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Research on the Factors Influencing the Financing Performance of Rewarded Crowdfunding - Based on Project Multimodal data Analysis

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1. INTRODUCTION AND RESEARCH QUESTIONS

Rewarded crowdfunding platforms have grown rapidly in recent years as an important way to help startups solve their financing problems. Most previous studies apply signaling theory to discuss the association between the structured information and fundraising performance [1-2]. However, funders in rewarded crowdfunding are rather supporters than professional investors. They invest not only to chase financial returns, but more likely as an act of support generated by emotional transmission. Therefore, understanding the effects of emotional factors that are embedded in fundraiser's presentation is important in exploring the antecedents of rewarded crowdfunding success. As a multimodal signal, speech contains both textual modality (spoken words) and acoustic modality (voice) data. Both textual and acoustic modality data of speech contain emotional cues that can accurately reflect the emotional states of speakers. Emotional contagion theory outlines a process in which an individual's emotion expression triggers changes in the emotional states and perception of others [3]. In rewarded crowdfunding, fundraiser's emotion or attitude conveyed by speech can affect funder's perception. When crowdfunding funders are viewing a project presentation, emotional cues in the fundraiser's speech will trigger the occurrence of emotional contagion and change funders' attitude towards the project, which may affect their willingness to invest. Thus, emotional contagion theory can help us understand the relationship between emotional cues in fundraiser's speech and crowdfunding performance. Therefore, this study aims at investigating the impact of textual and acoustic emotional cues from the speech on financing performance in rewarded crowdfunding from the perspective of emotional contagion theory.

2. THEORY AND RESEARCH FRAMEWORK

Speech contains rich emotional cues, which are hidden in voice as well as the spoken words. Pitch, intensity and speech rate fluctuate according to speakers' current emotional state [4]. And intimate and perceptual language are considered as important psychological language styles, which can close the psychological distance with audiences and make the message seems more appealing [5]. When exposed to these emotional cues, funders may develop similar feelings, which influences their perceptions of the project values and decision-making strategies. Based on emotional contagion theory, three acoustic emotional cues, pitch, intensity and speech rate, and two textual emotional cues, intimate language and perceptual language are chosen as independent variables, the final funding result of the project is used as the dependent variable. The research model is built in Figure 1.

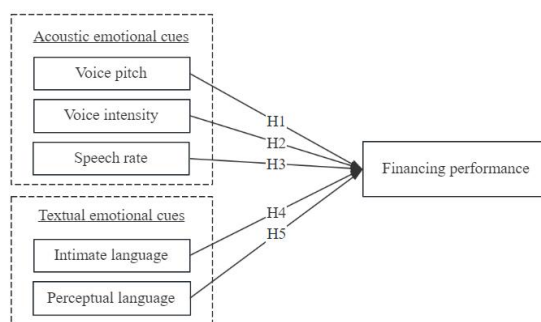


Figure 1. Research framework

Data comes from 21996 projects in Kickstarter, the most influential rewarded crowdfunding platform in the world. Logistic regression is adopted to conduct a quantitative analysis of the relationship between emotional cues in speech and project funding results.

3. RESULTS AND MAJOR FINDINGS

This study attempts to explore how linguistic style of the speech text and acoustic features of the speech voice influence the crowdfunding performance from the perspective of emotional contagion. The main findings are as follows. First, acoustic emotional cues give significant impact on project financing performance. Pitch and speech rate have positive influence on the financing performance, while intensity shows a negative effect. It indicates that fundraisers often use high vocal tone and speech rate to convey their positive emotions to funders. The occurrence of positive emotional contagion motivates funders to invest in the project. High-intensity is usually associated with extreme emotions and stress. Negative emotional contagion triggered by high-intensity voices will reduce funders' intention to invest. Second, both intimate and perceptual languages in fundraiser's speech are positively associated with crowdfunding results. First-pronouns and affective words in speech contribute to ignite positive emotional contagion between fundraisers and funders, reducing the psychological distance between them. Meanwhile, perceptual words in speech both reflect the fundraiser's passion and enable funders to understand project details easily. The positive emotional contagion effect of intimate language and perceptual language will improve funders' impression of the project, which will increase their investment intention, thus improve the financing performance.

4. CONTRIBUTIONS

This study may contribute to the existing literature in the following two ways. First, we extend the crowdfunding literature that previously focused on the structured data by mining the emotional features contained in multimedia data, which provides a new direction of effort to investigate the factors influencing crowdfunding performance. Second, this study is an innovative attempt to extract quantitative emotional cues from different modalities of unstructured data, which broadens the application area of unstructured data mining.

Our findings provide some valuable guidance for fundraisers to improve their financing performance. First, in view of the impact of acoustic emotional cues on funding results, fundraisers should pay attention to their tone and speed in their speech. They should control the volume of the explanation to reduce the average strength of their voices, which make funders feel respected in a gentle way. A fast speaker is perceived as persuasive, and knowledgeable, while conveying the signal of enthusiasm. Therefore, fundraisers should properly improve the speed of the speech and convey more details of the project to funders in limited time. Second, fundraisers should pay attention to the use of style words during their presentations, especially those related to psychological distance descriptions. Increasing the use of first-person pronouns and affective words would be a good idea to enhance their intimacy. Increasing the use of perceptual words will help funders to understand the project more easily under the influence of the fundraiser's passion.

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