Communications of the Association for Information Systems

Volume 56 Paper 27

5-13-2025

The Digital Language of Emotion: Cautions and Solutions for Strategic Use of Emoji in Responding Information System Incidents

Soojin Roh
Peking University, sroh@phbs.pku.edu.cn

Shubin Yu
BI Norwegian Business School

Recommended Citation
Roh, S., & Yu, S. (2025). The Digital Language of Emotion: Cautions and Solutions for Strategic Use of Emoji in Responding Information System Incidents. Communications of the Association for Information Systems, 56, 675-719. https://doi.org/10.17705/1CAIS.05627

The Digital Language of Emotion: Cautions and Solutions for Strategic Use of Emoji in Responding Information System Incidents

Cover Page Footnote

This manuscript underwent peer review. It was received 04/05/2024 and was with the authors for four months for one revision. The Associate Editor chose to remain anonymous.

Communications of the Association for Information Systems

Research Article DOI: 10.17705/1CAIS.05627 ISSN: 1529-3181

The Digital Language of Emotion: Cautions and Solutions for Strategic Use of Emoji in Responding Information System Incidents

Soojin Roh
HSBC Business School
Peking University
China
sroh@phbs.pku.edu.cn
0000-0002-4476-8631

Shubin Yu
Department of Communication and Culture
BI Norwegian Business School
Norway
Shubin.Yu@bi.no
0000-0001-7719-3056

Abstract:

Three experimental studies demonstrate if, when, and how an organization involved in information system (IS) incidents can effectively strategize the use of emoji in its online communication. Theoretical foundations drawn from the stereotype content model, the psychological distance literature, and the situational crisis communication theory have informed the predictions. Among the Chinese, emoji in social media responses reduced psychological distance and alleviated anger, which had positive impacts on evaluations of the company involved in the incident. The impact was particularly evident when the business social media account (vs. the CEO account) employed emoji. Furthermore, emoji in incident responses signaled warmth and competence, while its impact was contingent on incident type. The positive emoji effect on competence was stronger when the company was deemed responsible for the incident indicating Chinese' public appreciation for emoji as an additional communication effort for emotional disclosure and relationship maintenance. In contrast, people from the United States negatively evaluated the use of emoji in such responses, especially when the CEO facing an internally caused incident utilized it. This study is the first study to delineate differential understandings of emoji use and its competing effects on warmth and competence as cognitive underpinnings of contradictory emoji effects across different cultures. Our findings offer important theoretical and practical implications in digitally-mediated communication related to IS incidents.

Keywords: Emoji, Information System Incident, Social Media, Psychological Distance, Warmth, Competence.

This manuscript underwent peer review. It was received 04/05/2024 and was with the authors for four months for one revision. The Associate Editor chose to remain anonymous.

1 Introduction

Non-verbal cues such as emoticons, emoji, and stickers, termed “graphicons” (Herring & Dainas, 2017), have rapidly become a staple in our daily communication practices. Studies have identified the merits of using various types of graphicons for improving communication efficiency (Dunlap et al., 2016; Gaube et al., 2018; Kaye et al., 2016; Miller et al., 2017; Skovholt et al., 2014; Son & Negahban, 2023); they have a greater attention grabbing potential (Willoughby & Liu, 2018), allow for indirect and more nuanced expressions (Leong & Ho, 2021; Logi & Zappavigna, 2023; Lotfinejad et al., 2022; Ordoñez & Nekmat, 2019; Tsichla et al., 2023) while reducing ambiguity and thus chances for misinterpretation (Hancock et al., 2024; Kaye et al., 2017; Leung & Chan, 2017; Marengo et al., 2019; Ray & Merle, 2020), signal intimacy (Janssen et al., 2014; Kelly & Watts, 2015; Liu et al., 2023; Luangrath et al., 2017; Willoughby & Liu, 2018; Skovholt et al., 2014), positive affect (Das et al., 2019; Lin & Luo, 2023), trust (Qiu et al., 2023), fairness and competence (Beattie et al., 2020; Shankar et al., 2024), and likability (Beattie et al., 2020; Byron & Baldridge, 2007), which can subsequently lead to greater engagement (Casado-Molina et al., 2022; Lin & Luo, 2023; McShane et al., 2021).

Understanding the role of emojis in professional communication would be essential for navigating the evolving landscape of digital interaction and its impact on corporate communication. As organizations increasingly depend on digital platforms to connect with customers, stakeholders, and the public, recognizing the subtle influence of these visual cues can improve communication effectiveness and strengthen reputation management. As such, this study focuses intently on the strategic employment of emoji in conveying responses to information system (IS) incidents, particularly those encountered by technology-driven firms. An IS incident refers to any unexpected event that threatens to, or actually does, cause an interruption or reduction in the quality of IS services (Rezazade Mehrizi et al., 2022). Technology-driven firms frequently confront various IS incidents, encompassing not only server overloads and data breaches (Du et al., 2024) but also system outages (Triche & Walden, 2018), cyber-attacks (Kumar et al., 2020), software malfunctions, and unauthorized data access incidents. Prior studies have extensively investigated the consequence of IS failures (e.g., Tan et al., 2016) and how companies should react to such an incident (e.g., Dabholkar & Spaid, 2012), such as providing human supports (Dabholkar & Spaid, 2012) or showing emotions (Liu et al., 2023; Sitoh & Cavusoglu, 2012).

In fact, technology corporations, particularly in China, increasingly use emoji in such responses, acting as supplementary channels for expressing emotions that are often absent in text-based communication. For instance, in its social media communication addressing a server overload, the company Didi employed a crying face emoji to express regret and empathy. Recent literature, however, identifies both advantages and disadvantages of using emojis in professional contexts; while emojis may convey warmth and enhance likability, their use can also lead to perceptions of incompetence, unprofessionalism, and inadequacy (Aretz & Mierke, 2019; Butterworth et al., 2019; Cavalheiro et al., 2022; Glikson et al., 2018; X. (Shirley) Li et al., 2019; Riordan & Glikson, 2020; Wang et al., 2014). Publics may evaluate corporates’ crisis responses including emoji— typically considered fun, playful (Hsieh & Tseng, 2017; McShane et al., 2021), casual, or even childish (Provine et al., 2007)— to be strange and inadequate in the face of the incident.

Without a strategic approach to emoji use, organizations risk significant missteps, particularly in crisis communication. A lack of understanding of how emojis shape public perception can lead to poorly managed digital interactions and reputational harm. Scholars, although not directly discussing emojis, have in fact argued that the explicit display of emotion in crisis messages can have both positive and negative effects, and have thus suggested that organizations show emotions with caution and in a restrained manner (Stephens et al., 2019). An honest display of emotion can help create the impression that the company in crisis is caring and sincere, which can in turn foster a greater sense of empathy among the publics (Claeys et al., 2013; De Waele et al., 2020; Xiao et al., 2018). At the same time, an emotional response can pose a risk of its sender bring seen as powerless, insincere, less credible, and unprofessional (Schoofs & Claeys, 2021; Stephens et al., 2019; ten Brinke & Adams, 2015; Willoughby & Liu, 2018).

That is, without a clear understanding of how emojis function as an additional cue for emotional expression, companies risk unintentionally trivializing serious IS incident responses or failing to engage effectively across different contexts. Overlooking these dynamics can lead to public backlash, heightened scrutiny, and long-term damage to trust. However, existing literature lacks sufficient empirical evidence on

the risks of emoji use and the unique challenges they pose, including their dual impact across cultures, leaving this area largely unexplored. This further prompts an inquiry into the strategic application of emojis in effective IS incident responses. Prior literature has identified some factors that can moderate the potential emoji effects in crisis communication contexts, such as crisis timing (Claeys & Cauberghe, 2014; Schoofs & Claeys, 2021), emotion intensity (Stephens et al., 2019), and crisis involvement levels (Claeys & Cauberghe, 2014). However, there is still not enough scholarly attention as to how to contextualize emoji use for IS incident communication. For example, the impact of emojis may vary depending on the user. Different source characteristics may affect how people evaluate the adequacy of emoji use.

Also, emoji may not work for all types of incidents across different cultures; Organizations in crisis are expected to take matters more seriously and be accommodating when it comes to crises for which the company is held responsible (Coombs, 2021). People may find emoji in responses to be indicative of how serious, honest, willing, and professional the company is in its incident communication efforts. Additionally, research has evidenced that people from high-context societies (e.g., Japan, South Korea, China, and India), due to their enhanced sensitivity to context, use emoticons and emoji more often (Kavanagh, 2016; Pflug, 2011; Liu et al., 2023; Togans et al., 2021), in order to compensate for the "lean" nature of online communication. Particularly, in collectivist societies, it is important to maintain group harmony and save face. Emoji are frequently used in such cultures as politeness markers or additional gestures to show face-saving efforts in negative, reputation-damaging (i.e., face-threatening) situations (Togans et al., 2021). In this regard, in high-context cultures such as China, where non-verbal cues are integral to communication, neglecting to use emojis in customer-facing interactions could result in messages that seem cold or distant, reducing public trust and engagement. Conversely, in low-context cultures like the U.S., overuse or inappropriate placement of emojis in corporate messaging could damage credibility and erode trust in leadership. In conclusion, studying the role of emojis in professional communication would be vital for organizations to better navigate the complexities of digital interaction, crisis management, and cross-cultural communication. As such, study 1 first examines how emoji use in incident responses affects people's evaluation of corporate communication efforts and the moderating role of message source (official vs. CEO account) in China. Study 2, also conducted in China, further investigates whether the emoji effect depends on the incident type (external vs. internal locus of control), as well as illustrates the cognitive mechanism of such effects. Building upon literature on psychological distance (Liberman et al., 2007; Liberman & Trope, 2008, 2014) and the stereotype content model (Fiske et al., 1999), we identified key mediators, such as psychological distance, warmth, and competence perceptions, in the paths toward the public's evaluation of the organization involved in the incident. In Study 3, we try to replicate our findings from Studies 1 and 2 in the United States, showing the contrasting effect of emoji use in different incident scenarios between the two cultures.

All in all, the present study identifies the boundary condition of emoji's effectiveness; the benefits of emoji use in incident responses can depend on the type of message source delivering the message, the incident type, and the culture in which the message is communicated. This study is the first to delineate the effects of emoji use in IS incident communication efforts across different cultures, showing differential understandings of emoji use and its competing effects on warmth and competence as cognitive underpinnings of contradictory emoji effects in China and the United States. In addition, our study informs strategic communication practitioners trying to strategize the use of emoji for effective incident responses online; understanding the situational and contextual influences on emoji's effectiveness offers practical implications to corporate communication professionals working to develop more tailored, nuanced, and culturally sensitive IS incident responses.

2 Emotion, Emoji Use, and Psychological Distance

Prior crisis research has highlighted the significant influence of emotions in shaping crisis communication (Lu & Huang, 2018) demonstrating various merits of displaying various types of emotions in crisis communication such as shame (van der Meer & Verhoeven, 2014), regret (van der Meer & Verhoeven, 2014), and sadness (Claeys et al., 2013; De Waele et al., 2020; Stephens et al., 2019), all of which lead to more favorable outcomes. Previous studies on emotional crisis communication have primarily focused on emotional language (e.g., Claeys & Cauberghe, 2014; van der Meer & Verhoeven, 2014), facial expression (e.g., Schoofs & Claeys, 2021), and tone of voice (e.g., De Waele et al., 2020). A recent investigation revealed that the use of the pleading face emoji as a visual communication aid can effectively disambiguate the intent of apologies in the context of online consumer complaints, which, in turn, enhances perceptions of sincerity and significantly increases the likelihood of consumer forgiveness

(Wang et al., 2023). Despite the increasing recognition of emojis as a strategic communication tool for managing online consumer complaints, however, there is not enough evidence as to how emoji, as a supplementary communication cue for emotion, would affect people's evaluations of corporate incident responses.

As such, it remains unclear if how and when emoji in incident responses influence, if any, people's perceptions and attitudes toward corporate communication efforts. Lohmann et al. (2017) suggested "emotional contagion" may account for the positive impacts of emoji use; people can "catch" the communicated emotion from the emoji, or the emotion expressed through emoji can be transferred to the person who sees it. For instance, a smiley face emoji can make a person who sees it happy while an angry face emoji can make the person feel like he/she should be angry, too. Evidence shows that negative emoji make people feel bad (Ganster et al., 2012) and how positive emoji can induce positive emotions among people (Das et al., 2019).

Moreover, the theory of emotional self-disclosure offers another lens through which to examine this effect (Janssen et al., 2014); emoticons or emoji can reveal one's emotions and feelings, which people may appreciate to a greater extent than no disclosure. Extant literature documents self-disclosure online leads to increased perceived intimacy (e.g., Huang, 2015; Janssen et al., 2014; Lin & Chu, 2021). People find others online who share their personal information and feelings to be closer in the same way that they would be more willing to bond with someone who shares intimate details about them in offline settings. Following the emotional self-disclosure mechanism (Janssen et al., 2014), we posit that the use of emoji (as a visual cue for emotion) can disclose the sender's emotions and feelings, which makes the receiver perceive the sender as more intimate and thus psychologically proximate. Psychological distance refers to one's subjective, perceived assessment of distance from an object in terms of time, space, social relationship, and (Liberman et al., 2007; Liberman & Trope, 2008, 2014) In other words, one can perceive an object, an event, or a goal to be happening now (or far in the future), here (or far in the distance), in my social group (or out-group), or very much likely (or hardly/never).

Based on this foundation, we argue that the use of human-face emoji may ascribe human-like emotions to an online incident response, in turn reducing psychological distance toward the organization involved in the incident. An incident response message on social media may not seem as human as a communicative counterpart in face-to-face communication due to the relative lack of communicative cues online. An emotionally expressive human-face (i.e., emoji), however, may compensate for the absence of humanness in digital environments, which can lead to an increased perception of similarity and furthermore intimacy between the self (the public) and the incident communication source in social media, as previous emoji studies have also evidenced (Janssen et al., 2014; Kelly & Watts, 2015; Liu et al., 2023; Luangrath et al., 2017; Willoughby & Liu, 2018; Skovholt et al., 2014).

H1: Emoji in an IS incident response decreases the public's perceived psychological distance from the company involved in the incident.

Furthermore, the decreased perception of psychological distance (i.e., psychological proximity) may have additional advantages. Evidence has consistently shown that when it comes to moral transgression, people tend to be more lenient and understanding toward psychologically close (i.e., less distant) entities compared to psychologically distant ones (Agerström & Björklund, 2009; Eyal & Liberman, 2012; Weidman et al., 2020). Eyal et al. (2008), in their seminal study, demonstrated that moral transgressions occurring in distant contexts are judged more harshly than those perceived as psychologically close. In such cases, psychological distance reduces forgiveness for clear moral violations, resulting in diminished leniency and potentially more punitive reactions toward offenders. Building on these findings, subsequent research has consistently highlighted the negative impact of psychological distance on perceptions and judgments of misconduct and wrongdoing(e.g., Grolleau et al., 2023; Lo et al., 2019; Tumasjan et al., 2011). Conversely, research has further validated the tendency to be more lenient toward psychologically close individuals. For instance, Gino and Galinsky (2012) demonstrated that psychological proximity softens emotional evaluations, with individuals showing less shame and less severe judgment of unethical behavior when the transgressor was psychologically close, and harsher evaluations when the transgressor was distant. Similarly, Li and Sung (2021) emphasized the significance of psychological proximity in shaping positive attitudes. Their study revealed that people generally form more favorable perceptions of humanized AI assistants due to reduced psychological distance, which fosters a stronger sense of connection to the AI. This body of research underscores the critical mediating role of psychological distance in shaping emotions and attitudes. Extending these findings, the use of emojis in incident responses—acting as a proxy for humanness—may also reduce psychological distance. This

diminished sense of distance, in turn, may have the potential to positively influence emotional and attitudinal outcomes.

H2: Psychological distance (compared to close distance) negatively influences the public's anger level.

H3: Anger negatively influences attitude toward the organization.

Another area of focus in this study is investigating how and whether the use of emojis by different sources might result in divergent perceptions, potentially leading to conflicting interpretations. For instance, nowadays it is a common practice for organizations to communicate with the social media audience through their official accounts, online influencers, and CEOs. As such, the positive effect of emotional disclosure by emoji in incident responses may be particularly salient when it is used by a non- or less-human electronic message source, such as an official social media account of an organization involved in the incident, which may be seen as relatively cold, dry, and less friendly compared to a source people can easily recognize as a specific person (e.g., CEO). Thus, the use of emoji can be particularly helpful to address potential drawbacks inherent to digital communication environments. However, as noted in previous studies, emotional tactics for crisis communication are not always effective (Stephens et al., 2019; ten Brinke & Adams, 2015), especially when used by people in power. Previous literature has noted the downside of displaying emotions in crisis communication: a CEO or a spokesperson explicitly showing their emotion can seem unprofessional and powerless (e.g., Schoofs & Claeys, 2021; Stephens et al., 2019). All in all, including an emoji as a human, emotional cue in incident responses can be beneficial as it may reduce distance perceptions. However, it can also be detrimental, as the CEO's use of emojis may inadvertently signal incompetence. Based on this foundation, we propose the following hypothesis (See Figure 1 for the conceptual model):

H4: The indirect effect of emoji use on attitude toward the organization, mediated by psychological distance and anger, varies based on the message source. Specifically, emoji use by an official account is posited to decrease psychological distance and anger, thereby enhancing attitude towards the organization, whereas emoji use by a CEO is expected to increase psychological distance and anger, consequently reducing attitude towards the organization.

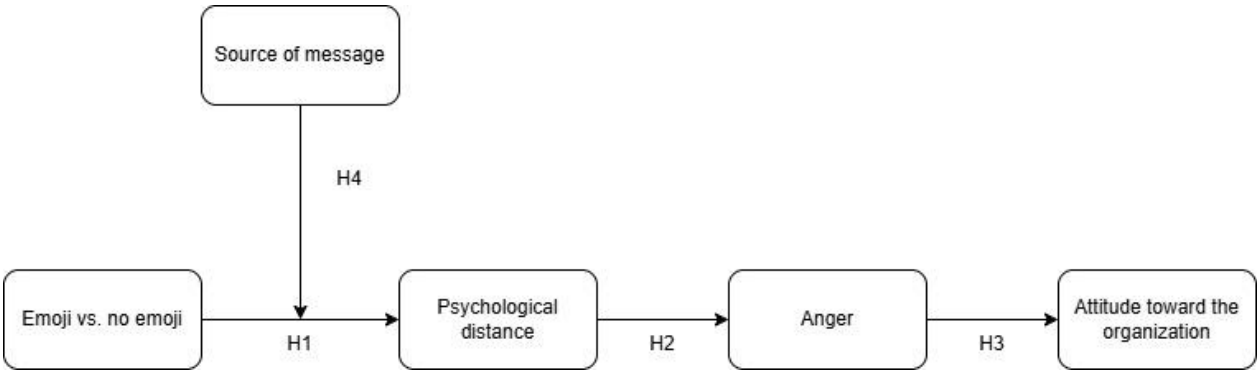


Figure 1. The Proposed Moderated Serial Mediation Model

3 Study 1

4 Methods

For Study 1 we employed a 2 (emoji vs. control) by 2 (message source: CEO vs. official company social media account) between-subject factorial design. We designed a scenario where a fictitious company providing online car-hailing services encountered a technical issue. Participants first learned about the case and then were asked to read a microblog response from the company. To manipulate the source of the message, participants were told that this message was posted either by the company's official Weibo (China's equivalent to Twitter) account (official source) or by its CEO. For the emoji condition, we added a crying face emoji next to the text message, while this emoji was absent in the no emoji (control) condition. Please see supplementary materials for the stimuli.

We recruited 187 participants from an online panel maintained by SoJump, a research participant crowdsourcing platform in China. The average age was 28.96 (SD = 5.80). Of the participants, 64.2% were female (n = 120). Regarding education, 8.6% had not obtained a bachelor's degree, 86.6% had obtained a bachelor's degree, and 4.8% had obtained a master's degree or higher. Finally, 67.4% worked as an employee in the private sector, 8.6% were skilled workers or professionals, and only 6.4% were students.

Attitude, psychological distance, and anger were measured using a set of seven-point Likert scales. Three items were extracted from (Chun, 2005) to assess the attitude of the company (α = .88). We adapted the IOS (Inclusion of Other in the Self) scale by Aron et al. (1992) to assess the psychological distance between the participant and the message sender. Anger (α = .88) was measured using the three-item scale developed by Jin et al. (2007). Please see supplementary materials in the Appendix for specific items.

5 Results

5.1 Manipulation Checks

The results of a t test suggest that participants in the emoji condition were more likely to believe that the response contained emotions than those in the non-emoji condition, Memoji = 6.59, SD = .80, Mcontrol = 1.31, SD = .66, t(185) = −49.50, p < .001. In addition, participants in the official account condition believed that the response was from an official source more than those in the CEO account condition, Mofficial = 6.48, SD = .94, Mceo = 2.05, SD = 1.03, t(185) = −30.84, p < .001. As such, the manipulation was successful.

5.2 Preliminary Data Analysis

Prior to hypothesis testing, we conducted preliminary analyses to ensure the robustness of our statistical approach. Common method bias was assessed using Harman's single-factor test, revealing that the maximum variance extracted by a single factor was 36.4%, which is below the 50% threshold, indicating no significant common method variance concerns. We then examined multivariate assumptions which revealed satisfactory conditions for regression analysis. While formal tests of normality (Kolmogorov-Smirnov and Shapiro-Wilk) showed statistical significance, this is common in large samples. The normality assumption was adequately met as evidenced by acceptable skewness (ranging from -.281 to .612) and kurtosis (ranging from -.739 to -.502) values for all variables, supported by visual inspection of Q-Q plots. Multicollinearity diagnostics showed no concerns, with all VIF values ranging from 1.001 to 1.062 (well below the critical threshold of 10) and tolerance values between 0.942 and 0.999 (well above 0.1). The homoscedasticity assumption was supported through visual inspection of residual plots, showing consistent variance across predicted values with no systematic patterns. These results collectively indicate that our data meets the necessary statistical assumptions for hypothesis testing (detailed results available in supplementary materials).

5.3 Hypothesis Testing

We observed a marginally significant main effect of emoji on psychological distance, Memoji = 3.40, SD = 1.64, Mcontrol = 3.88, SD = 1.79, F(1, 183) = 3.29, p = .07, η^2 = .02; and a non-significant main effect of source on psychological distance, Mofficial = 3.67, SD = 1.80, Mceo = 3.62, SD = 1.67, F(1, 183) = .04, p = .84, η^2= .001. The interaction effect on psychological distance was significant, F(1, 183) = 4.87, p = .03, η^2= .03. More specifically, emojis significantly reduced the psychological distance from the business account, Memoji = 3.12, SD = 1.41, Mcontrol = 4.12, SD = 1.78, F(1, 97) = 9.71, p = .002, η^2= .09; but not from the personal account of the CEO, Memoji = 3.72, SD = 1.83, Mcontrol = 3.62, SD = 1.79, F(1, 86) = .07, p = .80, η^2= .001.

We also conducted a two-way ANOVA to examine the main and interaction effects of emoji and message sources on attitudes toward the organization. The results suggest that the emoji's main effect on attitude was not significant, Memoji = 4.65, SD = 1.21, Mcontrol = 4.44, SD = 1.27, F(1, 183) = 1.03, p = .31, η^2= .006. Additionally, the main effect of message source on attitude was not significant, Mofficial = 4.57, SD = 1.27, Mceo = 4.52, SD = 1.22, F(1, 183) = .10, p = .75, η^2 = .001.

We observed a significant interaction effect between emoji and the message source, F(1, 183) = 4.71, p = .03, η^2= .03. In particular, emoji increased the positive attitude toward the organization when the message was sent by the official account, Memoji = 4.80, SD = 1.06, Mcontrol = 4.22, SD = 1.31, F(1, 97) = 5.76, p = .02, η^2= .06. When the message was sent by the CEO, the effect of emoji was not significant, Memoji = 4.47, SD = 1.36, Mcontrol = 4.67, SD = 1.19, F(1, 86) = .56, p = .45, η^2= .007. For anger, we did not observe a significant main effect of emoji, Memoji = 3.24, SD = 1.26, Mcontrol = 3.28, SD = 1.36, F(1, 183) = .01, p = .91, η^2= .001; or source, Mofficial = 3.21, SD = 1.28, Mceo = 3.31, SD = 1.33, F(1, 183) = .25, p = .62, η^2= .001. The interaction effect is marginally significant between emoji and message source, F(1, 183) = 2.93, p = .09, η^2 = .02.

To test the moderated serial mediation effect, we used Model 83 in PROCESS 4.0 (bootstrap samples = 10,000). The results show that emoji's indirect effect on attitude through distance and anger was moderated by the message source (b = .06, se = .04, 95% CI [.0027, 1395]). More specifically, when the message was sent by the official account, emoji reduced the psychological distance, which in turn lowered the anger and improved the attitude toward the organization (b = .05, se = .03, 95% CI [.0090, 1159]). However, when the source of the message was the CEO, such a serial indirect effect is not significant (b = −.005, se = .02, 95% CI [−0.0505, 0353]). As such, H4 is confirmed.

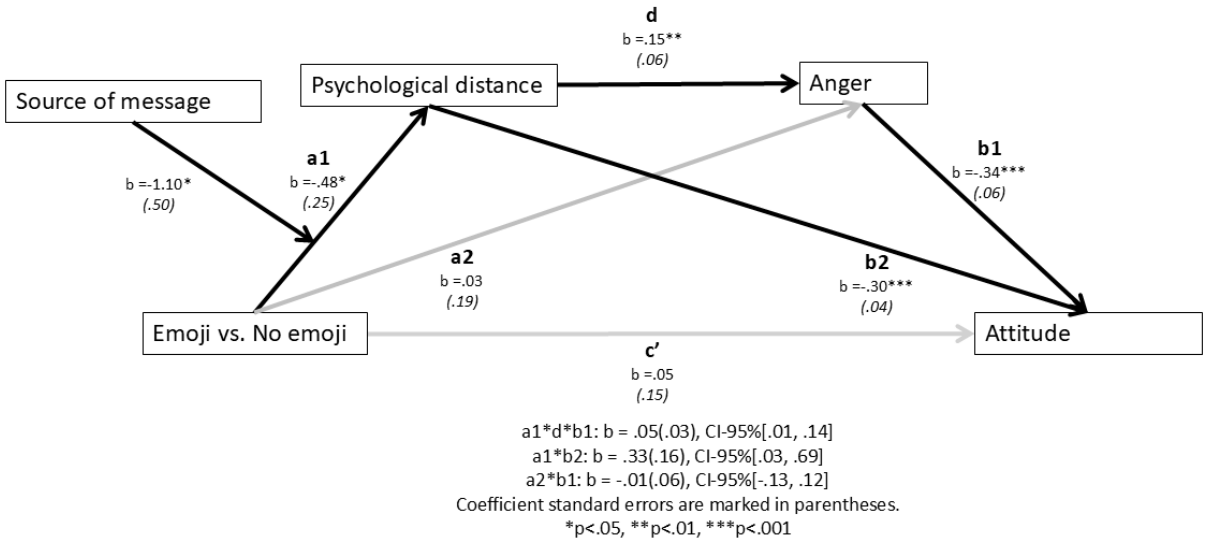


Figure 2. The Moderated Serial Mediation Model (source)

6 Discussion

Study 1's results indicate that emojis can play a vital role in a corporation's incident communication efforts, particularly evident when employed by a source lacking personal information, as emojis reduce the psychological distance regarding the organization involved in the incident, highlighting the interaction between emoji use and messages source, as well as the moderating role of the message source in the effectiveness of emoji use. That is, the positive effect of emojis in reducing psychological distance was observed only when the message source using them lacked humanness, such as an official company account issuing an apology for corporate wrongdoings. The decreased distance perception, in turn, alleviates anger and leads to a better attitude assessment. We may argue that the use of emojis and the following decreased distance perception contribute to greater perceptions of humanness—e.g., inevitably making mistakes despite efforts and seeking forgiveness—about a non-human message source (e.g., an official account), which may increase a sense of intimacy and empathy among the study participants, resulting in a more positive evaluation of the company.

Although we have found empirical evidence for emoji's effectiveness particularly evident for an official social media account as an information source, however, there are still some important questions that remain to be addressed. For instance, incident type and the following perceptions of responsibility (i.e., locus of control) have been noted as vital for an organization's strategic crisis responses (Coombs, 2021).

6.1 Incident Type and Strategic Incident Responses

Different incident types can imply a different level of responsibility. When faced with negative and unexpected situations, individuals engage in an attribution process to make sense of the situation (Weiner, 1986). Assessment of responsibility is a key determinant of the way stakeholders consequently assess the organization involved in the incident. Attribution theory (Weiner, 1986) proposes that when the cause of the crisis event is deemed internal and thus preventable beforehand (i.e., the locus of control is internal), it is more likely for the organization to be held responsible for the event. Based on attribution theory, the situational crisis communication theory (SCCT) (Coombs, 2021) offers a set of "situational" crisis response strategies to restore a damaged reputation. Judgment of responsibility in turn evokes different feelings such as anger and sympathy and results in subsequent cognitive evaluations of the organization such as reputation; the more people perceive the company to be responsible for the incident, the greater the anger that ensues (and the more negatively people evaluate the company's reputation (Coombs & Holladay, 2005; Utz et al., 2013). These findings corroborate how publics may hold different expectations depending on the incident type and the way the organization communicates the incident (i.e., a response strategy).

While there has been a bulk of research about strategic choices of contingency and crisis responses under different conditions (i.e., internally or externally caused incidents), we still know fairly little about how the effect of an explicit display of emotion can differ and under what conditions. One recent study (Fannes & Claeys, 2022) found positive impacts of displaying emotion (e.g., empathy toward victims) in crisis responses across different crisis types (e.g., victim vs. preventable crisis), but there is still not enough and clear explanation as to when and how to situationally strategize the use of emotion in such communication, especially given the dual, seemingly contradictory paths underlying the effect of emotional disclosure evidenced in prior literature (Claeys et al., 2013; Claeys & Cauberghe, 2014; De Waele et al., 2020; Fannes & Claeys, 2022; Schoofs & Claeys, 2021; ten Brinke & Adams, 2015).

6.2 Emoji's Effects through Warmth and Competence Perception

Originally proposed by Fiske et al. (Fiske, 1998; Fiske et al., 1999; Glick & Fiske, 2001), the Stereotype Content Model (SCM) identifies two dimensions that people use to make a quick judgment of others: warmth and competence. These two dimensions are reflective of human evolutionary pressure; survival instincts demand that humans try to understand others' intentions or motives to determine whether this person is a friend or foe, ill- or well-meaning (i.e., this person is warm)—whether I can and should trust this person. Then, people move on to think about how capable the person or entity is in carrying out the necessary courses of action to eventually achieve their goals (i.e., this person is competent). Typically, warmth dimensions are associated with perceptions of an other-profited mindset, kindness, harmony, sincerity (authenticity), and morality, whereas competence judgments often accompany perceptions of a self-focused mindset, confidence, intelligence, competitiveness, effectiveness, utility, and power (A. J. Cuddy et al., 2008; Hoegg & Lewis, 2011).

Warmth and competence dimensions as primary constitutes of judgments of others have been well-documented in the literature across various contexts ranging from individual attractiveness (e.g., Lan et al., 2022)), leadership (e.g., Ludwig et al., 2022), and service providers (e.g., Min & Hu, 2022) to non-human entities including brands (J. L. Aaker et al., 2012; Kervyn et al., 2012; Xu et al., 2013; Z. Zhu et al., 2020), firms (J. Aaker et al., 2010; Y. L. Gao & Mattila, 2014) and products (B. Li et al., 2021).

Although people, in general, consider both warmth and competence when judging others, perceived competence can dominate judgment processes under specific circumstances. For instance, competence perception is weighted more heavily, particularly when people evaluate someone in whom they may have a stake (Luttrell et al., 2022) because people want others to have traits that will eventually benefit them (i.e., competence). In a similar vein, work contexts usually require more competence-oriented judgment; people stereotyped as competent but cold (i.e., less warm) are generally more valued in the workplace (Burke et al., 2024) because being competent frequently equals being skillful, technical, hard-working, and ambitious.

This may account for the potentially detrimental effects of emotional disclosure in a professional setting; literature has suggested that leaders' emotional expression should be contextualized and used with caution (e.g., Schoofs & Claeys, 2021; Stephens et al., 2019; ten Brinke & Adams, 2015). A growing body of recent research resonates with this claim highlighting both the advantages and disadvantages of emoji use in the workplace. For instance, emoji use in professional communications can be beneficial for adding

context and building rapport (e.g., Cavalheiro et al., 2022; Shandilya et al., 2022). Employees find leaders who use emojis to be more likable, warm, and well-meaning, but at the same time less effective, appropriate, and assertive (i.e., less competent) (Aretz & Mierke, 2019; Riordan & Glikson, 2020; Wang et al., 2014).

As for emoji use in professional communication, Butterworth et al. (2019) found that males' use of affectionate emoji (e.g., kissing face) is perceived to be less appropriate and likable in communications with coworkers. People also find the use of emoji to be inadequate in professional ("distant") settings such as when brands or companies are communicating with customers (Cavalheiro et al., 2022). In addition, an emoji (e.g., smiley face) can undermine competence perceptions, especially when it is used in a formal setting such as a work email exchange (Glikson et al., 2018). Similarly, consumers perceive service providers using emoticons to be warmer but less competent, particularly more so when the emoticon was used for communicating service failures with customers (B. Li et al., 2021).

In sum, the scarcity of research investigating emoji effects, which may be contingent upon the incident type, warrants further investigation. In addition, previous findings present somewhat competing effects of emotional disclosure – including those concerning emoji and emoticon use - on warmth and competence perceptions. As such, we know little about how the emoji use and the incident type can together influence the way publics evaluate the incident response efforts, through the mediation of warmth and competence. Therefore, we pose a research question regarding the incident type and its subsequent impacts:

Research Question 1: How and to what extent does the incident type (locus of control: internal vs. external) influence the public's a) emotional response, b) warmth and competence perception, and c) reputation assessment toward an incident response using emoji?

7 Study 2

8 Methods

An online experiment was conducted using a 2 x 2 factorial design with between-subjects factors of emoji use (emoji vs. no emoji) and locus of control (external vs. internal). All participants were again presented with a message from a fictitious company in response to a data leak incident. To manipulate the use of emoji, we followed the same manipulation methods used in Study 1. To manipulate the locus of control, we adapted the description of the incident. For the external locus of control incident, we told the participants that the company's server was hacked, which caused the data leak. In contrast, for the internal locus of control condition, the cause of the data breach was attributed to the deliberate mishandling of user data by the company.

Data were collected using another Chinese panel service, Credamo. A total of 193 participants were recruited, and 94 were female (49%). The mean age was 29.07 (SD = 5.96). We used the same scale to measure psychological distance, anger (α = .96), and attitude toward the organization (α = .95). In addition, we also assessed participants' perceived warmth (Fiske et al. (2002), α = .96) and perceived competence (Belanche et al., 2021; Cuddy et al., 2004, α = .91) using two seven-point Likert scales. Please see supplementary materials for specific items.

9 Results

9.1 Manipulation Checks

The results of a t test showed that emoji use significantly increases the perceived emotion of the response, $M_{control}$ = 3.24, SD = 1.64; M_{emoji} = 5.79, SD = .90, $t(191) = -13.43$, $p < .001$. Additionally, participants in the internal locus of control condition perceived the company to be more responsible for the incident than those in the external locus of control condition, $M_{external}$ = 5.66, SD = 1.31; $M_{internal}$ = 6.15, SD = .99, $t(191) = -2.90$, $p < .01$.

9.2 Preliminary Data Analysis

Prior to hypothesis testing, we conducted preliminary analyses to ensure the robustness of our statistical approach. Common method bias was assessed using Harman's single-factor test, revealing that the

maximum variance extracted by a single factor was 46.395%, which is below the 50% threshold, indicating no significant common method variance concerns. We then examined multivariate assumptions which revealed satisfactory conditions for regression analysis. While formal tests of normality (Kolmogorov-Smirnov and Shapiro-Wilk) showed statistical significance ($p < .001$), this is common in large samples. The normality assumption was adequately met as evidenced by acceptable skewness (ranging from -.430 to .900) and kurtosis (ranging from -1.325 to -.311) values for all variables, supported by visual inspection of Q-Q plots. Multicollinearity diagnostics showed no concerns, with all VIF values ranging from 1.223 to 2.596 (well below the critical threshold of 10) and tolerance values between .385 and .818 (well above 0.1). The highest condition index was 19.932, below the critical threshold of 30, further confirming the absence of serious multicollinearity. The homoscedasticity assumption was supported through visual inspection of residual plots, showing generally consistent variance across predicted values without substantial systematic patterns. These results collectively indicate that our data meets the necessary statistical assumptions for hypothesis testing (detailed results available in supplementary materials).

9.3 Hypothesis Testing

A series of ANOVAs were employed to test the hypotheses 1, 2a and 2b hypothesized and tested in Study 1. As it was in Study 1, results suggest that the use of emoji decreased the psychological distance, Mcontrol = 3.53, SD = 1.67; Memoji = 3.03, SD = 1.43, $F(1, 189) = 5.06$, $p = .03$, $\eta^2 = .03$; and anger, Mcontrol = 3.98, SD = 1.71; Memoji = 3.48, SD = 1.63, $F(1, 189) = 4.29$, $p = .04$; and increased perceived warmth, Mcontrol = 3.76, SD = 1.53; Memoji = 4.96, SD = 1.26, $F(1, 189) = 41.7$, $p < .001$, $\eta^2 = .18$; competence, Mcontrol = 4.16, SD = 1.38; Memoji = 4.79, SD = 1.18, $F(1, 189) = 12.9$, $p < .001$, $\eta^2 = .06$; and attitude, Mcontrol = 3.65, SD = 1.58; Memoji = 4.29, SD = 1.61, $F(1, 189) = 8.52$, $p = .004$, $\eta^2 = .04$. The results of a serial mediation analysis show that emoji had a positive indirect effect on attitude through distance and anger, consequently (b = .05, se = .04, 95% CI [0.0028, 1411]), as in Study 1. The indirect effect of emoji on attitude through anger was not significant (see Figure 3). This is also consistent with Study 1.

Also, this indirect effect did not depend on the locus of control (b = .05, se = .06, 95% CI [-0.0395, 1912]).

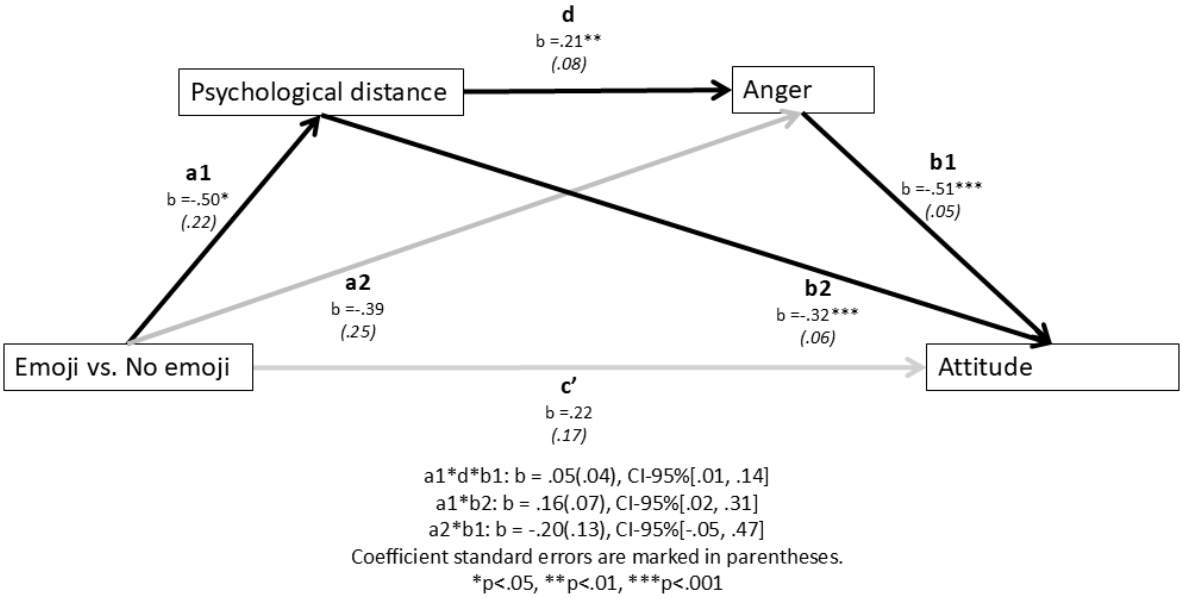


Figure 3. The Serial Mediation Model

Additionally, we observed significant main effects of the locus of control on psychological distance, Mexternal = 3.02, SD = 1.50; Minternal = 3.54, SD = 1.62, $F(1, 189) = 5.49$, $p = .02$, $\eta^2 = .03$; anger, Mexternal = 3.13, SD = 1.70; Minternal = 4.33, SD = 1.63, $F(1, 189) = 25.63$, $p < .001$, $\eta^2 = .12$; warmth, Mexternal = 4.91, SD = 1.31; Minternal = 3.82, SD = 1.52, $F(1, 189) = 34.7$, $p < .001$, $\eta^2 = .15$; competence, Mexternal = 4.78, SD = 1.23; Minternal = 4.17, SD = 1.34, $F(1, 189) = 12.04$, $p < .001$, $\eta^2 =$

.03; and attitude, Mexternal = 4.54, SD = 1.48; Minternal = 3.40, SD = 1.57, F(1, 189) = 27.74, p < .001, η^2 = .13.

However, we did not observe an interaction effect of the use of emoji and the locus of control on psychological distance, F(1,189) = 1.28, p = .26, η^2 = .007; anger, F(1, 189) = 1.86, p = .18, η^2 = .01; warmth, F(1, 189) = 1.22, p = .27, η^2 = .006; and attitude, F(1, 189) = .09, p = .79, η^2 = .001. In other words, the effect of emoji use on distance perception did not depend on the incident type. However, there was a significant interaction effect between emoji use and incident type on competence, F(1, 189) = 5.57, p = .02, η^2 = .03. When the locus of control was internal, the use of emojis increased the perceived competence, Mcontrol = 3.64, SD = 1.33; Memoji = 4.69, SD = 1.14, F(1, 189) = 17.6, p < .001, η^2 = .09. However, for an external locus of control, the effect was not significant, Mcontrol = 4.67, SD = 1.24; Memoji = 4.89, SD = 1.22, F(1, 189) = .76, p = .39, η^2 = .004. These results answered research question 1.

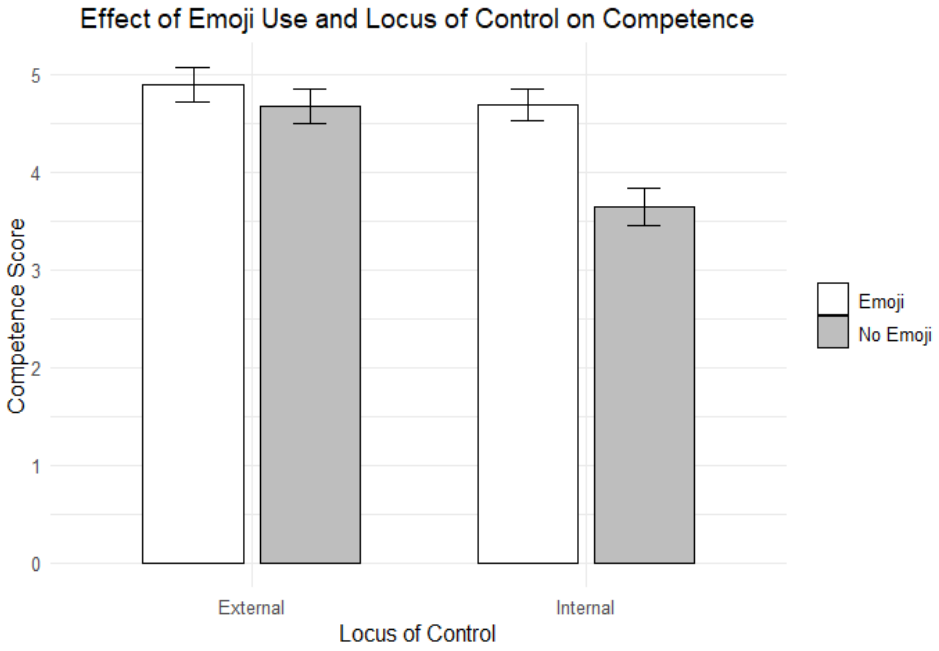


Figure 4. The Interaction Effect of Emoji and Locus of Control on Competence

10 Discussion

Study 2 yet again confirms the positive effect of emoji use on attitude toward the organization which replicates our Study 1 findings. Regardless of the incident type, emoji reduces people's psychological distance from the organization during an incident, thereby decreasing the level of anger, which ultimately leads to a more positive attitude toward the organization. Furthermore, emoji use enhances both the perceived warmth and competence of the company.

Prior findings from the warmth and competence literature may help to explain these effects. The idea of halo effects—that positive information on one trait dimension can spill over to seemingly unrelated traits (e.g., a warm person can also seem more competent than a person lacking warmth and vice versa)—for warmth and competence have received empirical support (e.g., A. J. C. Cuddy et al., 2011; Carrier et al., 2019; Chen & Guo, 2021). As such, we may speculate that emoji use increases the Chinese public's warmth perception, as well as its competence perception in turn. A follow-up serial mediation analysis testing the effect of emoji on perceived competence through psychological distance and perceived warmth supports our speculation (b = .10, se = .05, 95% CI [0.0111, 2177]). In particular, the use of emoji reduces psychological distance, which in turn increases perceived warmth, which leads to higher perceived competence.

However, the warmth and competence literature has also claimed that the two paths, warmth and competence judgment, do not always go hand in hand; warmth and competence can be negatively correlated (Burke et al., 2024; Durante et al., 2017; Fiske et al., 2007; Judd et al., 2005), especially more

so in the workplace or a professional setting (Burke et al., 2024).. The disparity between the literature and Study 2's findings – that emoji both positively influence warmth and competence perceptions - may lie in cultural differences given that both Study 1 and Study 2 are solely based on a Chinese sample, while previous studies are mostly conducted in Western contexts. Publics of different cultures may have different expectations toward the organization involved in the incident, as well as hold different understandings of what constitutes "competent" and "professional."

In addition, we do not observe significant interaction effects of emoji usage and locus of control on psychological distance, anger, attitude, or perceived warmth. Interestingly, however, we do find that the emoji effect on perceived competence is moderated by the locus of control (i.e., incident type). Emoji use is more effective when the locus of control is internal rather than external, which is opposite to prior research claims that emotional expressions in crisis messages can be harmful when it comes to internally caused crises (e.g., Schoofs & Claeys, 2021). Study 2 shows otherwise that Chinese participants still perceive the company as more competent when emoji are used in response to an incident for which the company bore significant responsibility.

10.1 Emoji Effectiveness and Cultural Differences

The public's cultural background affects how they understand and construct meaning, and thus scholars have called for more nuanced crisis strategies specific to different cultures (Claeys & Schwarz, 2016; Y.-H. C. Huang et al., 2016). In a similar vein, the meaning and usage of emoji as a strategic visual cue for emotional disclosure in corporate crisis responses can depend greatly on culture (Bai et al., 2019; Chandra Guntuku et al., 2019; B. Gao & VanderLaan, 2020). According to Hall's (1976) cultural framework, people from high-/low-context cultures have different communication patterns. People in a low-context culture seek relatively little information about the situation's context and instead concentrate on verbally communicated messages, which leaves little room for creative imagination or intuition (Triandis, 1995). In contrast, people in a high-context culture tend to read between the lines. Therefore, they may interpret a message not only on the basis of literal meaning but also on the context associated with it. For example, they may more willingly and readily take many non-verbal elements into account, such as gestures, facial expressions, eye contact, body posture, the physical distance between those involved in the conversation, and audible elements (the tone of voice and the nature and frequency of interjections). Therefore, people from high-context cultures, such as China, may rely more on non-verbal elements to infer the intended meaning of the message. Consequently, they might look for and appreciate such cues to a greater extent. As such, previous studies have shown people from a high-context culture are more likely to over-read into the meaning of visual elements in an ad (Callow & Schiffman, 2004).

Culture also influences the way people communicate digitally (Yang et al., 2021). When communicating with consumers online, websites in high-context cultures use more visuals and symbols to create emotions and atmosphere (Usunier & Roulin, 2010). In high-context cultures, there is a greater reliance on non-verbal cues for message interpretation. Companies in high-context cultures are accustomed to presenting images and animations on their websites to engage their consumers (Usunier & Roulin, 2010). Also, research shows that in high-context societies emojis/emoticons are not just to convey and clarify emotions, but also serve as face-saving strategies and politeness markers (Kavanagh, 2016; Togans et al., 2021); strategic placing of emoji/emoticons can soften a tense mood between communicators and therefore appease the anger of message readers (Wang et al, 2014). In a similar sense, the use of emojis may naturally seem like polite, adequate, and necessary crisis communication strategies that an organization in high-context societies may be expected to take in sensitive times. As such, it may be advisable for companies in high-context societies to use iconic elements in crisis communication as they can help them look more competent, capable, and appropriate in communicating crises.

In contrast, unlike Chinese people who may consider emoji as an important means to disclose emotion and facilitate communication, the publics from low-context cultures might interpret emojis differently, sometimes even negatively. The United States represents a typical low-context culture where people are prone to primarily relying on verbal expressions. In that regard, the U.S. public may find the use of emoji (or emoticons)—a non-verbal cue typically seen as fun and playful (Hsieh & Tseng, 2017; McShane et al., 2021), less serious, or even childish (Provine et al., 2007) —in a corporate communication message to be unprofessional and inadequate, something that they do not expect from an organization facing crises.

In fact, previous studies conducted in low-context cultures have suggested that emotional expression by CEOs during an incident can be considered insincere and incompetent (Schoofs & Claeys, 2021; Stephens et al., 2019; ten Brinke & Adams, 2015). Moreover, these negative effects may intensify when

the perceived locus of control of the incident is internal (Schoofs & Claeys, 2021), which is directly opposite to Study 2's findings. Previous studies have noted that emotional expression as a way to seek empathy from the public can backfire when the organization is deemed responsible for the incident (i.e., an internal locus of control), because the public expects the organization to be honest, responsive, and accommodating (i.e., showing its willingness and capability to handle the situation effectively) under such circumstances rather than trying to engage in victimage as an impression-management tactic (X. (Shirley) Li et al., 2019; Schoofs & Claeys, 2021). In other words, a CEO's message with a crying face emoji may seem warmer and more human but not necessarily competent and professional enough, as people may infer an egoistic motive to save face by the use of emoji (X. (Shirley) Li et al., 2019).

A handful of recent studies have demonstrated the adverse effects of emoji use in a formal setting (e.g., work email exchange, service-provider–customer communication), arguing that the public finds emoji use in such specific scenarios to be inappropriate and unprofessional. This finding has been reported from the U.S. (Glikson et al., 2018), a low-context culture, but also, surprisingly, found among the Portuguese (Cavalheiro et al., 2022), a high-context culture. A study conducted in Hong Kong (X. (Shirley) Li et al., 2019) showed that the use of emoticons in service-failure scenarios backfired, arguably because service-failure scenarios situationally make customers' exchange-norm orientation—concerns about benefits—more salient, which naturally drives them to pay greater attention to capabilities and professionalism (Heide & Wathne, 2006) within the communication message. As such, using emoji, when the public's exchange norm is salient, can negatively impact competence judgment, which is opposite to our findings from Studies 1 and 2. The disparity between our findings and previous studies, as well as the scarcity of empirical evidence to support our findings, led us to conduct Study 3 in the U.S.

Research Question 2: How and to what extent do the emoji use, incident type (locus of control: internal vs. external), and message source influence the public's a) emotional response, b) warmth and competence perception, and c) reputation assessment toward an incident response using emoji?

11 Study 3

12 Methods

An online experiment was conducted using a 2 x 2 x 2 factorial design with between-subject factors of emoji use (emoji vs. no emoji), message source (CEO vs. official company account), and locus of control (power outage in the area vs. bad maintenance). All participants were presented with a web page resembling a Twitter feed containing a Twitter message from either a fictitious Twitter user named Lee Williams or an official company account and asked to read them carefully.

After participants viewed the stimuli, we asked them to fill in a questionnaire to measure the relevant constructs. We used the same scales as those in Study 1 and 2 to assess individuals' psychological distance, anger level (α = .87), attitude (α = .73), perceived warmth (α = .78), and perceived competence (α = .80). Please see Appendix A for specific items.

Data were collected during one week in September 2022 using respondents living in the United States. A total of 442 subjects were recruited through Amazon Mechanical Turk (MTurk), and they were provided with a link to the experiment that was set up on the online survey system Qualtrics. They were paid $.50 upon completion of the experiment. Some scholars have expressed concerns regarding the use of non-probability-based online samples such as MTurk, citing a relative lack of experimental control and demographic skew. However, recent research has demonstrated that data collected from the Amazon MTurk worker pool is comparable in quality to data obtained through other sampling methods (Huff & Tingley, 2015; Mason & Suri, 2012). Further evidence suggests that issues such as insufficient attention among MTurk participants are no more prevalent than in other convenience or high-quality commercial samples (Thomas & Clifford, 2017). Also, a prior study noted that potential data quality issues with Amazon Mturk can be addressed by employing response validity indicators and implementing data screening procedures (Chmielewski & Kucker, 2020). As such, after eliminating 44 participants who did not complete the study and those unable to correctly answer the filter manipulation check questions, initial analyses were conducted for the remaining 398 participants. Male participants comprised 74.9% of the participants, and the rest were female (25.1%). The mean age was 33.55 (SD = 9.71). About 73% of participants had a bachelor's degree, followed by people with a master's degree or above (19.6%), then those who had completed high school or secondary school (5.5%), and the rest (2%). A Chi-square

analysis and a series of t tests found no significant difference in the distribution of gender, age, and education across study conditions.

13 Results

13.1 Manipulation Checks

Those who viewed the corporate misbehavior incident case (i.e., high responsibility) reported significantly higher levels of responsibility perception (n = 200, M = 5.65, SD = .76) than those who read about a system-hacking case (n = 198, M = 5.44, SD = 1.06), p = .026. Participants also evaluated that the Twitter message including an emoji contained more emotion (n = 199. M = 5.52, SD = .88) than the one with no emoji (n = 199, M = 5.32, SD = 1.18), p = .05. People in the official account message source condition responded more positively toward the manipulation check items designed to ask if the message source was the official account (M = 5.96, SD = .87) than those who viewed the message from the CEO (M = 5.17, SD = 1.54), p < .001.

13.2 Preliminary Data Analysis

Prior to hypothesis testing, we conducted preliminary analyses to ensure the robustness of our statistical approach. Common method bias was assessed using Harman's single-factor test, revealing that the maximum variance extracted by a single factor was 37.373%, which is below the 50% threshold, indicating no significant common method variance concerns. We then examined multivariate assumptions which revealed satisfactory conditions for regression analysis. The normality assumption was adequately met as evidenced by acceptable skewness (ranging from -1.432 to -.728) and kurtosis (ranging from -.612 to 2.103) values for all variables, supported by visual inspection of Q-Q plots. Multicollinearity diagnostics showed no concerns, with all VIF values ranging from 1.006 to 2.448 (well below the critical threshold of 10) and tolerance values between .409 and .994 (well above 0.1). The highest condition index was 30.423, slightly above but very close to the critical threshold of 30, suggesting no severe multicollinearity issues. The homoscedasticity assumption was supported through visual inspection of residual plots, showing a generally consistent scatter of residuals across predicted values. These results collectively indicate that our data meets the necessary statistical assumptions for hypothesis testing (detailed results available in supplementary materials).

13.3 Hypothesis testing

A series of ANOVAs were employed to test the hypotheses.

Unlike the Chinese participants, among the U.S. participants, there was no difference in distance perception in terms of emoji use (MEmoji = 3.04, SD = 1.63; MNo Emoji = 2.95, SD = 1.65, p = .598); message source (MCEO = 3.03, SD = 1.62; MOfficial Account = 2.96, SD = 1.66, p = .674); and incident type (i.e., locus of control) (MInternal = 2.94, SD = 1.67; MExternal = 3.05, SD = 1.61, p = .524). Thus, H1 was not supported among the U.S. participants, and H2 and 3 regarding the indirect impact of emoji via psychological distance perceptions on emotion and attitudes were not tested. Overall, unlike Chinese participants, the U.S. participants evaluated emoji use in incident responses negatively. For instance, emoji use had a significant main impact on people's attitude toward the company; those who viewed emoji in a company's Twitter responses exhibited much more negative attitudes toward the company (M = 5.343, SD = 1.20) than those who viewed the same message without emoji, M = 5.56, SD = 1.05, p = .05, F (1, 389) = 3.86, η2 = .010; while other factors had no effects on attitude, (MCEO = 5.38, SD = 1.19; MOfficial Account = 5.52, SD =1 .06, p = .251), (MInternal = 5.43, SD = 1.21; MExternal = 5.47, SD = 1.04, p = .308).

In addition, emoji use (MEmoji = 5.41, SD = 1.00; MNo Emoji = 5.53, SD = .99, p = .673); message source (MCEO = 5.45, SD = 1.04; MOfficial Account = 5.49, SD = .95, p = .791); and incident type (i.e., locus of control) (MInternal = 5.53, SD = 1.07; MExternal = 5.42, SD = 1.01, p = .308) did not affect participants' warmth perception about the company involved in the incident, F (1, 389) = 1.84, η^2 = .005. Moreover, no significant main effects were found for participants' competence perception in terms of emoji use (MEmoji = 5.37, SD = 1.15; MNo Emoji = 5.53, SD = 1.20. p = .146); message source (MCEO = 5.37, SD = 1.22; MOfficial Account = 5.53, SD = .1.12, p = .163); or incident type (i.e., locus of control) (MInternal = 5.44, SD = 1.20; MExternal = 5.5.46, SD = 1.15, p = .766). Instead, however, there was a significant three-way interaction among emoji use, message source, and locus of control (i.e., incident type) jointly affecting

competence perception, F (1, 389) = 4.32, η^2 = .011, p = .038. Notably, a pairwise comparison indicates that participants reported the company to be significantly less competent when the emoji was used by a CEO facing a high-responsibility (i.e., internal locus of control) incident (M = 5.13, SE = .16) compared to the same message under the same circumstance without emoji (M = 5.60, SE = .17), p = .05. This answered research question 2.

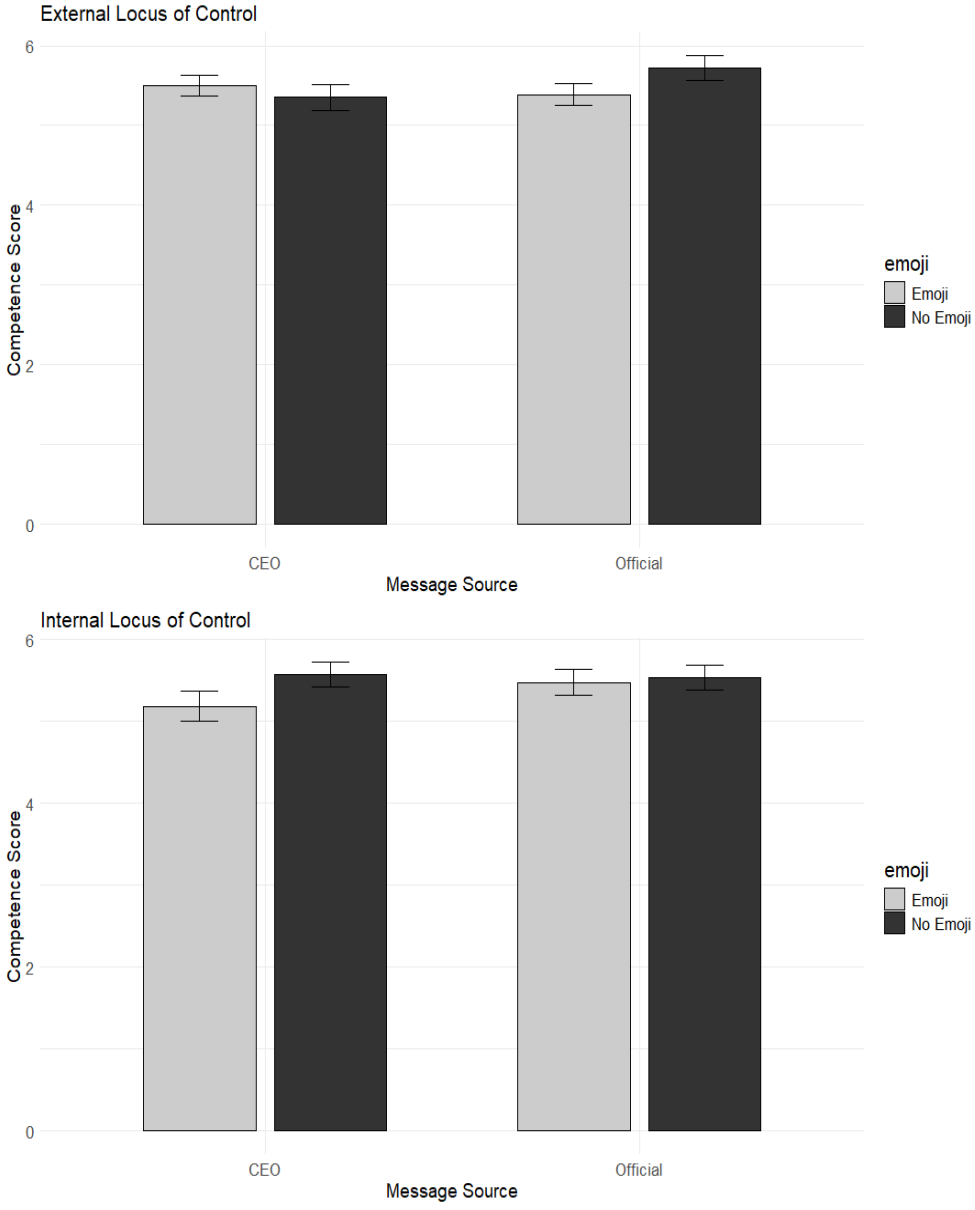


Figure 5. The Interaction Effect of Emoji, Source, and Locus of Control on Competence

There was no significant difference in anger levels between those who viewed emoji (M = 4.48, SD = 1.80) and those who did not (M = 4.30, SD = 1.89). No significant differences exist in anger levels across groups regardless of the locus of control (i.e., whether the cause of the incident was internal or external) (MInternal = 4.53, SD = 1.76; MExternal = 4.32, SD = 1.90) and message source (MCEO = 4.35, SD = 1.91; MOfficial Account = 4.41, SD = 1.77).

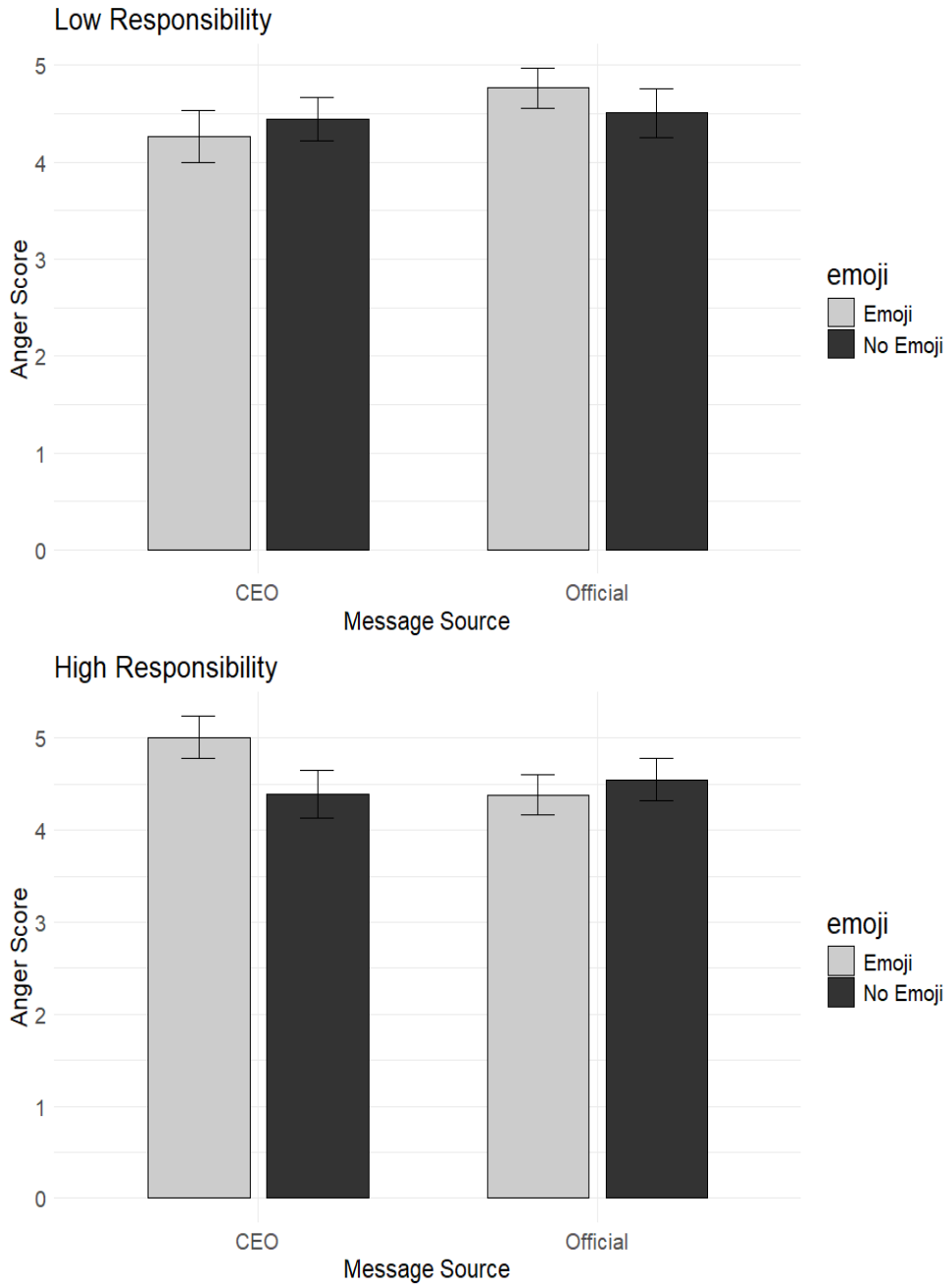


Figure 6. The Interaction Effect of Emoji, Source, and Locus of Control on Anger

However, there was another significant three-way interaction among emoji use, message source, and locus of control jointly affecting anger, $F(1, 389) = 3.85$, $\eta^2 = .10$, $p = .05$. Specifically, a pairwise comparison indicates that participants reported higher levels of anger when emoji was used by a CEO facing a high-responsibility (i.e., internal locus of control) incident ($M = 4.86$, $SE = .26$) compared to the same message under the same circumstance without emoji ($M = 4.10$, $SE = .26$), $p = .039$.

14 Discussion and Implications

Three phases of experimental studies have investigated the effect of emoji use in corporate responses across two cultures, China and the United States, and suggest different circumstances under which emoji should and should not be strategized. We have demonstrated the positive impacts of emoji use in corporations' incident responses among the Chinese public; emoji reduce the perceived level of distance toward the company and, eventually, alleviate anger (Studies 1 and 2). Emoji's positive impact in reducing

distance perception is particularly salient when a non-human message source uses them. We further identify the cognitive mechanism of emoji's positive impacts with our moderated mediation models, wherein warmth and competence bridge the paths toward the public's evaluation of an organization's incident response efforts. Interestingly, emoji's positive impact on competence perception is stronger when they are used to communicate about an incident where the locus of control is internal (Study 2). In contrast, the U.S. participants negatively respond to emoji, especially when the CEO uses them to communicate an incident for which the company is deemed highly responsible (Study 3).

14.1 Theoretical Implications

The findings of this study further enrich our knowledge of IS incident handling, particularly in the notification stage (Werlinger et al., 2010). Grounded in the literature on self-disclosure (Janssen et al., 2014), emotional contagion (Lohmann et al., 2017), and psychological distance (Agerström & Björklund, 2009; Eyal & Liberman, 2012; Liberman et al., 2007; Liberman & Trope, 2008, 2014; Weidman et al., 2020), our study provides some of the first detailed look into the cognitive mechanism of emoji effects in corporate's online handling of the information incidents. In Studies 1 and 2, we illustrate that the Chinese consistently view the use of emoji in incident responses as generally positive; emoji use contributes to decreased distance perception toward the organization faced with an information incident. As such, our findings make theoretical contributions to the existing literature which suggests that emotionally expressive human-face emojis can mitigate the perceived lack of humanness in digital communication about organizational misdeeds by fostering a stronger sense of perceived similarity (Liviatan et al., 2008) and enhancing intimacy between the audience and the communication source on social media (Janssen et al., 2014; Kelly & Watts, 2015; Liu et al., 2023; Luangrath et al., 2017; Willoughby & Liu, 2018; Skovholt et al., 2014; Wang et al., 2023) with emojis playing an essential role in shaping user perceptions. Specifically, we demonstrated that emojis reduce the psychological distance people feel toward companies addressing consumer complaints which aligns with prior research highlighting greater leniency and more positive evaluations driven by decreased psychological distance (Eyal & Liberman, 2012; Gino & Galinsky, 2012; Li & Sung, 2021; Weidman et al., 2020).

Another theoretical advancement offered by this study is the identification of specific crisis contexts—such as incident type and cultural factors—in which the use of emojis can backfire when addressing consumer complaints online.

Unlike the Chinese participants, the U.S. participants responded differently to the use of emoji in an incident response on social media. In Study 3, emoji use alone and in conjunction with incident type and message source does not influence the U.S. participants' distance or warmth perceptions. However, emoji use in general results in more negative evaluations of the company involved in the incident. Additionally, the negative impacts of emoji use are particularly salient when the CEO uses them for an internally caused incident, hurting competence perceptions as well as inducing more anger. These findings clearly illustrate how the publics of two different cultures can have substantially different understandings of emoji use in responses to IS incidents. Study 3's findings highlight that the U.S. public views a CEO's use of emoji as a sign of incompetence when it comes to internally caused incidents, which provides additional empirical evidence for the claims of prior crisis communication studies (X. (Shirley) Li et al., 2019; Schoofs & Claeys, 2021) that emotional expressions, including those through the use of emoji, should not be encouraged when the CEO and organization facing an incident are expected to be most accommodating. Rather, an organization should show its capability in appropriately handling incidents rather than trying to manage its impression, which can dilute perceptions of responsibility. This study, albeit in a new context, aligns with the recommendations by Mitropoulos et al., (2006), who advocated for a deeper understanding of individual reactions to incident responses as well as provides further empirical support to the existing literature on strategic management of service and system failures, emphasizing the public's differential expectations based on crisis type and the organization's communication strategies (Coombs, 2007; Y.-H. Huang, 2006), particularly concerning emotional expressions in crisis responses (Fannes & Claeys, 2022).

This study also adds new knowledge to the previous literature on warmth and competence; literature has noted that work or professional contexts usually lead people to competence-oriented judgments (e.g., Glikson et al., 2018). Thus, it comes as no surprise that we observed that the U.S. public finds the visual cue for emotion (i.e., emoji) in a CEO's incident responses to be incompetent and maddening, especially when it comes to an internally caused incident. Our study findings regarding the U.S. participants resonate with a growing body of recent studies showing the inadequacy of emoji use in a professional setting (Cavalheiro et al., 2022; Glikson et al., 2018). We, however, also witnessed the strong benefits of emoji

use in communicating crises in China. First, emoji are conducive to fostering a sense of closeness between the public and the non-human message source (as demonstrated in Studies 1 and 2). Second, incident responses including emoji result in a positive appraisal of the incident response endeavors. This positive evaluation, characterized by heightened perceptions of warmth and competence, ultimately contributes to a favorable reputation, irrespective of the nature of the incident (as evidenced in Study 2), which lends support to the halo effects (A. J. C. Cuddy et al., 2011) where positive impressions in one trait (e.g., warmth perceptions) domain can influence perceptions of unrelated traits (e.g., competence perceptions), as our study demonstrates that the use of emojis enhances the Chinese public's perception of warmth, which subsequently contributes to an increased perception of competence. Furthermore, in China, where Studies 1 and 2 are conducted, a strong relationship (guanxi) is the first step to an open conversation (Wong et al., 2017). We may speculate that the Chinese took the use of emoji in incident responses as an additional sign of relationship maintenance efforts, which they may have expected the company to prioritize in the face of an incident for which the company is highly responsible. In addition, it is worth noting that warmth perception primarily concerns one's judgment of trustworthiness—whether this person is well-meaning and friendly, thus someone whom I can trust, who is also likely to be other-focused, kind, sincere (authentic), and ethical (A. J. Cuddy et al., 2008; Hoegg & Lewis, 2011) as previously mentioned. The Chinese participants may have greatly appreciated the warm incident response messages with emoji as additional cues for an organization's genuine, sincere concerns for others and its effort to regain trust, which they may have believed to be the top priority in corporate incident communication efforts. This may account for the significant interaction effects of emoji and incident type on competence perception found in Study 2.

The contrasting effects of emoji use suggest that it should be contextualized, such that cultural differences, as well as message source and incident type, should not be overlooked, resonating with an emergent stream of research calling for a more nuanced approach with cultural sensitivity theoretically (Cheng, 2020; Cheng & Lee, 2019; Hu & Pang, 2018; Ngai & Jin, 2016; L. Zhu et al., 2017) as well as practical insights for professionals handling IS incidents.

14.2 Practical Implications

For practitioners dealing with IS incidents in China, the strategic use of emoji in response messages can be highly beneficial. The study reveals that Chinese audiences respond positively to the inclusion of emoji, perceiving it as a sign of closeness and warmth from the organization. This fosters a sense of trust and goodwill, ultimately enhancing the company's reputation even in the face of an incident. Practitioners in China should consider incorporating emoji not just on social media platforms but also within application interfaces and other communication channels. By doing so, they can leverage emoji as a means to convey genuine concern, maintain relationships, and mitigate potential backlash during IS incidents.

However, the study cautions that a more nuanced approach is required when responding to IS incidents in the United States. American audiences tend to view the use of emoji by organizations, especially by CEOs, as a sign of incompetence, particularly in cases of internally-caused incidents. Practitioners should exercise caution and avoid the indiscriminate use of emoji, as it can inadvertently induce anger and erode perceptions of competence among the U.S. public. The source of the message and the nature of the incident play a crucial role in determining the appropriateness of using emoji in incident response strategies within this cultural context.

Ultimately, the key takeaway for practitioners is the importance of accounting for cultural nuances when formulating IS incident response strategies, especially in today's interconnected global landscape where social media amplifies the reach of such communications. It is important to conduct thorough research and pre-check the cultural context before deploying any IS incident response strategy. By tailoring their approach to the specific cultural sensitivities, practitioners can effectively navigate the complexities of IS incident handling, mitigate potential reputational damage, and foster trust and goodwill among diverse audiences worldwide.

14.3 Limitations and Suggestions for Future Research

We identify some limitations in this study which point, in turn, to avenues for future research. We conceptualize that emoji use induces an increased perception of intimacy and humanness, but we do not directly measure and test these perceptions in the current three studies. However, we attempt to address this limitation, as we test distance, warmth, and competence perceptions as underlying mechanisms for emoji's effects. Additionally, what we still do not know is why CEO emoji use did not make a significant

difference in the public's distance perception regarding the organization in Study 1 (the Chinese context). A CEO, commonly viewed as someone powerful, resourceful, and distant, could benefit from emotional disclosure through the use of emoji. One potential reason could be that, in all three studies, the distance perceptions we measured are those toward the "organization" involved in the incident and not toward the "CEO," which may provide a clue to our question.

Moreover, the current study does not consider potential gender effects in emoji use, while the literature has noted differences in people's expectations and subsequent interpretations of emoji use across different genders (e.g., Butterworth et al., 2019; Weisberg et al., 2011). In this study, the spokesperson's gender is purposefully manipulated as ambiguous and not obvious. However, it is possible that stereotypical gender expectations can bias evaluations of those using emoji; females use much more graphicons than males (Jones et al., 2020) and typically are expected to be more relationship-oriented (Felmlee et al., 2012). As such, females' use of emoji may seem more natural and acceptable than that of males, which may additionally influence the public's assessment of an organization's crisis communication efforts in terms of competence and warmth.

In addition, in this study, we test only one type of emoji (e.g., a human crying face). We hope that future studies explore the potential impact of different types of emoji, the emotions that each signals, and how they may interplay with different crisis types as well. For example, it remains unclear how the public would interpret and respond to an emoji containing positive emotions, such as a smiley face emoji, which may signal the company's competence and conviction, especially when the company is taking an advocating stance or trying to appear confident. We also do not know how the use of neutral emojis would play out in incident responses.

References

Aaker, J. L., Garbinsky, E. N., & Vohs, K. D. (2012). Cultivating admiration in brands: Warmth, competence, and landing in the "golden quadrant". *Journal of Consumer Psychology*, *22*(2), 191-194.

Aaker, J., Vohs, K. D., & Mogilner, C. (2010). Nonprofits are seen as warm and for-profits as competent: Firm stereotypes matter. *Journal of Consumer Research, 37*(2), 224–237.

Agerström, J., & Björklund, F. (2009). Temporal distance and moral concerns: Future morally questionable behavior is perceived as more wrong and evokes stronger prosocial intentions. *Basic and Applied Social Psychology, 31*(1), 49–59.

Aretz, W., & Mierke, K. (2019). Seriously?! Prevalence and motives of using emojis in job-related communication and their effect on perceived executive characteristics. *Journal of Business and Media Psychology, 10*, 43–48.

Aron, A., Aron, E. N., & Smollan, D. (1992). Inclusion of other in the self scale and the structure of interpersonal closeness. *Journal of Personality and Social Psychology, 63*(4), 596–612.

Bai, Q., Dan, Q., Mu, Z., & Yang, M. (2019). A systematic review of emoji: Current research and future perspectives. *Frontiers in Psychology, 10*, 2221.

Beattie, A., Edwards, A. P., & Edwards, C. (2020). A bot and a smile: Interpersonal impressions of chatbots and humans using emoji in computer-mediated communication. In *Communicating Artificial Intelligence (AI)* (pp. 41–59). Routledge.

Belanche, D., Casaló, L. V., Schepers, J., & Flavián, C. (2021). Examining the effects of robots' physical appearance, warmth, and competence in frontline services: The Humanness - Value - Loyalty model. *Psychology & Marketing*, *38*(12), 2357-2376.

Burke, V., Grandey, A. A., Melloy, R. C., Ferris, D. L., & England, K. (2024). Are women penalized for showing pride at work? Gender disparities in the competence-warmth tradeoff. *Journal of Applied Social Psychology, 54*(8), 455–473.

Butterworth, S. E., Giuliano, T. A., White, J., Cantu, L., & Fraser, K. C. (2019). Sender gender influences emoji interpretation in text messages. *Frontiers in Psychology, 10*, 431196.

Byron, K., & Baldridge, D. C. (2007). E-mail recipients' impressions of senders' likability: The interactive effect of nonverbal cues and recipients' personality. *The Journal of Business Communication, 44*(2), 137–160.

Callow, M., & Schiffman, L. G. (2004). Sociocultural meanings in visually standardized print ads. *European Journal of Marketing*, 1113–1128.

Carrier, A., Dompnier, B., & Yzerbyt, V. (2019). Of nice and mean: The personal relevance of others' competence drives perceptions of warmth. *Personality and Social Psychology Bulletin, 45*(11), 1549–1562.

Casado-Molina, A. M., Rojas-de Gracia, M. M., Alarcón-Urbistondo, P., & Romero-Charneco, M. (2022). Exploring the opportunities of the emojis in brand communication: The case of the beer industry. *International Journal of Business Communication, 59*(3), 315–333.

Cavalheiro, B. P., Prada, M., Rodrigues, D. L., Lopes, D., & Garrido, M. V. (2022). Evaluating the adequacy of emoji use in positive and negative messages from close and distant senders. *Cyberpsychology, Behavior, and Social Networking, 25*(3), 194–199.

Chandra Guntuku, S., Li, M., Tay, L., & Ungar, L. H. (2019). Studying cultural differences in emoji usage across the East and the West. *Proceedings of the International AAAI Conference on Web and Social Media, 13*, 226–235.

Chen, F., & Guo, T. (2021). Effects of competence information on perceptions of warmth. *Asian Journal of Social Psychology, 24*(4), 524–536.

Cheng, Y. (2020). The social-mediated crisis communication research: Revisiting dialogue between organizations and publics in crises of China. *Public Relations Review, 46*(1), 101769.

Cheng, Y., & Lee, C.-J. (2019). Online crisis communication in a post-truth Chinese society: Evidence from interdisciplinary literature. *Public Relations Review, 45*(4), 101826.

Chmielewski, M., & Kucker, S. C. (2020). An MTurk crisis? Shifts in data quality and the impact on study results. *Social Psychological and Personality Science, 11*(4), 464–473.

Chun, R. (2005). Corporate reputation: Meaning and measurement. *International Journal of Management Reviews, 7*(2), 91–109.

Claeys, A.-S., & Cauberghe, V. (2014). Keeping control: The importance of nonverbal expressions of power by organizational spokespersons in times of crisis. *Journal of Communication, 64*(6), 1160–1180.

Claeys, A.-S., & Schwarz, A. (2016). Domestic and international audiences of organizational crisis communication: State of the art and implications for cross-cultural crisis communication. In *The handbook of international crisis communication research* (pp. 224–235). Wiley-Blackwell.

Claeys, A.-S., Cauberghe, V., & Leysen, J. (2013). Implications of stealing thunder for the impact of expressing emotions in organizational crisis communication. *Journal of Applied Communication Research, 41*(3), 293–308.

Coombs, W. T. (2007). Protecting organization reputations during a crisis: The development and application of situational crisis communication theory. *Corporate Reputation Review, 10*(3), 163–176.

Coombs, W. T. (2021). *Ongoing crisis communication: Planning, managing, and responding* (5th ed.). Sage Publications.

Coombs, W. T., & Holladay, S. J. (2005). An exploratory study of stakeholder emotions: Affect and crises. In C. E. J. Haid & N. M. Ashkanasy (Eds.), *The effect of affect in organizational settings* (Vol. 1, pp. 263–280). Emerald Group Publishing Limited.

Cuddy, A. J. C., Glick, P., & Beninger, A. (2011). The dynamics of warmth and competence judgments, and their outcomes in organizations. *Research in Organizational Behavior, 31*, 73–98.

Cuddy, A. J., Fiske, S. T., & Glick, P. (2004). When professionals become mothers, warmth doesn't cut the ice. *Journal of Social Issues*, *60*(4), 701–718.

Cuddy, A. J., Fiske, S. T., & Glick, P. (2008). Warmth and competence as universal dimensions of social perception: The stereotype content model and the BIAS map. *Advances in Experimental Social Psychology, 40*, 61–149.

Dabholkar, P. A., & Spaid, B. I. (2012). Service failure and recovery in using technology-based self-service: Effects on user attributions and satisfaction. *The Service Industries Journal, 32*(9), 1415–1432.

Das, G., Wiener, H. J. D., & Kareklas, I. (2019). To emoji or not to emoji? Examining the influence of emoji on consumer reactions to advertising. *Journal of Business Research, 96*, 147–156.

De Waele, A., Claeys, A.-S., & Opgenhaffen, M. (2020). Preparing to face the media in times of crisis: Training spokespersons' verbal and nonverbal cues. *Public Relations Review, 46*(2), 101871.

Du, S., Gwebu, K. L., Wang, J., & Yu, K. (2024). Differential market reaction to data security breaches: A screening perspective. *Communications of the Association for Information Systems, 54*, 376–401.

Dunlap, J. C., Bose, D., Lowenthal, P. R., York, C. S., Atkinson, M., & Murtagh, J. (2016). What sunshine is to flowers: A literature review on the use of emoticons to support online learning. In S. Y. Tettegah & M. Gartmeier (Eds.), *Emotions, technology, design, and learning* (pp. 163–182). Elsevier.

Durante, F., Tablante, C. B., & Fiske, S. T. (2017). Poor but warm, rich but cold (and competent): Social classes in the stereotype content model. *Journal of Social Issues, 73*(1), 138–157.

Eyal, T., & Liberman, N. (2012). Morality and psychological distance: A construal level theory perspective. In M. Mikulincer & P. R. Shaver (Eds.), *The social psychology of morality: Exploring the causes of good and evil* (pp. 185–202). American Psychological Association.

Eyal, T., Liberman, N., & Trope, Y. (2008). Judging near and distant virtue and vice. *Journal of Experimental Social Psychology, 44*, 1204–1209.

Fannes, G., & Claeys, A.-S. (2022). Putting empathic feelings into words during times of crisis: The impact of differential verbal empathy expressions on organizational reputation. *Public Relations Review, 48*(2), 102183.

Felmlee, D., Sweet, E., & Sinclair, H. C. (2012). Gender rules: Same- and cross-gender friendships norms. *Sex Roles, 66*(7–8), 518–529.

Fiske, S. T. (1998). Stereotyping, prejudice, and discrimination. In D. T. Gilbert, S. T. Fiske, & G. Lindzey (Eds.), *The handbook of social psychology* (4th ed., pp. 357–411). McGraw-Hill.

Fiske, S. T., Cuddy, A. J. C., & Glick, P. (2007). Universal dimensions of social cognition: Warmth and competence. *Trends in Cognitive Sciences, 11*, 77–83.

Fiske, S. T., Cuddy, A. J. C., Glick, P., & Xu, J. (2002). A model of (often mixed) stereotype content: Competence and warmth respectively follow from perceived status and competition. *Journal of Personality and Social Psychology, 82*, 878–902.

Fiske, S. T., Xu, J., Cuddy, A. C., & Glick, P. (1999). (Dis)respecting versus (dis)liking: Status and interdependence predict ambivalent stereotypes of competence and warmth. *Journal of Social Issues, 55*(3), 473–489.

Ganster, T., Eimler, S. C., & Krämer, N. C. (2012). Same same but different!? The differential influence of smilies and emoticons on person perception. *Cyberpsychology, Behavior, and Social Networking, 15*(4), 226–230.

Gao, B., & VanderLaan, D. P. (2020). Cultural influences on perceptions of emotions depicted in emojis. *Cyberpsychology, Behavior, and Social Networking, 23*(8), 567–570.

Gao, Y. L., & Mattila, A. S. (2014). Improving consumer satisfaction in green hotels: The roles of perceived warmth, perceived competence, and CSR motive. *International Journal of Hospitality Management, 42*, 20–31.

Gaube, S., Tsivrikos, D., Dollinger, D., & Lermer, E. (2018). How a smiley protects health: A pilot intervention to improve hand hygiene in hospitals by activating injunctive norms through emoticons. *PLOS ONE, 13*(5), e0197465.

Gino, F., & Galinsky, A. D. (2012). Vicarious dishonesty: When psychological closeness creates distance from one's moral compass. *Organizational Behavior and Human Decision Processes, 119*(1), 15–26.

Glick, P., & Fiske, S. T. (2001). Ambivalent sexism. In *Advances in experimental social psychology* (Vol. 33, pp. 115–188). Elsevier.

Glikson, E., Cheshin, A., & van Kleef, G. A. (2018). The dark side of a smiley: Effects of smiling emoticons on virtual first impressions. *Social Psychological and Personality Science, 9*(5), 614–625.

Grolleau, G., Ibanez, L., & Mzoughi, N. (2023). The effect of distance on the moral judgment of environmental wrongdoings. *Business Strategy and the Environment, 32*(4), 1504–1512.

Hall, E. T. (1976). *Beyond culture*. Anchor.

Hancock, P. M., Hilverman, C., Cook, S. W., & Halvorson, K. M. (2024). Emoji as gesture in digital communication: Emoji improve comprehension of indirect speech. *Psychonomic Bulletin & Review, 31*(3), 1335–1347.

Heide, J. B., & Wathne, K. H. (2006). Friends, businesspeople, and relationship roles: A conceptual framework and a research agenda. *Journal of Marketing, 70*(3), 90–103.

Herring, S., & Dainas, A. (2017). "Nice picture comment!" Graphicons in Facebook comment threads. In *Proceedings of the 50th Hawaii International Conference on System Sciences* (pp. 2185–2194).

Hoegg, J., & Lewis, M. V. (2011). The impact of candidate appearance and advertising strategies on election results. *Journal of Marketing Research, 48*(5), 895–909.

Hsieh, S. H., & Tseng, T. H. (2017). Playfulness in mobile instant messaging: Examining the influence of emoticons and text messaging on social interaction. *Computers in Human Behavior, 69*, 405–414.

Hu, Y., & Pang, A. (2018). The indigenization of crisis response strategies in the context of China. *Chinese Journal of Communication, 11*(1), 105–128.

Huang, L.-S. (2015). Trust in product review blogs: The influence of self-disclosure and popularity. *Behaviour & Information Technology, 34*(1), 33–44.

Huang, Y.-H. (2006). Crisis situations, communication strategies, and media coverage: A multicase study revisiting the communicative response model. *Communication Research, 33*(3), 180–205.

Huang, Y.-H. C., Wu, F., & Cheng, Y. (2016). Crisis communication in context: Cultural and political influences underpinning Chinese public relations practice. *Public Relations Review, 42*(1), 201–213.

Huff, C., & Tingley, D. (2015). "Who are these people?" Evaluating the demographic characteristics and political preferences of MTurk survey respondents. *Research & Politics, 2*(3), 2053168015604648.

Janssen, J. H., IJsselsteijn, W. A., & Westerink, J. H. D. M. (2014). How affective technologies can influence intimate interactions and improve social connectedness. *International Journal of Human-Computer Studies, 72*(1), 33–43.

Jin, Y., Pang, A., & Cameron, G. T. (2007). Integrated crisis mapping: Toward a publics-based, emotion-driven conceptualization in crisis communication. *Sphera Publica, 7*, 81–95.

Jones, L. L., Wurm, L. H., Norville, G. A., & Mullins, K. L. (2020). Sex differences in emoji use, familiarity, and valence. *Computers in Human Behavior, 108*, 106305.

Judd, C. M., James-Hawkins, L., Yzerbyt, V., & Kashima, Y. (2005). Fundamental dimensions of social judgment: Understanding the relations between judgments of competence and warmth. *Journal of Personality and Social Psychology, 89*(6), 899–913.

Kavanagh, B. (2016). Emoticons as a medium for channeling politeness within American and Japanese online blogging communities. *Language & Communication, 48*, 53–65.

Kaye, L. K., Malone, S. A., & Wall, H. J. (2017). Emojis: Insights, affordances, and possibilities for psychological science. *Trends in Cognitive Sciences, 21*(2), 66–68.

Kaye, L. K., Wall, H. J., & Malone, S. A. (2016). "Turn that frown upside-down": A contextual account of emoticon usage on different virtual platforms. *Computers in Human Behavior, 60*, 463–467.

Kelly, R., & Watts, L. (2015, September). Characterising the inventive appropriation of emoji as relationally meaningful in mediated close personal relationships. In *Experiences of technology appropriation: Unanticipated users, usage, circumstances, and design*.

Kervyn, N., Fiske, S. T., & Malone, C. (2012). Brands as intentional agents framework: How perceived intentions and ability can map brand perception. *Journal of Consumer Psychology, 22*(2), 166–176.

Kumar, C., Marston, S., & Sen, R. (2020). Cyber-physical systems (CPS) security: State of the art and research opportunities for information systems academics. *Communications of the Association for Information Systems, 47*(1), 678–696.

Lan, M., Peng, M., Zhao, X., Chen, H., Liu, Y., & Yang, J. (2022). Facial attractiveness is more associated with individual warmth than with competence: Behavioral and neural evidence. *Social Neuroscience, 17*(3), 225–235.

Leong, A. D., & Ho, S. S. (2021). Perceiving online public opinion: The impact of Facebook opinion cues, opinion climate congruency, and source credibility on speaking out. *New Media & Society, 23*(9), 2495–2515.

Leung, C. H., & Chan, W. T. Y. (2017). Using emoji effectively in marketing: An empirical study. *Journal of Digital & Social Media Marketing, 5*(1), 76–95.

Li, B., Nan, Y., & Yao, R. (2021). Warmth or competence? The effects of cool and cuteness on the perceived quality of digital products. *Asia Pacific Journal of Marketing and Logistics, 34*(9), 1880–1904.

Li, X. (Shirley), Chan, K. W., & Kim, S. (2019). Service with emoticons: How customers interpret employee use of emoticons in online service encounters. *Journal of Consumer Research, 45*(5), 973–987.

Li, X., & Sung, Y. (2021). Anthropomorphism brings us closer: The mediating role of psychological distance in user–AI assistant interactions. *Computers in Human Behavior, 118*, 106680.

Liberman, N., & Trope, Y. (2008). The psychology of transcending the here and now. *Science, 322*(5905), 1201–1205.

Liberman, N., & Trope, Y. (2014). Traversing psychological distance. *Trends in Cognitive Sciences, 18*(7), 364–369.

Liberman, N., Trope, Y., McCrea, S. M., & Sherman, S. J. (2007). The effect of level of construal on the temporal distance of activity enactment. *Journal of Experimental Social Psychology, 43*(1), 143–149.

Lin, T. S., & Luo, Y. (2023). Emoji and visual complexity in health information design: A moderated serial mediation model. *Telematics and Informatics, 85*, 102065.

Lin, Y.-H., & Chu, M. G. (2021). Online communication self-disclosure and intimacy development on Facebook: The perspective of uses and gratifications theory. *Online Information Review, 45*(6), 1167–1187.

Liu, D., Lv, Y., & Huang, W. (2023). How do consumers react to chatbots' humorous emojis in service failures. *Technology in Society, 73*, 102244.

Liviatan, I., Trope, Y., & Liberman, N. (2008). Interpersonal similarity as a social distance dimension: Implications for perception of others' actions. *Journal of Experimental Social Psychology, 44*(5), 1256–1269.

Lo, C. J., Tsarenko, Y., & Tojib, D. (2019). Does consumer-firm affiliation matter? The impact of social distance on consumers' moral judgments. *Psychology & Marketing, 36*(12), 1215–1225.

Logi, L., & Zappavigna, M. (2023). A social semiotic perspective on emoji: How emoji and language interact to make meaning in digital messages. *New Media & Society, 25*(12), 3222–3246.

Lohmann, K., Pyka, S. S., & Zanger, C. (2017). The effects of smileys on receivers' emotions. *Journal of Consumer Marketing, 34*(6), 489–495.

Lotfinejad, N., Tartari, E., Sauser, J., Fankhauser-Rodriguez, C., Pires, D., & Pittet, D. (2022). Are emojis ready to promote the WHO 5 moments for hand hygiene in healthcare? *Antimicrobial Resistance & Infection Control, 11*(1), 127.

Lu, Y., & Huang, Y. H. C. (2018). Getting emotional: An emotion-cognition dual-factor model of crisis communication. *Public Relations Review, 44*(1), 98–107.

Luangrath, A. W., Peck, J., & Barger, V. A. (2017). Textual paralanguage and its implications for marketing communications. *Journal of Consumer Psychology, 27*(1), 98–107.

Ludwig, V. U., Berry, B., Cai, J. Y., Chen, N. M., Crone, D. L., & Platt, M. L. (2022). The impact of disclosing emotions on ratings of interpersonal closeness, warmth, competence, and leadership ability. *Frontiers in Psychology, 13*, 989826.

Luttrell, A., Sacchi, S., & Brambilla, M. (2022). Changing impressions in competence-oriented domains: The primacy of morality endures. *Journal of Experimental Social Psychology, 98*, 104246.

Marengo, D., Settanni, M., & Giannotta, F. (2019). Development and preliminary validation of an image-based instrument to assess depressive symptoms. *Psychiatry Research, 279*, 180–185.

Mason, W., & Suri, S. (2012). Conducting behavioral research on Amazon's Mechanical Turk. *Behavior Research Methods, 44*(1), 1–23.

McShane, L., Pancer, E., Poole, M., & Deng, Q. (2021). Emoji, playfulness, and brand engagement on Twitter. *Journal of Interactive Marketing, 53*(1), 96–110.

Miller, H., Kluver, D., Thebault-Spieker, J., Terveen, L., & Hecht, B. (2017, May 3). Understanding emoji ambiguity in context: The role of text in emoji-related miscommunication. In *Proceedings of the Eleventh International AAAI Conference on Web and Social Media*.

Min, H. (Kelly), & Hu, Y. (2022). Revisiting the effects of smile intensity on judgments of warmth and competence: The role of industry context. *International Journal of Hospitality Management, 102*, 103152.

Mitropoulos, S., Patsos, D., & Douligeris, C. (2006). On incident handling and response: A state-of-the-art approach. *Computers & Security, 25*(5), 351–370.

Ngai, C. S. B., & Jin, Y. (2016). The effectiveness of crisis communication strategies on Sina Weibo in relation to Chinese publics' acceptance of these strategies. *Journal of Business and Technical Communication, 30*(4), 451–494.

Ordoñez, M. A. M., & Nekmat, E. (2019). "Tipping point" in the SoS? Minority-supportive opinion climate proportion and perceived hostility in uncivil online discussion. *New Media & Society, 21*(11–12), 2483–2504.

Pflug, J. (2011). Contextuality and computer-mediated communication: A cross cultural comparison. *Computers in Human Behavior, 27*(1), 131–137.

Provine, R. R., Spencer, R. J., & Mandell, D. L. (2007). Emotional expression online: Emoticons punctuate website text messages. *Journal of Language and Social Psychology, 26*(3), 299–307.

Qiu, L., Wang, W., & Pang, J. (2023). The persuasive power of emoticons in electronic word-of-mouth communication on social networking services. *MIS Quarterly, 47*(2), 511–534.

Ray, E. C., & Merle, P. F. (2021). Disgusting face, disease-ridden place?: Emoji influence on the interpretation of restaurant inspection reports. *Health Communication, 36*(14), 1867–1878.

Rezazade Mehrizi, M. H., Nicolini, D., & Rodon, J. (2022). How do organizations learn from information system incidents? A synthesis of the past, present, and future. *MIS Quarterly, 46*(1), 531–590.

Riordan, M. A., & Glikson, E. (2020). On the hazards of the technology age: How using emojis affects perceptions of leaders. *International Journal of Business Communication*.

Schoofs, L., & Claeys, A.-S. (2021). Communicating sadness: The impact of emotional crisis communication on the organizational post-crisis reputation. *Journal of Business Research, 130*, 271–282.

Shandilya, E., Fan, M., & Tigwell, G. W. (2022). "I need to be professional until my new team uses emoji, GIFs, or memes first": New collaborators' perspectives on using non-textual communication in virtual workspaces. In *Proceedings of the 2022 CHI Conference on Human Factors in Computing Systems* (pp. 1–13).

Shankar, R., Wang, L., Gunasti, K., & Li, H. (2024). Nonverbal peer feedback and user contribution in online forums: Experimental evidence of the role of attribution and emotions. *Journal of the Association for Information Systems, 25*(2), 267–303.

Sitoh, M. K., & Cavusoglu, H. (2012). The effect of customers' emotion on service recovery strategy in IT service failures. In *ICIS 2012 Proceedings* (Paper 11). https://aisel.aisnet.org/icis2012/proceedings/ResearchInProgress/11

Skovholt, K., Grønning, A., & Kankaanranta, A. (2014). The communicative functions of emoticons in workplace e-mails: :-). *Journal of Computer-Mediated Communication, 19*(4), 780–797.

Son, J., & Negahban, A. (2023). Examining the impact of emojis on disaster communication: A perspective from the uncertainty reduction theory. *AIS Transactions on Human-Computer Interaction, 15*(4), 377–413.

Stephens, K. K., Waller, M. J., & Sohrab, S. G. (2019). Over-emoting and perceptions of sincerity: Effects of nuanced displays of emotions and chosen words on credibility perceptions during a crisis. *Public Relations Review, 45*(5), 101841.

Tan, C.-W., Benbasat, I., & Cenfetelli, R. T. (2016). An exploratory study of the formation and impact of electronic service failures. *MIS Quarterly, 40*(1), 1–29.

ten Brinke, L., & Adams, G. S. (2015). Saving face? When emotion displays during public apologies mitigate damage to organizational performance. *Organizational Behavior and Human Decision Processes, 130*, 1–12.

Thomas, K. A., & Clifford, S. (2017). Validity and Mechanical Turk: An assessment of exclusion methods and interactive experiments. *Computers in Human Behavior, 77*, 184–197.

Togans, L. J., Holtgraves, T., Kwon, G., & Morales Zelaya, T. E. (2021). Digitally saving face: An experimental investigation of cross-cultural differences in the use of emoticons and emoji. *Journal of Pragmatics, 186*, 277–288.

Triandis, H. C. (1995). A theoretical framework for the study of diversity. In M. M. Chemers, S. Oskamp, & M. A. Costanzo (Eds.), *Diversity in organizations: New perspectives for a changing workplace* (pp. 11–36). Sage Publications, Inc.

Triche, J., & Walden, E. (2018). The use of impression management strategies to manage stock market reactions to IT failures. *Journal of the Association for Information Systems, 19*(4), 333–357.

Tsichla, E., Lappas, G., Triantafillidou, A., & Kleftodimos, A. (2023). Gender differences in politicians' Facebook campaigns: Campaign practices, campaign issues and voter engagement. *New Media & Society, 25*(11), 2918–2938.

Tumasjan, A., Strobel, M., & Welpe, I. (2011). Ethical leadership evaluations after moral transgression: Social distance makes the difference. *Journal of Business Ethics, 99*, 609–622.

Usunier, J. C., & Roulin, N. (2010). The influence of high-and low-context communication styles on the design, content, and language of business-to-business web sites. *The Journal of Business Communication (1973)*, *47*(2), 189-227.

Utz, S., Schultz, F., & Glocka, S. (2013). Crisis communication online: How medium, crisis type and emotions affected public reactions in the Fukushima Daiichi nuclear disaster. *Public Relations Review, 39*(1), 40–46.

van der Meer, T. G. L. A., & Verhoeven, J. W. M. (2014). Emotional crisis communication. *Public Relations Review, 40*(3), 526–536.

Wang, K. Y., Chih, W. H., & Honora, A. (2023). How the emoji use in apology messages influences customers' responses in online service recoveries: The moderating role of communication style. *International Journal of Information Management, 69*, 1–15.

Wang, W., Zhao, Y., Qiu, L., & Zhu, Y. (2014). Effects of emoticons on the acceptance of negative feedback in computer-mediated communication. *Journal of the Association for Information Systems, 15*(8), 454–483.

Weidman, A. C., Sowden, W. J., Berg, M. K., & Kross, E. (2020). Punish or protect? How close relationships shape responses to moral violations. *Personality and Social Psychology Bulletin, 46*(5), 693–708.

Weiner, B. (1986). Attribution, emotion, and action. In R. M. Sorrentino & E. T. Higgins (Eds.), *Handbook of motivation and cognition: Foundations of social behavior* (pp. 281–312). Guilford Press.

Weisberg, Y. J., DeYoung, C. G., & Hirsh, J. B. (2011). Gender differences in personality across the ten aspects of the Big Five. *Frontiers in Psychology, 2*(178), 1–11.

Werlinger, R., Muldner, K., Hawkey, K., & Beznosov, K. (2010). Preparation, detection, and analysis: The diagnostic work of IT security incident response. *Information Management & Computer Security, 18*(1), 26–42.

Willoughby, J. F., & Liu, S. (2018). Do pictures help tell the story? An experimental test of narrative and emojis in a health text message intervention. *Computers in Human Behavior, 79*, 75–82.

Wong, A., Wei, L., Wang, X., & Tjosvold, D. (2017). Guanxi's contribution to commitment and productive conflict between banks and small and medium enterprises in China. *Group & Organization Management, 42*(6), 819–845.

Xiao, Y., Hudders, L., Claeys, A.-S., & Cauberghe, V. (2018). The impact of expressing mixed valence emotions in organizational crisis communication on consumer's negative word-of-mouth intention. *Public Relations Review*, *44*(5), 794–806.

Xu, H., Leung, A., & Yan, R.-N. (2013). It is nice to be important, but it is more important to be nice: Country-of-origin's perceived warmth in product failures. *Journal of Consumer Behaviour, 12*(4), 285–292.

Yang, X., Hou, J., & Arth, Z. W. (2021). Communicating in a proper way: How people from high-/low-context culture choose their media for communication. *International Communication Gazette, 83*(3), 238–259.

Zhu, L., He, Y., Chen, Q., & Hu, M. (2017). It's the thought that counts: The effects of construal level priming and donation proximity on consumer response to donation framing. *Journal of Business Research, 76*, 44–51.

Zhu, Z., Liu, F., & Chen, H. (2020). Warmth or competence? The influence of advertising appeal and self-construal on consumer-brand identification and purchase intention. *Acta Psychologica Sinica, 52*(3), 357–370.

Appendix: Supplementary Material

A. Sample stimuli for Study 1 and the English translation

Translated text: Due to a system abnormality, we are experiencing a situation where the service cannot be performed normally. We are very sorry for the inconvenience [Emoji]. However, the technical staff is fixing the problem now. We will resume service as soon as possible. Thank you for your understanding.

B. Sample stimuli for Study 2

Translated version: Regarding recent reports about the management of Xiao Xin's facial data issue, we understand user concerns [Emoji], and have formed a team to thoroughly investigate this issue. We will inform you of any new developments.

C. Stimuli for Study 3

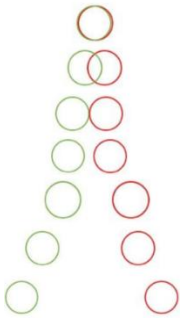
No Emoji, Official account condition

Emoji, Official account condition

No Emoji, CEO account condition

Emoji, CEO account condition

Detailed items for scales used across studies

Scale	Items	Source
Attitude of the company	After reading the statement, I felt good about the company. After reading the statement, I admire the company. After reading the statement, I believe in the company	Chun, 2005
Psychological distance (Inclusion of Other in the Self)	Please choose an image that describes your relationship with the company. The green circle represents you and the red circle represents the company. 	Aron et al., 1992
Anger	The way the company handled this technical glitch makes you feel - infuriating - angry - annoying	Jin et al., 2007
Perceived warmth	I think this company is very kind. I think this company is very friendly. I think this company is very amiable. I think this company is very warm.	Fiske et al., 2002b
Perceived competence	I think this company is very skilled. I think this company is very efficient. I think this company is very intelligent. i think this company is very capable. I think this company is competent.	Belanche et al., 2021; Cuddy et al., 2004

Detailed Statistical Assumptions Tests of Study 1

1. Normality Assessment

Q-Q plot shows good alignment with normal distribution

Minor deviations only at extreme values

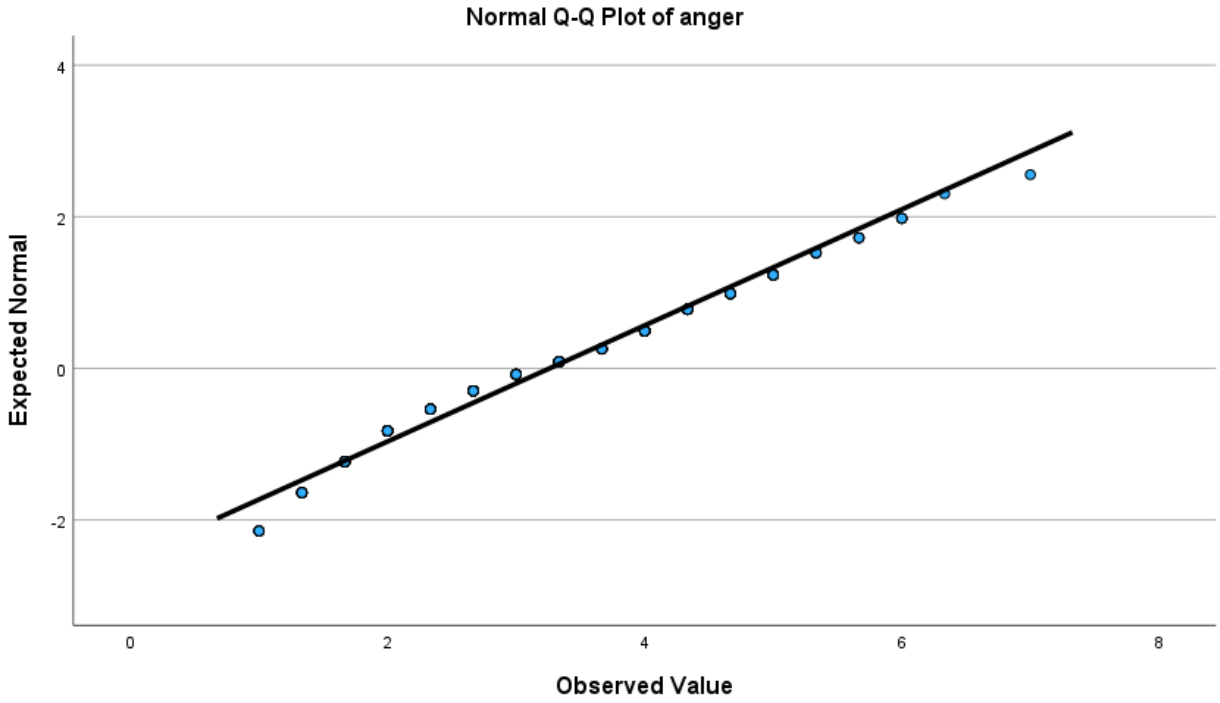
Observation points follow the diagonal line closely

a) Anger

Skewness = .320 (SE = .178)

Kurtosis = -.636 (SE = .354)

Shapiro-Wilk = .969 (p < .001)

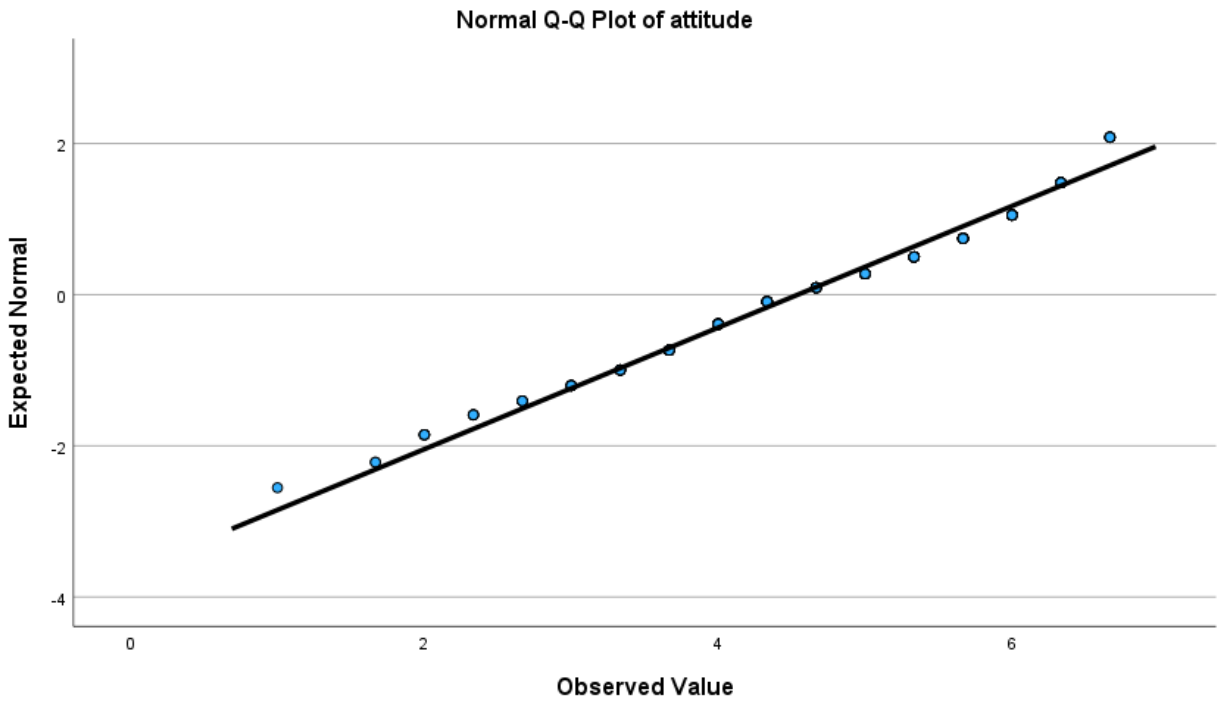


b) Attitude

Skewness = -.281 (SE = .178)

Kurtosis = -.502 (SE = .354)

Shapiro-Wilk = .971 (p < .001)

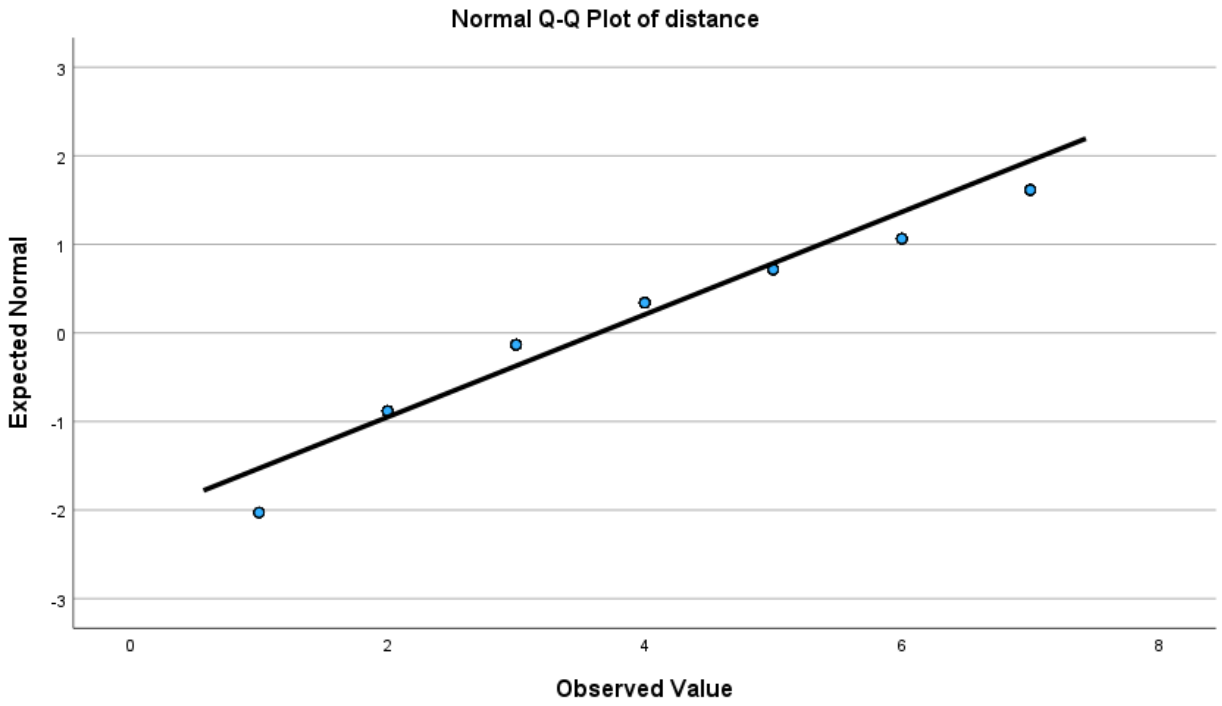


c) Distance

Skewness = .612 (SE = .178)

Kurtosis = -.739 (SE = .354)

Shapiro-Wilk = .889 ($p < .001$)



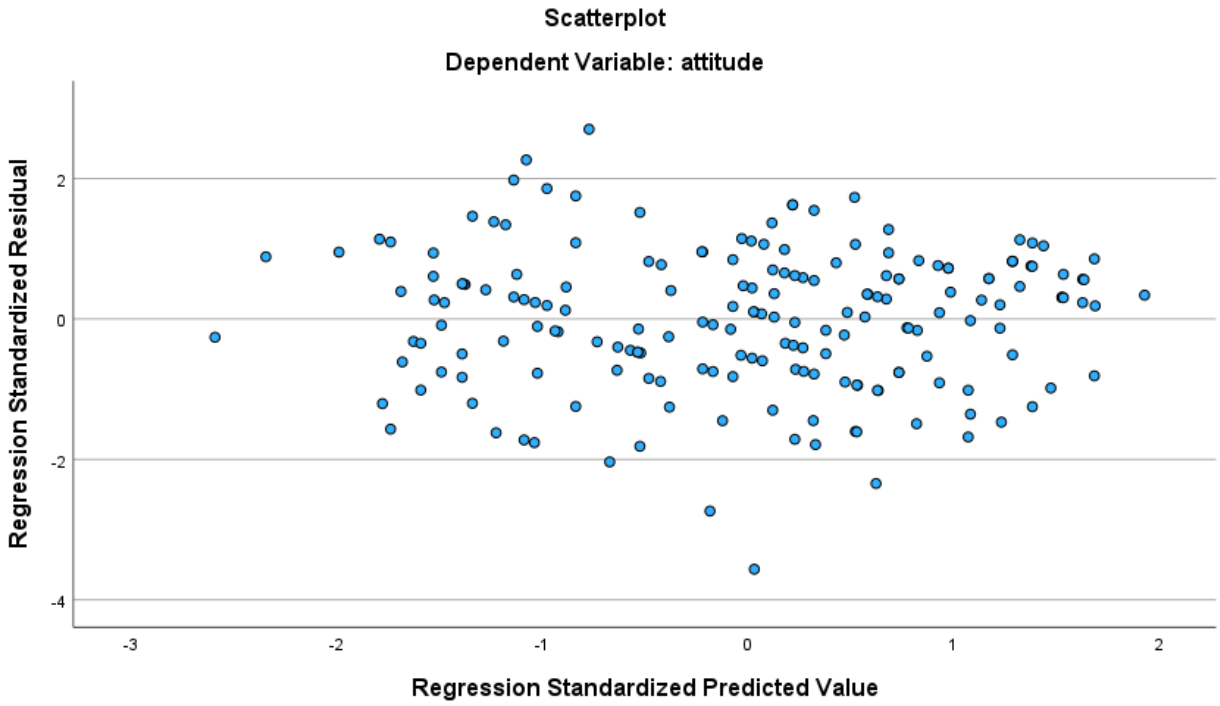
2. Multicollinearity Statistics

- emoji: Tolerance = .980, VIF = 1.021
- source: Tolerance = .999, VIF = 1.002

- anger: Tolerance = .960, VIF = 1.042
- distance: Tolerance = .942, VIF = 1.062
- Condition Indices and Eigenvalues: Highest condition index = 8.272 (below critical threshold of 30), Eigenvalues range: 3.924 to 0.057, No concerning variance proportions observed
- All values well within acceptable ranges (VIF < 10, Tolerance > 0.1)

3. Homoscedasticity Assessment

- Scatterplot of standardized residuals vs. predicted values shows:
- Random scatter of points around zero
- No obvious patterns or systematic variation
- Relatively consistent spread across predicted values
- Few potential outliers beyond ±3 standard deviations



4. Model Fit Statistics
   - R^2 = .366 (36.6% of variance explained)
   - Adjusted R^2 = .352

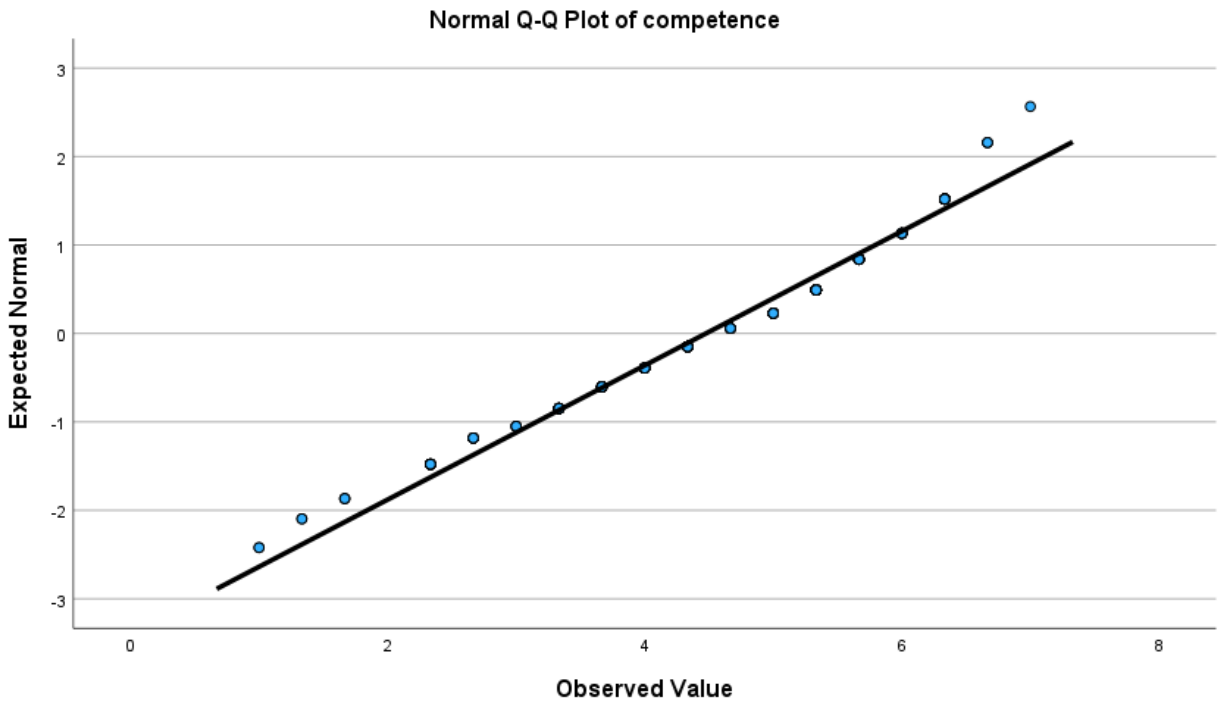
Detailed Statistical Assumptions Tests of Study 2

1. Normality Assessment:

- All variables show significant deviations from normality (Kolmogorov-Smirnov and Shapiro-Wilk tests p < .001)
- However, Q-Q plot for competence shows reasonably good alignment with normal distribution
- Given large sample size (n = 193), minor violations of normality are acceptable

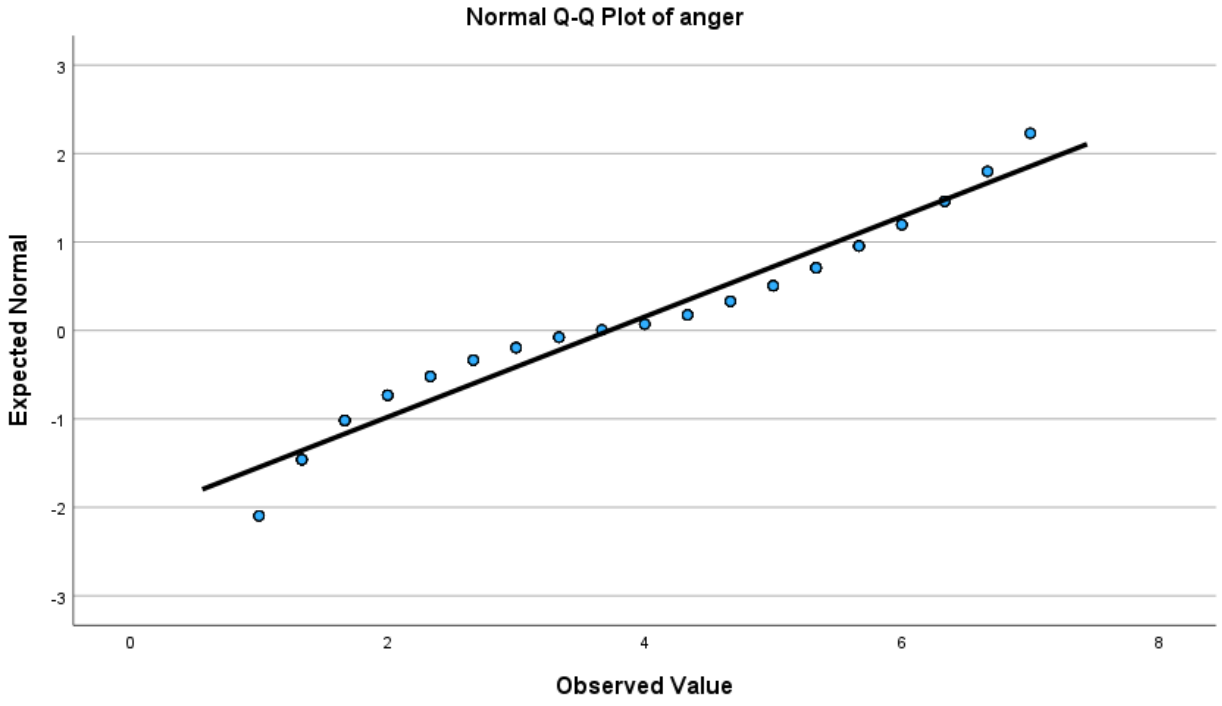
a) Competence

- Skewness: -.430 (SE = .175)
- Kurtosis: -.454 (SE = .348)
- Interpretation: Slightly negatively skewed, slightly platykurtic



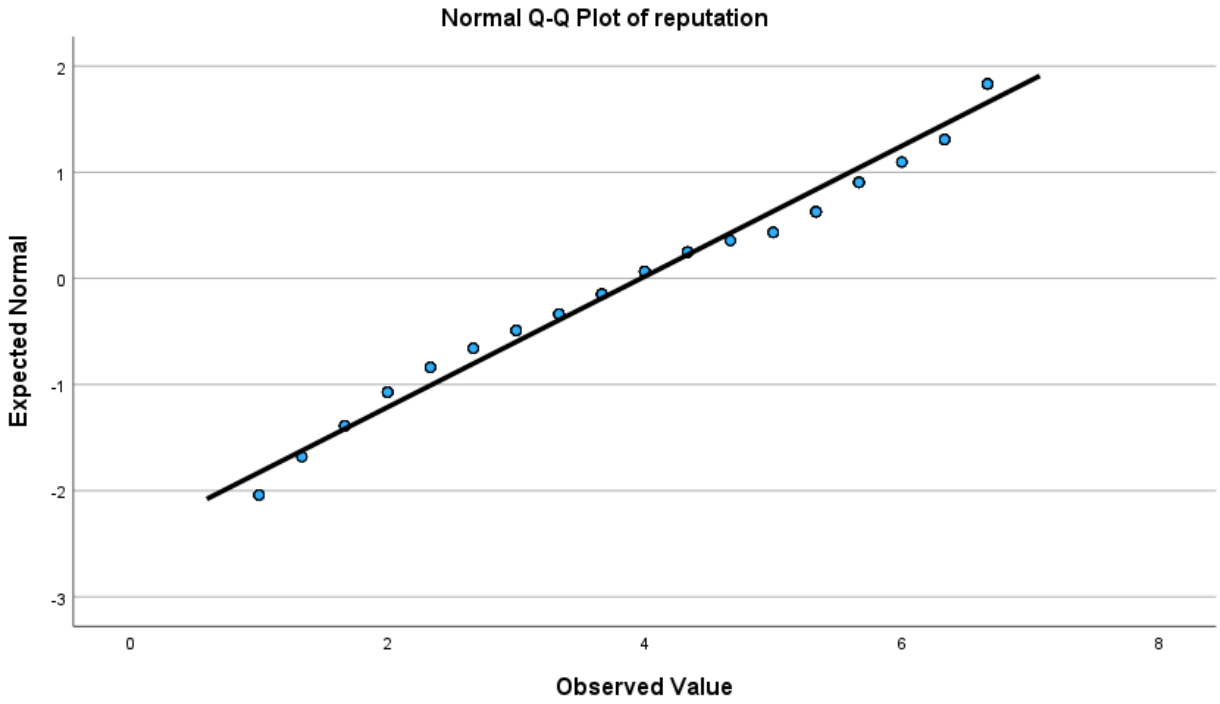
b) Anger

- Skewness: .107 (SE = .175)
- Kurtosis: -1.325 (SE = .348)
- Interpretation: Nearly symmetrical, notably platykurtic



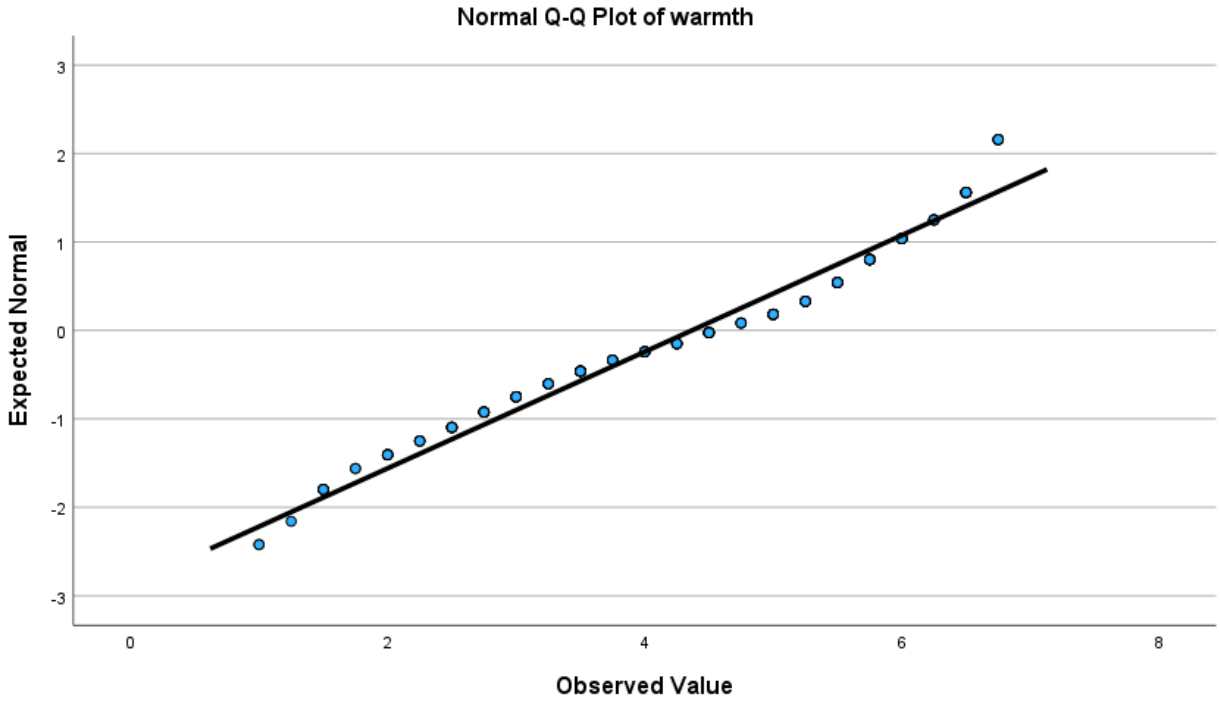
c) Attitude

- Skewness: .001 (SE = .175)
- Kurtosis: -1.072 (SE = .348)



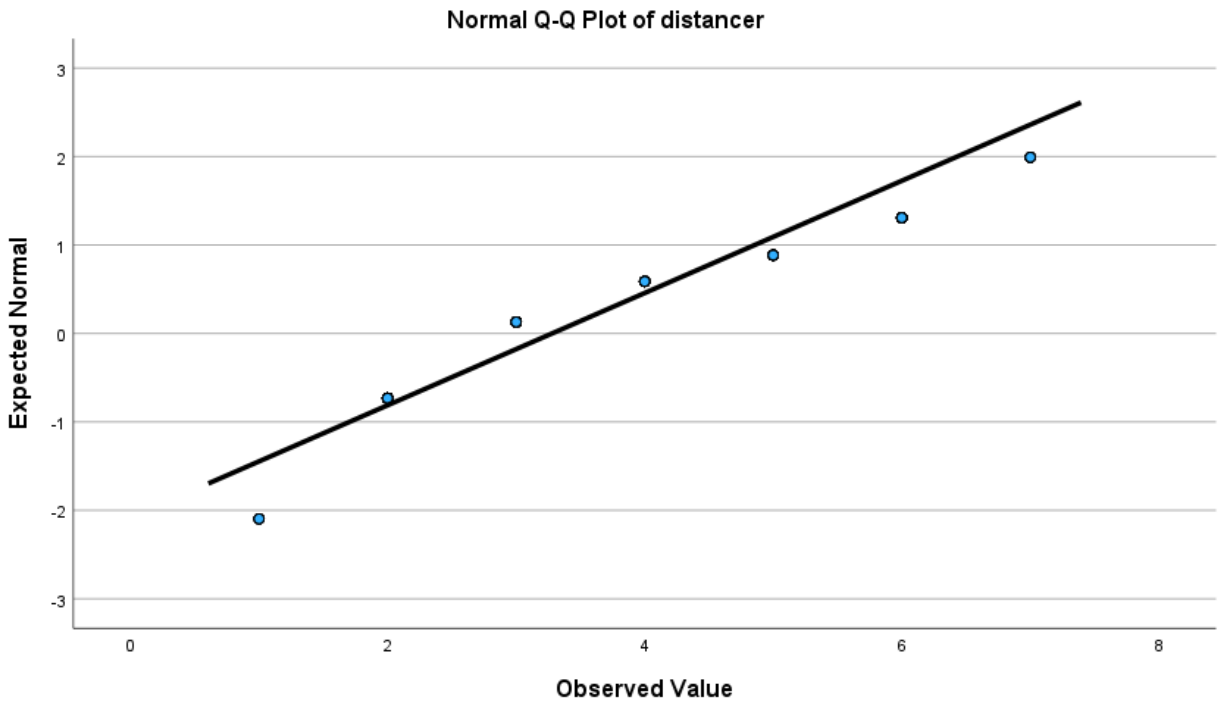
d) Warmth

- Skewness: -.321 (SE = .175)
- Kurtosis: -.976 (SE = .348)
- Interpretation: Slightly negatively skewed, moderately platykurtic



e) Distance

- Skewness: .900 (SE = .175)
- Kurtosis: -.311 (SE = .348)
- Interpretation: Moderately positively skewed, slightly platykurtic

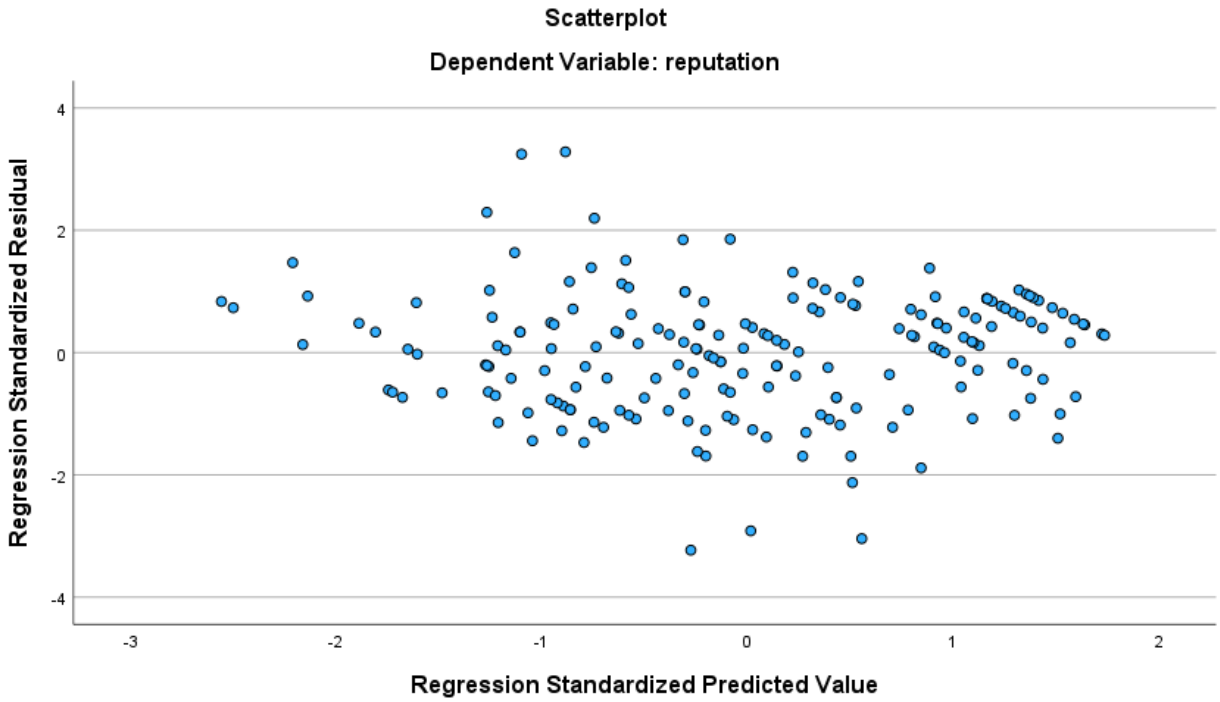


Overall Assessment:

- No severe violations of normality based on skewness and kurtosis
- All values fall within commonly accepted thresholds
- While statistical tests (K-S and S-W) show significant non-normality, the actual values of skewness and kurtosis suggest only mild to moderate departures from normality
- Given the sample size (n=193), these departures are not likely to significantly impact the regression results

2. Homoscedasticity:

- Scatterplot of standardized residuals vs. predicted values shows:
    - Generally random scatter of points
    - Slight funneling pattern suggesting mild heteroscedasticity
    - Points mostly fall within ±3 standard deviations
    - No clear systematic patterns



3. Multicollinearity:

- VIF values range from 1.223 to 2.596 (well below critical threshold of 10)
- Tolerance values range from .385 to .818 (above .10 threshold)
- Condition indices: Highest value is 19.932 (below critical threshold of 30)
- No serious multicollinearity concerns

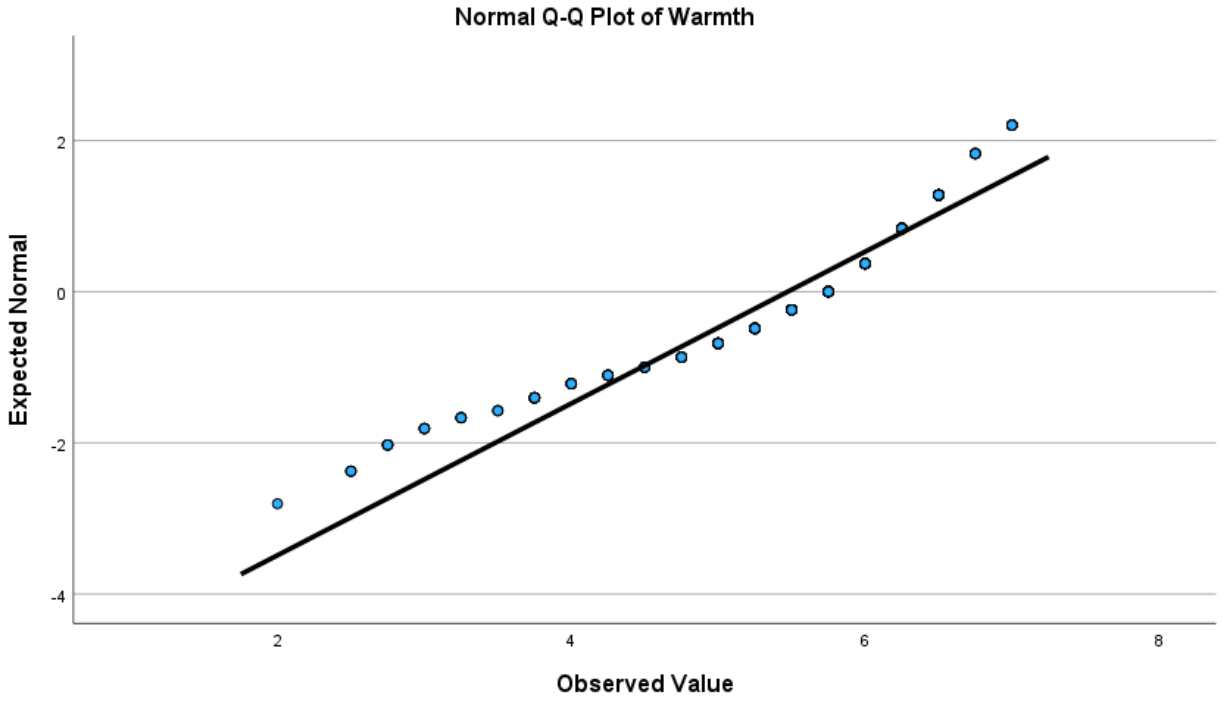
4. Model Fit Statistics
    - R^2 = .766 (76.6% of variance explained)
    - Adjusted R^2 = .759

Detailed Statistical Assumptions Tests of Study 3

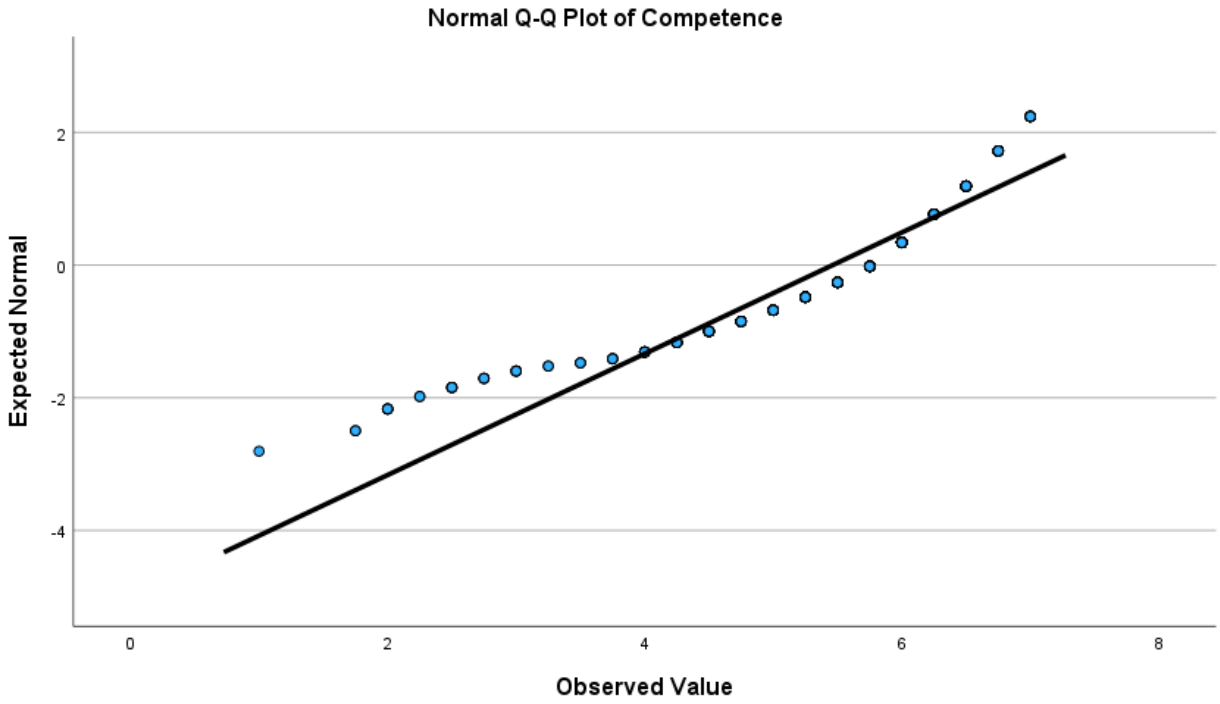
Detailed Statistical Assumptions Tests of Study 3

1. Normality Assessment:
   • Visual inspection of Q-Q plots suggests reasonable normality for key variables
   • Large sample size (n = 397) makes analysis robust to minor normality violations

a) Warmth
• Skewness: -1.121 (SE = .122)
• Kurtosis: .877 (SE = .244)
• Interpretation: Moderately negatively skewed, slightly leptokurtic



b) Competence
• Skewness: -1.432 (SE = .122)
• Kurtosis: 2.103 (SE = .244)
• Interpretation: Strongly negatively skewed, moderately leptokurtic

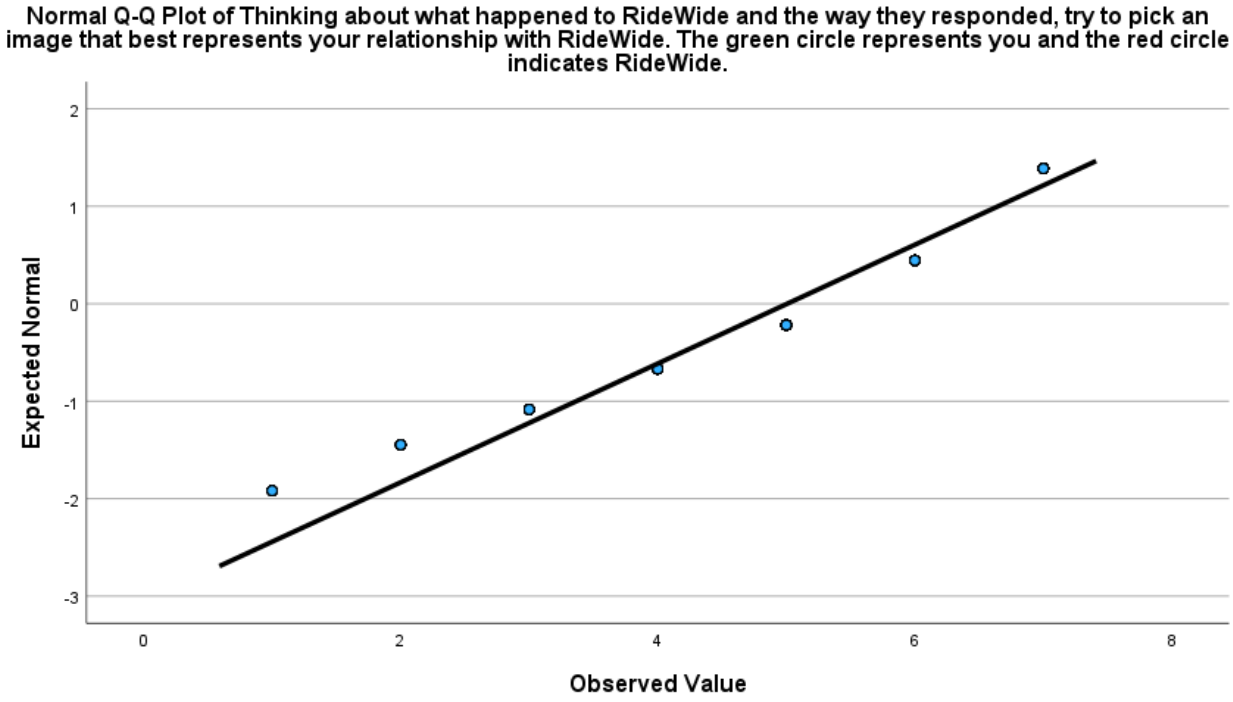


c) Distance

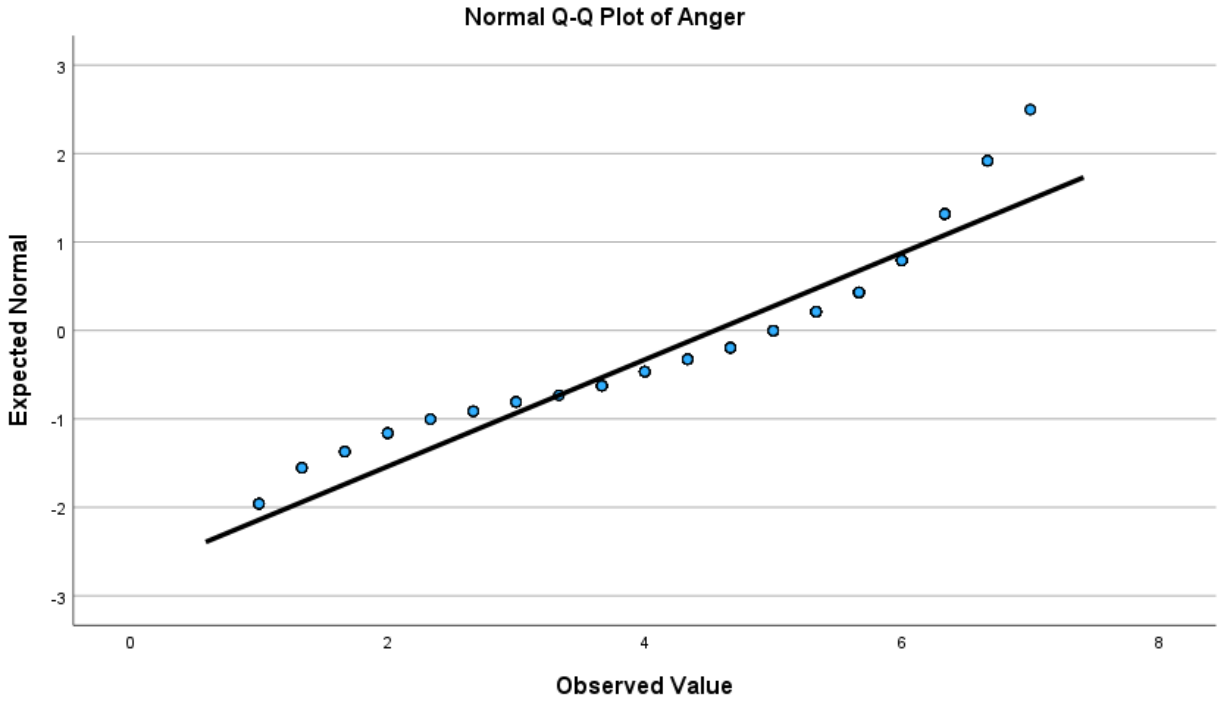
• Skewness: -.854 (SE = .122)

• Kurtosis: -.019 (SE = .244)

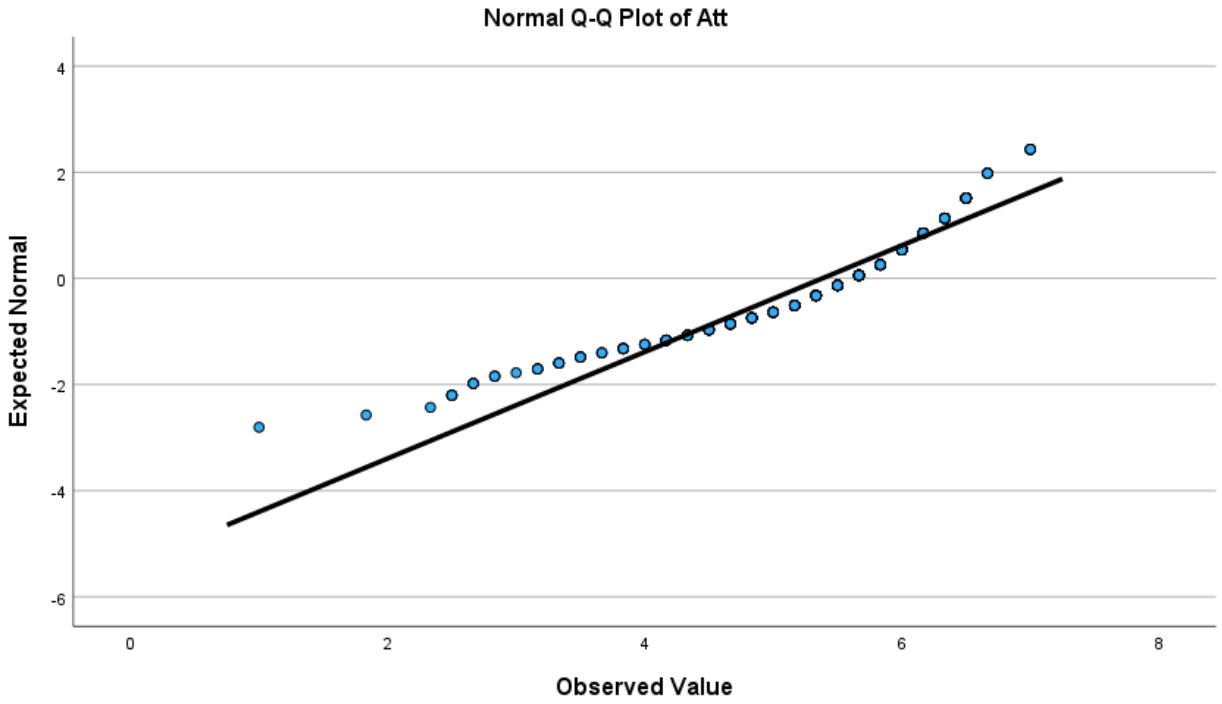
• Interpretation: Moderately negatively skewed



d) Anger
- Skewness: -.728 (SE = .122)
- Kurtosis: -.612 (SE = .244)
- Interpretation: Moderately negatively skewed, moderately platykurtic



e) Attitude
- Skewness: -1.251 (SE = .122)
- Kurtosis: 1.599 (SE = .244)
- Interpretation: Strongly negatively skewed, moderately leptokurtic

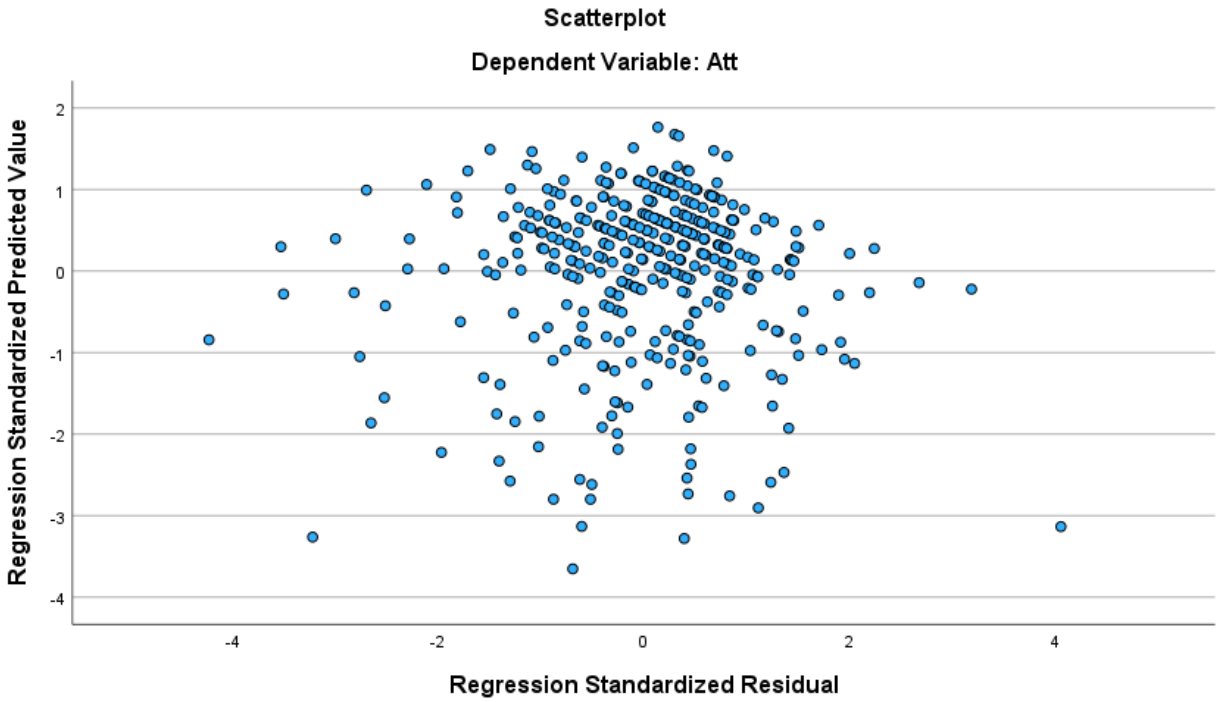


Overall Assessment:

The analysis of distributional characteristics revealed notable patterns across variables. Skewness values ranged from -1.432 to -.728, indicating a consistent negative skew across all measured constructs. The most pronounced negative skew was observed for competence (-1.432), followed by attitude (-1.251) and warmth (-1.121), with anger showing a more moderate negative skew (-.728). These values, while indicating some deviation from perfect symmetry, remain within acceptable bounds given our substantial sample size (n = 397).

Kurtosis values demonstrated greater variation, ranging from -.612 to 2.103, representing a mix of platykurtic and leptokurtic distributions. Specifically, anger exhibited a platykurtic distribution (-.612), indicating a flatter distribution than normal, while competence showed the highest leptokurtic tendency (2.103), suggesting more peaked distribution with heavier tails. Warmth (.877) and attitude (1.599) displayed moderate leptokurtic characteristics. Despite these variations, all kurtosis values remained within acceptable thresholds for statistical analysis, particularly considering our robust sample size. These distributional characteristics, while showing some departure from normality, do not pose significant concerns for our subsequent analyses, as regression techniques are generally robust to such moderate deviations.

2. Homoscedasticity:
   Scatterplot of standardized residuals vs. predicted values shows: Generally random scatter pattern, Points mostly contained within ±3 standard deviations, No clear violation of homoscedasticity assumption



3. Multicollinearity:
   - VIF values range from 1.006 to 2.448 (well below critical threshold of 10)
   - Tolerance values range from .409 to .994 (above .10 threshold)
   - Highest condition index: 30.423 (slightly above but very close to threshold of 30)
   - No severe multicollinearity concerns
4. Model Fit Statistics:
   - R^2 = .785 (78.5% of variance explained)
   - Adjusted R^2 = .782
   - Standard Error of Estimate = .46546

About the Authors

Soojin Roh. Soojin Roh (Ph.D., Syracuse University) is an assistant professor at Peking University HSBC Business School. Her research program centers around the strategic use of technology in corporate, marketing, and crisis communication. Her peer-reviewed work has appeared in international journals, including *Journal of Public Relations Research, Public Relations Review*, and *Cyberpsychology, Behavior, and Social Networking*, among others.

Shubin Yu. Shubin Yu (Ph.D., Ghent University) is an associate professor at BI Norwegian Business School. His research interests include Generative AI for business and consumer-technology interaction. His works have been published in international peer-reviewed journals such as *Journal of Consumer Psychology*, *International Journal of Research in Marketing, JMIR, International Journal of Information Management*, and *Journal of Business Research*.