minimizing ambiguity, thus promoting trust and perceived authenticity (Berger & Milkman, 2012). For instance, a new product pitch might employ high-arousal negativity (e.g. *Act now before it's too late*) to accentuate scarcity, while a for-profit venture can also rely on low-arousal positivity (e.g. *A gentle step toward a better you*) to appeal to calm, steady engagement (Lee, Kim, & Winterich, 2023). In this view, consistent cues reduce potential donor confusion, boosting willingness to fund.

By contrast, valence-arousal conflict (VACOF) pairs positive valence with high arousal (e.g., *Hurry—ignite hope now! Every pledge brings us closer to a brighter tomorrow!*) or negative valence with low arousal (e.g., *Quietly, families struggle in the shadows. Your support can lift them out of despair*). Advocates argue that mismatched cues

create an emotional tension that attracts heightened scrutiny and fosters deeper cognitive processing (Albouy, 2017; Chapman, Lizzio-Wilson, & Masser, 2022). For example, a campaign might highlight a grave social issue (negative valence, low arousal) while suggesting a bright vision for change, prompting donors to reconcile conflicting feelings by contributing (Winterich, Gangwar, & Mittal, 2021). Though potentially powerful, incongruence risks either confusing potential supporters or, conversely, seizing their attention and eliciting moral engagement (Hildebrand, Häubl, & Herrmann, 2022).

Non-profit contexts add complexity to this puzzle because moral imperatives and prosocial motivations often overshadow purely transactional motives (Nielsen & Binder, 2020; Snyder, 2023). Unlike for-profit projects that promise tangible rewards or product innovations (Colombo, Franzoni, & Rossi-Lamastra, 2015), non-profit campaigns rely on backers' sense of altruism or obligation (Hildebrand et al., 2022). Donors may be drawn to urgency and negativity—if combined with optimism about a feasible outcome—because it underscores both the severity of a social problem and the plausibility of addressing it (Liang, Chen & Hong, 2022). Meanwhile, in a for-profit context, backers might prefer congruent emotional cues, such as excitement aligning with an innovative product, rather than the cognitive dissonance of, say, hopeful-but-intense pleas (Allison et al., 2022). These differing motivations imply that moral considerations can alter which emotional configuration—conflict or congruence—proves most effective.

Building on these debates, we pose a central research question: *Does valence-arousal conflict (VACOF) lead to higher crowdfunding success, and under what conditions do non-profit or for-profit campaigns benefit more from conflict-based vs. congruence-based appeals?* To address this question, we draw on dual-dimensional emotion theory (Bradley & Lang, 1999; Russell, 2003) and analyze over 24,000 reward-based campaigns from Ulule, a prominent French crowdfunding platform. Our findings indicate that conflict-based

messaging significantly boosts success among non-profit projects, where donors interpret incongruent emotional cues—especially hopeful urgency (high-arousal positivity)—as signals of both moral gravity and feasible impact. By contrast, for-profit ventures benefit more from congruent configurations, such as high arousal + negative valence to emphasize scarcity or low arousal + positive valence to create calm assurance, in line with backers’ product-driven motivations (Lee et al., 2023).

These results extend prior scholarship on ethics in crowdfunding and emotional persuasion in three ways. First, they refine existing work on valence-arousal alignment (Allison et al., 2022) by showing that the best strategy depends on the project’s ethical framing. Second, they strengthen the notion that moral imperatives can magnify donor responsiveness to emotional conflict, highlighting how tension can galvanize action in non-profit settings (Hildebrand et al., 2022; Winterich et al., 2021). Third, the findings offer actionable guidance for campaign designers: in highly prosocial contexts, mixing urgency with hope may spur greater engagement, while for-profit creators might favor consistent emotional cues that align with backers’ utilitarian or hedonic desires (Allison et al., 2022; Snyder, 2023).

The paper proceeds as follows. We first review the conceptual underpinnings of valence-arousal conflict, discussing why non-profit campaigns could heighten its persuasive power. We then present our methodological approach, including data collection, psycholinguistic analysis, and classification of emotional frames. Next, we describe empirical findings demonstrating a significant advantage for conflict-based appeals in ethical contexts. Finally, we explore implications for business ethics, crowdfunding practice, and emotional theory, concluding with avenues for future research.

Theory and Hypotheses

Crowdfunding has evolved into a multifaceted funding mechanism supporting both commercial innovations and socially driven endeavors (Mollick, 2014). Although these domains differ in purpose—ranging from profit-making ventures to campaigns with altruistic or moral imperatives—they share a fundamental reliance on effective storytelling and emotional engagement (Hildebrand et al., 2022). Existing scholarship clarifies how certain valence-arousal configurations (see Figure 1) can influence backers' decisions; however, many studies still focus on valence alone, overlooking whether an emotional message carries low versus high intensity (Russell, 2003). Recent work suggests that valence-arousal conflict—the incongruent pairing of valence and arousal—could be especially powerful in shaping campaign outcomes (Lee et al., 2023; Liang et al., 2022). Yet few attempts have been made to compare these mixed-emotion strategies across both for-profit and non-profit project types.

Insert Figure 1 about here

In reward-based crowdfunding, backers receive tangible products or exclusive perks for their financial support (Kuppuswamy & Bayus, 2017). Researchers have long identified novelty, exclusivity, and future value as key motivators that appeal to self-interest and consumer curiosity (Colombo et al., 2015). Emotionally, such appeals often rely on valence-arousal congruence (VACOG)—either high arousal + negative valence (“Don’t miss out—time is running out!”) or low arousal + positive valence (“Relax and enjoy a gentle path to wellness”). These congruent combinations reduce message ambiguity and can intensify clarity (Allison et al., 2022). Indeed, campaigns introducing urgent negativity (high arousal, negative valence) leverage scarcity or deadlines to spur immediate action (Berger &

Milkman, 2012), whereas those featuring calm positivity (low arousal, positive valence) reassure prospective backers, creating a sense of reliability and trust (Lee et al., 2023).

Prior studies in reward-based contexts underscore high-arousal negative tactics (e.g., “Only 50 units left—act now!”) as a potent means to capture attention and reinforce the product’s exclusivity (Anglin et al., 2018). Meanwhile, low-arousal positive messages (e.g., “Take a relaxed journey to better health”) can sustain pledges by aligning with a backer’s preference for steady, low-pressure engagement. Both illustrate congruence: the emotional intensity (arousal) matches the valence (positive or negative). Although some for-profit campaigns experiment with other combinations, these two congruent modes remain prevalent due to their straightforward alignment with consumer-oriented goals (Allison et al., 2022).

Non-profit campaigns, by contrast, typically emphasize collective benefits—such as environmental preservation or social welfare—rather than material returns (Hildebrand et al., 2022). Donors are motivated more by ethical or prosocial considerations (Du, Bhattacharya, & Sen, 2021), prompting them to respond differently to emotional cues. While valence-arousal congruence can still be employed (e.g., “Urgent negativity” highlighting dire crises, or “Calm positivity” emphasizing steady hope), emerging evidence points to valence-arousal conflict (VACOF)—that is, low arousal + negative valence or high arousal + positive valence—as a compelling strategy in morally charged contexts (Albouy, 2017; Winterich et al., 2021).

In a non-profit setting, high arousal + positive valence might manifest as a “hopeful urgency,” such as “Act now to ignite a brighter future for these children!” By pairing an upbeat tone (positive valence) with a high sense of urgency (arousal), the campaign can convey both the severity of the need and an optimistic solution (Liang et al., 2022).

Alternatively, low arousal + negative valence might appear as “Quietly, entire communities are being overlooked,” creating a somber emotional tone that nevertheless draws attention to

ethical stakes. Donors encountering such incongruent messages may undergo deeper cognitive engagement, reconciling conflicting signals in a way that highlights moral responsibility (Chapman et al., 2022). This approach challenges assumptions that purely positive appeals always foster trust or that purely negative appeals invariably drive urgency (Goenka & Van Osselaer, 2019; Sen, Du, & Bhattacharya, 2022). Instead, it positions incongruence as an instrument for balancing moral gravitas with hope or reflection, thus avoiding donor fatigue (Winterich et al., 2021).

Despite these domain-specific insights, many crowdfunding studies continue to bundle valence and arousal into a single “emotional tone” measure (Berger & Milkman, 2012). This one-dimensional approach can obscure critical variations, such as when negative valence pairs with low arousal (evoking somber empathy) versus high arousal (conveying urgent alarm). Similarly, positive valence can appear as either mellow reassurance (low arousal) or invigorating excitement (high arousal). Recent literature therefore calls for finer distinctions between the emotional content of a message (valence) and its intensity (arousal), revealing that mismatches—valence-arousal conflict—may generate enhanced scrutiny and heightened donor engagement (Hildebrand et al., 2022; Liang et al., 2022).

Building on these insights, we posit that valence-arousal conflict can directly spur heightened emotional engagement in crowdfunding. Specifically, backers may find incongruent combinations—whether “hopeful urgency” (high arousal + positive valence) or “somber reflection” (low arousal + negative valence)—attention-grabbing and novel, leading to deeper cognitive processing (Winterich et al., 2021). By disrupting conventional emotional expectations, conflict-based framing can also invoke perceptions of *authenticity*, particularly in altruistic or ethical campaigns (Albouy, 2017).

Moreover, non-profit campaigns appear poised to amplify conflict’s effectiveness, given the moral underpinnings that often accompany their appeals (Liang et al., 2022).

Donors in these settings are likely to interpret incongruent emotional cues through a moral lens, compelled to act when they sense both the gravity of the problem (negative valence) and a realistic path to improvement (positive valence). By contrast, reward-based (for-profit) projects—largely catering to backers’ desire for novelty and tangible rewards—may more consistently benefit from congruent cues, such as urgent negativity or calm positivity (Anglin et al., 2018). Consequently, emotional conflict in for-profit contexts may risk confusion rather than motivate prospective supporters.

Based on this reasoning, we anticipate that valence-arousal conflict exerts a positive effect on crowdfunding success overall, but that its impact is magnified for non-profit projects that invoke moral imperatives. In the following sections, we formalize these ideas into testable hypotheses. We then detail our research method, describing how we collected and analyzed data from thousands of campaigns to examine the relative effectiveness of emotional conflict and congruence across project types.

Valence-Arousal Conflict and Crowdfunding Success

Valence-arousal conflict (VACOF) arises when positive valence pairs with high arousal or negative valence pairs with low arousal—combinations that create a sense of emotional tension (Allison et al., 2022). In crowdfunding contexts, such tension can draw extra scrutiny from backers, heighten perceived authenticity, and ultimately spur greater engagement. While many studies stress valence alone (Anglin et al., 2018; Kuppuswamy & Bayus, 2017), recent evidence underscores that arousal also influences donors’ judgments (Hildebrand et al., 2022; Lee et al., 2023). Conflict-based messaging—such as “hopeful urgency” (high arousal + positive valence) or “somber negativity” (low arousal + negative valence)—prompts backers to reconcile seemingly contradictory signals, which can deepen cognitive involvement and increase the likelihood of donations (Berger & Milkman, 2012; Winterich et al., 2021).

Empirical research offers preliminary support for this logic. Lee et al. (2023) find that combining a sense of urgency with an uplifting outcome broadens a campaign's appeal across both impulsive and deliberative decision-makers. Similarly, Hildebrand et al. (2022) show that when prosocial campaigns highlight the stakes via strong emotional cues, donations rise as donors perceive a more pressing need. Although these studies often address valence or arousal independently, they collectively imply that conflict amplifies emotional salience by disrupting typical expectations—whether through a hopeful call for immediate action or a subdued warning that elicits empathy (Liang et al., 2022). Through this incongruence, backers are nudged to resolve the discomfort or curiosity generated by mixed emotional signals, thus strengthening their commitment to the campaign's goals (Chapman et al., 2022).

Moreover, incongruent appeals may be particularly effective in crowded online environments, where purely positive or purely negative pitches risk fading into the background (Du et al., 2021; Sen et al., 2022). By juxtaposing uplifting language with intense activation, or calm messaging with a negative undertone, campaigns can stand out and encourage donors to consider the campaign more carefully. This heightened processing often translates into stronger backer alignment with the project's objectives (Winterich et al., 2021).

Taken together, these arguments suggest that valence-arousal conflict fosters emotional complexity, deeper cognitive engagement, and increased authenticity—all factors that can raise the likelihood of hitting funding targets. Therefore, we hypothesize:

Hypothesis 1: Valence-arousal conflict in campaign narratives is positively associated with crowdfunding success.

The Moderating Role of Non-Profit Campaigns

Non-profit crowdfunding projects appeal to donors' moral and prosocial motives, often emphasizing communal benefits rather than personal rewards (Hildebrand et al., 2022).

Against this backdrop, valence-arousal conflict (VACOF)—either low arousal + negative valence (e.g., understated distress) or high arousal + positive valence (e.g., hopeful urgency)—can be especially potent. Because non-profit backers approach campaigns with ethical imperatives in mind (Liang et al., 2022; Snyder, 2023), they are more receptive to emotionally mixed messages that convey both the gravity of a problem and a plausible path to resolution. For instance, a campaign highlighting quiet desperation (low arousal, negative valence) may elicit empathy, but pairing it with an attainable solution (positive framing elsewhere in the pitch) can strengthen donors' sense of moral duty (Chapman et al., 2022). Alternatively, a high-arousal, positive-valence appeal might merge uplifting language with an urgent call to act, amplifying both the severity and the hope for change (Hildebrand et al., 2022).

Multiple psychological mechanisms help clarify why non-profit donors respond powerfully to such emotional incongruence. According to the Self-Concept Maintenance Model (Mazar et al., 2008), individuals aspire to maintain a positive moral identity, taking corrective action (e.g., donating) when confronted with a perceived gap between their values and a pressing ethical problem (Winterich et al., 2021). Incongruent cues—like a high-arousal positive valence that merges urgency with optimism—signal both the immediate threat and the potential for a meaningful solution, heightening a donor's perceived responsibility to intervene (Liang et al., 2022). Low arousal + negative valence can also stir a sense of moral discomfort by quietly exposing distress, prompting backers to alleviate that discomfort by supporting the cause (Mueller, Gonzalez, & Hutter, 2023). In both cases, the clash between valence and arousal underscores moral tension that donors seek to resolve through prosocial action (Hildebrand et al., 2022).

In contrast, for-profit campaigns generally rely on valence-arousal congruence (VACOG)—for instance, high arousal + negative valence to induce urgency around a

limited-time product, or low arousal + positive valence to convey relaxed confidence (Anglin et al., 2018; Allison et al., 2022). Because for-profit backers pursue tangible rewards rather than ethical fulfillment, purely negative or purely positive cues can align more directly with backers' product-driven expectations (Lee et al., 2023). Empirical evidence supports this distinction: Hildebrand et al. (2022) report that urgency-based appeals (i.e., high-arousal negativity) significantly heighten donations in non-profit contexts but offer less advantage for reward-based products. Likewise, Liang et al. (2022) find moral outrage (high-arousal negative) to be impactful in prosocial settings but not in for-profit arenas. These patterns reinforce the idea that moral framing in non-profit projects amplifies the persuasive clout of emotional complexity (Du et al., 2021).

Drawing on these insights, we posit that valence-arousal conflict exerts a stronger positive influence on non-profit success than on for-profit outcomes. Donors who care about social or ethical objectives are more inclined to process incongruent emotional signals, interpreting them as both an alarm and an invitation for hope or resolution. By contrast, for-profit backers may prefer less nuanced messaging that aligns directly with material benefits or product novelty (Colombo et al., 2015). Therefore, we propose:

Hypothesis 2: The positive effect of valence-arousal conflict on crowdfunding success is stronger for non-profit campaigns than for for-profit campaigns.

Research Method

Our data were sourced from the Ulule reward-based crowdfunding platform. Established in 2010, Ulule specializes in reward-based crowdfunding, offering a generalist platform for diverse projects, including artistic, cultural, entrepreneurial, social, and solidarity-driven initiatives. As of late 2023, Ulule had hosted more than 67,000 campaigns and successfully funded over 46,000 projects, raising a cumulative total of €285 million. The

platform boasts a global community of more than 5.2 million members, making it one of the most prominent crowdfunding platforms worldwide (Troise, 2020).

Our analysis began with 37,000 projects available on the Ulule platform. Projects missing critical information, such as launch dates, target amounts, or raised amounts, were excluded. Additionally, we removed campaigns with aberrant data, such as goals reached before the campaign's launch date or account creation dates after campaign initiation. To enhance sample quality, we further excluded projects in the extreme ends of the 1st percentile of project goals, following best practices in data harmonization (Cumming et al., 2019). After these refinements, our final dataset comprised 24,534 projects, encompassing over 1,344,740 contributions and a total pledged amount of €65,726,236.

The analyzed sample includes projects launched on the Ulule platform between 2012 and 2018 (see Table 1). The dataset reveals a consistent growth trend in crowdfunding campaigns, peaking in 2017, which accounted for 22.84% of the projects. The remaining projects have target goals ranging from €200 to €25,000, reflecting the diversity and accessibility of campaigns hosted on the platform. This refined dataset provides a robust foundation for examining the dynamics of crowdfunding success.

Insert Table 1 about here

Our dependent variable, *goal raised*, is measured as a binary outcome (1 = the campaign met its funding goal; 0 = otherwise). This operationalization is consistent with established crowdfunding research, reflecting the all-or-nothing funding model widely used on platforms like Ulule (Cumming, Leboeuf, & Schwienbacher, 2019). It effectively captures the critical success threshold determining whether a campaign achieves its financial objectives and proceeds as planned (Colombo et al., 2015; Mollick, 2014).

Emotional congruence in crowdfunding pitches was operationalized as the alignment of valence (emotional tone) and arousal (intensity) dimensions (Allison et al., 2022), following a multi-step process. The first step involved translating pitch texts into English and assigning valence and arousal scores using the Affective Norms for English Words (ANEW) corpus (Bradley & Lang, 1999). The use of ANEW scores builds upon foundational work in affective science, which validates valence and arousal as fundamental dimensions of emotional expression (Russell, 2003). This corpus has been widely applied in studies exploring the emotional impact of text-based stimuli (Citron, Weekes & Ferstl, 2014) underscoring its reliability and relevance. The normalized scores for valence and arousal were calculated, with scores below the mean representing negative valence or low arousal and scores above the mean indicating positive valence or high arousal. The normalized scores ensure that emotional expressions are interpreted relative to the dataset, addressing potential biases from cultural or linguistic variability.

In congruence, valence and arousal are aligned—either low arousal with positive valence or high arousal with negative valence—allowing consistent emotional cues to be conveyed. In contrast, conflict occurs when valence and arousal diverge, such as pairing high arousal with positive valence or low arousal with negative valence (Allison et al., 2022). These categories capture the interplay between emotional dimensions, providing a nuanced lens for evaluating emotional appeals. Subsequently, interactions between these variables were used to classify pitches into congruence or conflict categories.

This method contrasts with prior studies that measured valence-arousal congruence/conflict primarily through direct affective displays, such as vocal tone or gestures (Allison et al., 2022). Our measure also avoid collapsing the valence and arousal into single measure which fails to highlight the implications of different configuration of valence-arousal congruence or conflict. Moreover, by relying on textual analysis and psycholinguistic tools,

we offer a replicable and scalable approach to capturing congruence in contexts where non-verbal cues may not be accessible. The interactional framework adopted here aligns with theoretical perspectives emphasizing the integrative nature of emotional congruence (Eder & Rothermund, 2010; Citron et al., 2014).

The moderator, non-profit project, is operationalized as a binary variable that identifies projects explicitly labeled as non-profit, regardless of the project owner's identity or affiliation. This approach builds upon established methodologies in crowdfunding research that differentiate project types based on their stated goals rather than organizational ownership (Mollick, 2014; André, Bureau, Gautier, & Rubel, 2017; Cumming et al., 2019). By relying on textual cues and stated purposes, this binary measure avoids ambiguities related to hybrid organizations, such as social enterprises, where ownership type may not indicate the project's orientation (Gafni, Hudon, & Périlleux, 2021). Moreover, studies investigating the impact of non-profit status in crowdfunding emphasize the importance of aligning the project's framing with backers' expectations of transparency and altruism (Nielsen & Binder, 2020; Zhao, Zhou, & Zhao, 2022). Research demonstrates that this dichotomous classification effectively captures differences in funding dynamics, as non-profit projects often leverage moral and emotional appeals to motivate backers, contrasting with the value-driven appeals typical of for-profit campaigns (Colombo et al., 2015).

To ensure the robustness of our analysis, we incorporated several control variables that account for campaign-specific, creator-specific, and temporal factors known to influence crowdfunding success. The project goal, measured as the logarithm of the target amount, accounts for the influence of goal size on backers' perceptions of feasibility. Research (Colombo et al., 2015) shows that campaigns with lower funding goals are perceived as more achievable, positively influencing funding probabilities.

The campaign duration, measured as the number of days between the launch and closing dates, accounts for temporal effects. Shorter campaigns often create urgency, whereas longer campaigns provide extended visibility, although they risk backer fatigue (Mollick, 2014; Kuppuswamy & Bayus, 2018).

Engagement levels are captured by the number of comments and number of news updates during the campaign. Comments indicate social interaction between creators and backers, while updates reflect creator engagement and transparency. Both factors enhance backer trust and contribute to funding success (Cumming et al., 2019).

To account for differences in contribution behavior, the average contribution per backer is included, measured as the logarithm of the mean contribution. Higher average contributions signal alignment between backers' expectations and campaign goals, serving as a proxy for trust and perceived value (Cordova et al., 2015; Mollick, 2014).

The inclusion of a video is a binary variable reflecting whether the campaign features a video, which enhances emotional resonance and demonstrates professionalism (Cumming et al., 2019). Similarly, the experience of the campaign creator is captured as a binary variable, indicating whether they have launched previous projects. Experienced creators benefit from improved strategies and networks, positively influencing outcomes (Mollick, 2014).

Additional controls include tags that categorize projects into predefined themes to account for visibility and alignment with backers' interests, and year dummies, which capture temporal trends in crowdfunding success, including changes in platform maturity and economic conditions (Kuppuswamy & Bayus, 2018; Cumming et al., 2019).

Model specification

We tested our hypotheses using logit regression, a statistical approach widely used to analyze data in crowdfunding research. 'Logit' models are used in this field for binary

dependent variables indicating success. Given our variables, we estimated our models stepwise using logistic regression by first introducing the control variables, then the main predictors, and finally, interaction effects. We specify the following logit regression model for H1 : $Success^i = \alpha + \beta_1 Valenc^i + \beta_2 Arousal^i + \beta_3 (Valenc^i \times Arousal^i) + \gamma X^i + \epsilon$

The equation models crowdfunding success ($Success^i$) as a function of valence, arousal, their interaction ($Valenc^i \times Arousal^i$), and control variables (X^i). Their interaction captures emotional congruence (alignment of tone and intensity) or conflict (misalignment). The intercept (α) represents baseline success, and the error term (ϵ) captures unexplained variation. This formulation isolates the effect of emotional dynamics on success while controlling for confounding factors.

To test our second hypothesis, we introduced into the first model, the moderator binary variable non-profit project as well as its interaction with the valence and arousal.

$$Success^i = \alpha + \beta_1 Valenc^i + \beta_2 Arousal^i + \beta_3 (Valenc^i \times Arousal^i) + \beta_4 Non-Profit^i + \beta_5 [(Valenc^i \times Arousal^i) \times \beta_4 Non-Profit^i] + \gamma X^i + \epsilon$$

This equation accounts for the moderating effect of campaign type, allowing the interaction between valence and arousal to vary depending on whether a campaign is non-profit or for-profit.

Results

The descriptive statistics (see Table 2) reveal insightful details about the dataset. The average project goal is approximately €3,098, with significant variation ($SD = €3,213.54$), ranging from €200 to €25,000. The average campaign duration is 42 days, with a maximum of 123 days. While the platform recommends a duration of 45 days, the maximum authorized duration is capped at 90 days.

Insert Table 2 about here

In terms of campaign narrative, 51% of projects included a video in their description, highlighting the widespread adoption of this feature to engage backers. Emotional sentiment measures show an average arousal score of 0.53 and a valence score of 0.69, indicating that most campaigns use moderately intense and positively toned messaging.

Regarding project sponsors, 13.35% of campaign creators had prior experience on the platform, indicating that a majority were first-time users. This aligns with the platform's accessibility for novice creators. Interaction with the backer community is notable: the average number of updates (Nb News) provided by sponsors is 4.58, and the average number of comments is 12.52. These figures underline the importance of maintaining active engagement throughout the campaign. The average contribution per backer is €48.4, further reflecting the diversity in contributor behavior.

In terms of success rates, 68% of the projects in the sample achieved their funding goals, which reflects the relatively favorable conditions of the Ulule platform for reward-based crowdfunding campaigns.

The correlation matrix (see Table 3) provides additional insights. A positive correlation exists between project goals and campaign duration, indicating that larger campaigns tend to allocate more time for fundraising. Additionally, project goals show a positive correlation with average contributions, suggesting that contributors are willing to increase their financial support for campaigns with higher targets.

Insert Table 3 about here

Among the emotional variables, arousal and valence display a positive correlation, consistent with theoretical expectations of emotional alignment. Importantly, the correlations between independent variables, including sentiment measures and control variables, are relatively low, reducing concerns about multicollinearity in the regression analysis.

This overview highlights the dataset's richness and ensures a strong foundation for analyzing the dynamics of crowdfunding success, particularly the roles of emotional congruence and project characteristics. The VIF values, all below 1.25, reinforce this conclusion (mean VIF 1.10).

The results (see Table 4) show that, except for video, all the control variables show significant effects on crowdfunding success. The negative valence ($\beta=-0.779$, $p<0.01$) increases crowdfunding success, whereas non-profit campaigns positively affect it ($\beta=0.042$, $p<0.01$).

Insert Table 4 about here

The effect of valence and the arousal interaction is also found to be significant ($\beta=4.843$, $p<0.05$). Figure 2 provides a nuanced view of the relationship between valence-arousal congruence, conflict, and crowdfunding success. The results indicate that crowdfunding campaigns employing valence-arousal conflict—specifically, positive valence with high arousal or negative valence with low arousal—tend to achieve higher success rates. For low arousal conditions, conflict (negative valence, low arousal) exhibits a 93.1% probability of success, while congruence (positive valence, low arousal) results in 89.4% probability of success. This 3.7 percentage point advantage for conflict suggests that subdued negative framing can enhance backer engagement by evoking moral reflection without overwhelming potential donors. For high arousal conditions, conflict (positive valence, high arousal) yields a 75.2% success probability, whereas congruence (negative valence, high arousal) achieves 77.1% success probability. This 1.85 percentage point disadvantage for conflict indicates that intensely positive appeals may not always outperform high-arousal negative messaging, possibly due to the effectiveness of urgency-driven scarcity appeals in crowdfunding.

Insert Figure 2 about here

These findings highlight a differential impact of valence-arousal configurations across varying levels of arousal intensity. Low arousal campaigns benefit more from valence-arousal conflict, as negative valence (e.g., understated distress) is associated with a significantly higher success rate of 3.7 percentage points compared to congruent low-arousal positivity (e.g., calm reassurance). High arousal campaigns slightly favor valence-arousal congruence, as negative valence (e.g., urgency and alarm) outperforms the high-arousal positive valence condition (e.g., energetic hope) by about 1.85 percentage points.

Transitioning from low to high arousal reveals key trends. For positive valence campaigns, success rates decline by 14.2 percentage points, from 89.4% at low arousal to 75.2% at high arousal, suggesting that increasing arousal intensity diminishes the effectiveness of positive appeals. For negative valence campaigns, success rates drop by 16 percentage points, from 93.1% at low arousal to 77.1% at high arousal, further indicating that high-intensity negative framing may deter backers despite its urgency.

Overall, Figure 2 confirms Hypothesis 1, demonstrating that valence-arousal conflict generally improves crowdfunding success rates, particularly under low-arousal conditions. However, the findings also nuance the hypothesis by indicating that high-arousal positivity does not always outperform high-arousal negativity, particularly in crowdfunding settings where scarcity and urgency are influential motivators.

The positive estimate reported for the non-profit project $\times$ arousal $\times$ valence interaction ($\beta=9.895$, $p<0.05$) suggests a moderating effect of the non-profit project types.

Insert Figure 3 about here

Figure 3 illustrates the interaction between valence-arousal congruence (valence $\times$ arousal) and project type (non-profit vs. for-profit) in influencing crowdfunding success. The results show that non-profit campaigns achieve significantly higher success rates under valence-arousal conflict conditions. When arousal is low and valence is negative, the probability of goal attainment is substantially higher for non-profit projects (99.6%) compared to for-profit campaigns (63.9%), reflecting a difference of approximately 35.7 percentage points. Similarly, in the high arousal and positive valence condition, non-profit campaigns maintain a success probability of 92.1%, whereas for-profit projects achieve only 68.2%, a gap of nearly 23.9 percentage points. These differences suggest that non-profit backers respond particularly well to incongruent emotional signals, perceiving them as both urgent and morally compelling.

Interestingly, congruence conditions—such as high arousal with negative valence—demonstrate stronger success rates for for-profit projects. In these cases, urgency-based messaging, often associated with scarcity-driven appeals, appears to be a more effective driver for transaction-focused backers. The slopes in Figure 3 indicate a steeper increase in success for non-profit campaigns under valence-arousal conflict conditions compared to for-profit projects, reinforcing the notion that moral imperatives heighten backers' sensitivity to mixed emotional appeals.

The results strongly support Hypothesis 2, showing that valence-arousal conflict has a greater positive impact on crowdfunding success for non-profit campaigns than for for-profit campaigns. The substantial differences in success probabilities highlight how emotional incongruence, particularly hopeful urgency or understated distress, resonates more effectively with backers of socially driven projects.

To check the robustness of the results, we tested for omitted variable bias using the Konfound function (Xu et al., 2019) of STATA. The results were found to be statistically

significant, and robust to bias with relatively high thresholds (64.3% for arousal; 44% for valence; 83.48% for non-profit project) required to invalidate our inferences

Discussion and Conclusion

This study set out to examine whether valence-arousal conflict (VACOF)—low arousal + negative valence or high arousal + positive valence—enhances crowdfunding success, and whether non-profit projects benefit more from such mixed emotional appeals than for-profit campaigns. Our analysis of over 24,000 reward-based campaigns shows that incongruent cues, such as urgent positivity (high arousal + positive valence) or understated negativity (low arousal + negative valence), substantially boost outcomes in non-profit contexts where moral imperatives are front and center. By contrast, for-profit initiatives perform better under valence-arousal congruence (VACOG)—either calm positivity (low arousal + positive valence) or intense urgency (high arousal + negative valence)—which aligns more naturally with transactional motivations. These results underscore that moral versus utilitarian considerations moderate the relative power of emotional conflict, extending prior research on ethical decision-making in crowdfunding (Du et al., 2021; Snyder, 2023) and dual-dimensional emotion theory (Allison et al., 2022; Lee et al., 2023).

Our findings offer four key contributions. First, we challenge unidimensional views of emotional persuasion by showing that arousal exerts its own direct influence on donors, rather than serving merely as a backdrop to valence (Bradley & Lang, 1999; Russell, 2003). This more nuanced perspective helps reconcile inconsistent results in earlier work where some authors highlight negative framing (Albouy, 2017; Hildebrand et al., 2022), whereas others stress positivity for building trust (Bennett, 2015; Goenka & Van Osselaer, 2019). Second, we resolve debates about conflict- vs. congruence-based appeals (Allison et al., 2022; Winterich et al., 2021) by demonstrating that valence-arousal conflict is particularly effective in moral settings. Non-profit donors, motivated by ethical imperatives, are

especially receptive to tension-laden signals—like upbeat urgency or low-key negativity—while for-profit backers respond better to simpler emotional consistency. Third, we expand ethical fundraising theories into broader, mixed-platform scenarios (Mollick, 2014; Kuppuswamy & Bayus, 2017), indicating that non-profit and for-profit campaigns can coexist on the same reward-based platform without diminishing the potency of moral messages (Liang et al., 2022; Snyder, 2023). Finally, we strengthen dual-dimensional emotion research (Citron, Weekes, & Ferstl, 2014; Russell, 2003) by providing a large-scale empirical examination that pinpoints when specific incongruent configurations (e.g., high arousal + positive valence) yield stronger engagement, clarifying the interplay between emotional intensity and tone.

From a managerial perspective, the insights can inform campaign designers of both non-profit and for-profit projects. Non-profit creators who rely on donors' sense of shared responsibility may harness hopeful urgency (high arousal + positive valence) or quiet distress (low arousal + negative valence) to trigger moral reflection without inducing donor fatigue. These forms of emotional mismatch draw attention, underscore the seriousness of a cause, and simultaneously present a feasible path to resolution (Winterich et al., 2021). By contrast, for-profit ventures can employ congruence to match valence and arousal—such as calm reassurance (low arousal + positive valence) or intense scarcity messages (high arousal + negative valence)—more in line with the transactional mindset of backers seeking innovative products or exclusivity (Anglin et al., 2018; Lee et al., 2023). In both cases, it is crucial to calibrate emotional frames to the project's underlying motivations; randomly mixing emotional tones can create confusion rather than drive engagement.

While our large dataset and psycholinguistic approach offer robust insights, several limitations merit further inquiry. First, our reliance on textual analysis omits non-verbal cues such as vocal tone or facial expressions (Allison et al., 2022). Future work might integrate

audiovisual data to examine how consistent or conflicting signals across multiple modalities affect pledges. Second, cross-platform variance remains a concern; different crowdfunding models (e.g., donation-based, equity-based) may yield distinct emotional dynamics (Cumming et al., 2019). Researchers could examine whether high-intensity positivity or subdued negativity resonates differently on donation-focused sites where direct returns are absent. Third, cultural nuances may moderate responses to incongruent emotional appeals (Nielsen & Binder, 2020). Cross-cultural comparisons could reveal whether certain societies—due to social norms or emotional display rules—are more receptive to conflict-based strategies. Finally, we assessed static pitches. Over time, campaign creators may adjust emotional cues to sustain momentum or counter donor fatigue. Tracking how such emotional pivoting influences backer engagement would illuminate the temporal dynamics of crowdfunding appeals.

By disentangling valence and arousal as separate yet interacting dimensions of emotion, this paper clarifies why certain conflict-based appeals galvanize non-profit donors but may not resonate as strongly in for-profit settings. High arousal with positive valence or low arousal with negative valence can elicit deeper moral engagement, whereas for-profit backers often favor straightforward excitement or calm positivity. These findings add nuance to the ethical persuasion literature, suggesting that emotional conflicts are not uniformly beneficial; instead, they thrive where donors' moral or prosocial sensibilities heighten their sensitivity to incongruence. As crowdfunding platforms continue to diversify, future studies examining how emotional configurations evolve throughout a campaign's lifecycle—and across cultural or institutional contexts—promise to deepen our understanding of how best to mobilize ethically oriented support in digital fundraising environments.

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Table 1. Distribution of projects

Categories	N	%
Art_Publishing	3,518	14.34
Charities_Heritage	5,132	20.92
Childhood	1,365	5.56
Craft	2,398	9.77
Film_Video_Stage	5,398	22.00
Music	3,642	14.84
Sports	1,716	6.99
Technology	485	1.98
Other_projects	88	3.59
<i>Total</i>	24,534	100.00
Year		
2012	247	1.01
2013	1,824	7.43
2014	3,829	15.61
2015	4,295	17.51
2016	4,972	20.27
2017	5,603	22.84
2018	3,764	15.34
<i>Total</i>	24,534	100.00

Note: Table presents the distribution of projects from 2012 to 2018 across the different tags grouped in categories.

Table 2. Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
<i>Dependent variable</i>					
Goal_raised	24,534	.68	.47	0	1
<i>Independent variables</i>					
Arousal	24,534	.53	.08	0	1
Valence	24,534	.69	.08	0	1
Non profit project	24,534	.42	.49	0	1
<i>Control variables</i>					
Project goal	24,534	3,098	3,213.54	200	25000
Duration	24,534	42.12	16.08	0	123
Nb news	24,534	4.58	6.67	0	119
Nb comments	24,534	12.52	193.76	0	25,467
Video	24,534	.51	.5	0	1
Average contribution	24,534	48.4	45.31	1	2
Experience	24,534	.13	.34	0	1

Table 3. Pairwise Correlations

Variables	1	2	3	4	5	6	7	8	9	10
(1) Goal_raised										
(2) Arousal	0.027*									
(3) Valence	-0.019*	0.370*								
(4) Non_profit_project	0.038*	0.020*	0.019*							
(5) Project_goal	-0.094*	-0.035*	-0.004	-0.063*						
(6) Duration	-0.099*	-0.003	0.023*	0.041*	0.255*					
(7) Nb_news	0.311*	-0.019*	-0.028*	-0.081*	0.228*	0.098*				
(8) Nb_comments	0.032*	-0.003	-0.005	-0.019*	0.066*	-0.003	0.193*			
(9) Video	0.063*	0.071*	0.042*	0.004	0.172*	0.073*	0.117*	0.021*		
(10) Average_contribution	0.189*	-0.015	0.002	-0.006	0.300*	0.114*	0.051*	0.016	0.059*	
(11) Experience	0.106*	0.016	-0.016	0.023*	-0.061*	-0.062*	0.137*	0.032*	0.013	-0.043*

Note: * $p < 0.1$.

Table 4: Results of the Logit Regressions

Goal raised (DV)	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10
Arousal		0.198 (0.258)			0.613** (0.287)	0.653** (0.290)	-2.629* (1.462)	0.687** (0.340)		1.035 (1.940)
Valence			-0.779*** (0.238)		-0.996*** (0.266)	-1.109*** (0.269)	-3.673*** (1.208)		-0.758** (0.316)	-1.301 (1.612)
Non_profit_project				0.418*** (0.049)		0.428*** (0.049)		1.014*** (0.278)	0.616* (0.340)	4.619*** (1.714)
Arousal × Valence							4.843** (2.137)			0.223 (2.845)
Non_profit_project × Arousal								-1.123** (0.514)		-7.778** (3.094)
Non_profit_project × Valence									-0.272 (0.482)	-5.373** (2.548)
Non_profit_project x Arousal × Valence										9.895** (4.515)
ln_goal	-1.924*** (0.038)	-1.924*** (0.038)	-1.927*** (0.038)	-1.933*** (0.038)	-1.926*** (0.038)	-1.935*** (0.038)	-1.926*** (0.038)	-1.934*** (0.038)	-1.936*** (0.038)	-1.935*** (0.038)
Duration	-0.012*** (0.001)	-0.012*** (0.001)	-0.012*** (0.001)	-0.013*** (0.001)	-0.012*** (0.001)	-0.013*** (0.001)	-0.012*** (0.001)	-0.013*** (0.001)	-0.013*** (0.001)	-0.013*** (0.001)
Nb_news	0.274*** (0.010)	0.274*** (0.010)	0.274*** (0.010)	0.276*** (0.010)	0.274*** (0.010)	0.276*** (0.010)	0.275*** (0.010)	0.276*** (0.010)	0.276*** (0.010)	0.276*** (0.010)
Nb_comments	0.106*** (0.005)	0.106*** (0.005)	0.106*** (0.005)	0.106*** (0.005)	0.106*** (0.005)	0.106*** (0.005)	0.106*** (0.005)	0.106*** (0.005)	0.106*** (0.005)	0.106*** (0.005)
Video	0.077 (0.041)	0.076 (0.041)	0.080 (0.041)	0.072 (0.041)	0.078 (0.041)	0.073 (0.041)	0.077 (0.041)	0.072 (0.041)	0.075 (0.041)	0.074 (0.041)
ln_average	2.868*** (0.058)	2.868*** (0.058)	2.870*** (0.058)	2.885*** (0.059)	2.871*** (0.058)	2.889*** (0.059)	2.872*** (0.058)	2.886*** (0.059)	2.888*** (0.059)	2.891*** (0.059)

Goal raised (DV)	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10
Experience	0.330*** (0.065)	0.330*** (0.065)	0.331*** (0.065)	0.298*** (0.065)	0.331*** (0.065)	0.299*** (0.065)	0.329*** (0.065)	0.299*** (0.065)	0.299*** (0.065)	0.298*** (0.065)
FE										
Year dummies included	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Tags dummies included	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
_cons	4.065*** (0.289)	3.963*** (0.319)	4.600*** (0.335)	4.111*** (0.289)	4.435*** (0.342)	4.538*** (0.343)	6.213*** (0.857)	3.766*** (0.338)	4.637*** (0.361)	4.392*** (1.113)
<i>Observations</i>	24534	24534	24534	24534	24534	24534	24534	24534	24534	24534
Pseudo R ²	0.47	0.47	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48

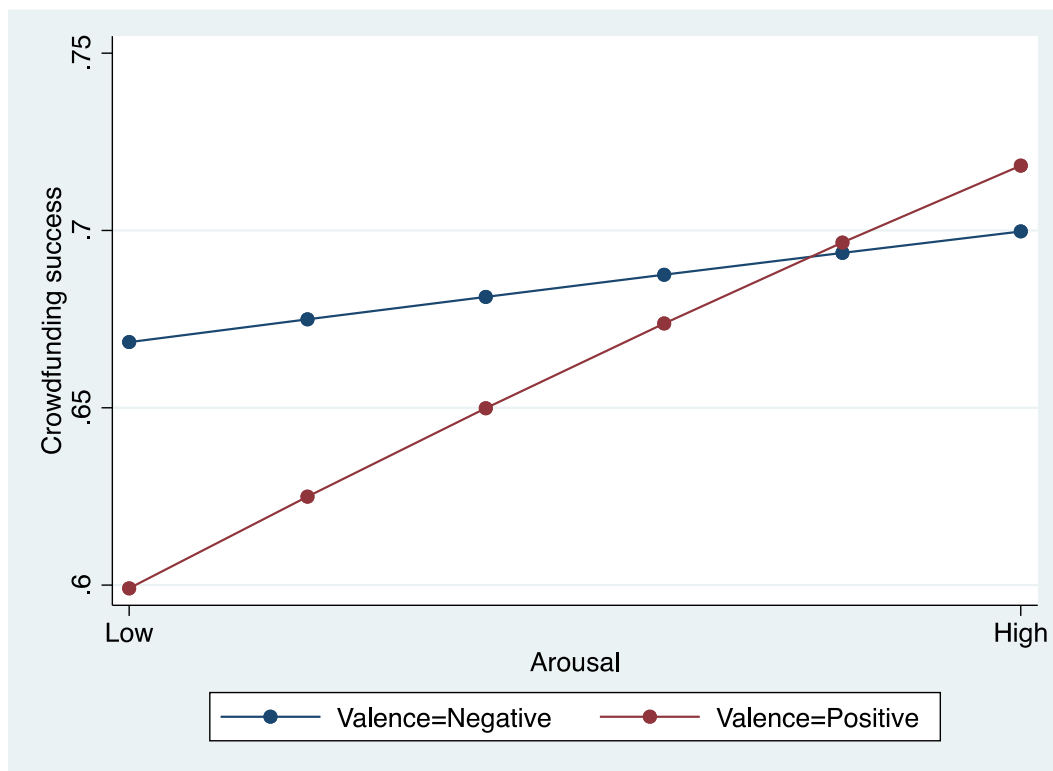
Note: *** p<0.01, ** p<0.05, * p<0.1. Robust standard errors are in parentheses.

Figure 1: Emotional congruence and conflict

Low Arousal	Conflict	Congruence
High Arousal	Congruence	Conflict
	Negative Valence	Positive Valence

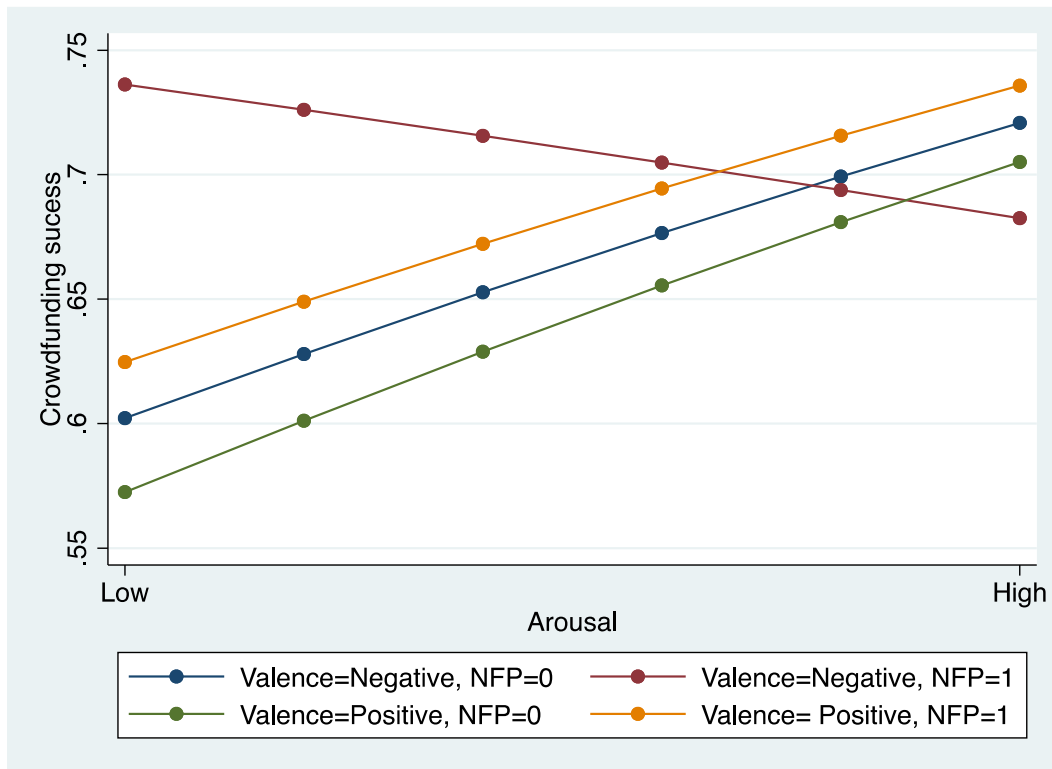
Adapted from Allison et al. (2022)

Figure 2. Predictive margins of the interaction terms between Arousal and Valence



Note: Congruence = low arousal+positive valence; or high arousal+negative valence
Conflict = low arousal+negative valence; or high arousal+positive valence

Figure 3. Predictive margins of the triple interaction terms between Arousal, Valence and Non_profit_project (1sd)



Note: NFP = non-profit projects. Congruence = low arousal+positive valence; or high arousal+negative valence. Conflict = low arousal+negative valence; or high arousal+positive valence