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Emojis as heuristic cues: The multifaceted role of emojis in online service interactions

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Abstract

Recent technological advances have allowed businesses to adopt emojis when interacting with consumers. To gain in-depth theoretical and managerial insight into this trend, five pre-registered studies (1 field observation and four controlled experiments) indicate that emojis in digital communication work as heuristic cues that might have a differential effect depending on elaboration likelihood and outcome valence. Drawing on the Heuristic Information Processing and elaboration likelihood model, this research reveals that emojis can systematically influence consumers' elaboration. Findings indicate that low elaboration in positive encounters results in a positive heuristic cue boost (emojis improve customer evaluation). In turn, high elaboration on negative service outcomes makes the heuristic content relevant, such that positive (vs. negative) emojis will bring attention to and reinforce the interaction's positive (vs. negative) aspects. This research contributes to emerging studies on the role of emojis in digital communication.

1 | INTRODUCTION

Emojis are integrated into our everyday language, facilitating the emergence of a universal means of communication (Forbes, 2019; Stein, 2023). Every day, billions of emojis are exchanged between individuals across various message platforms, such as Twitter, Facebook, Whatsapp, Instagram, and LinkedIn (World Economic Forum, 2020). In practical terms, businesses are increasingly relying on emojis to improve the consumer's online journey (Hayes et al., 2020; Park & Sundar, 2015) and simultaneously to mitigate consumers' negative reactions (Liu et al., 2023), signaling social presence such as empathy (Ma & Wang, 2021) and sincerity (Wang et al., 2023). Interestingly, due to their ability to effectively communicate complex emotions and symbolic messages (Cherbonnier & Michinov, 2021; Kim et al., 2018; vom Brocke et al., 2020), the use of emojis has extended its reach from interpersonal communication to encompass commercial enterprises (Beck et al., 2014; DirectLync Insights, 2019; Li et al., 2019). To illustrate, Aloft Hotel in New York launched the "Text it. Get it" assistance whereby guests can request room service using emojis (e.g., can I have 🥃 & ☕ to Room 301) (HuffPost, 2015).

However, to date, much of our understanding of emojis remains limited. Prior studies mainly focused on the positive side of emojis, such as increasing persuasion (Das et al., 2019; Ge & Gretzel, 2018), relationship strength (Smith & Rose, 2020), and engagement (Davis et al., 2019; McShane et al., 2021). However, a critical question remains: to what extent do various emoji types, including expressions of happiness or sadness, influence elaboration and customer responses to favorable and unfavorable service outcomes? This paper aims to understand when emojis are beneficial and when they can backfire on the company-consumer interaction.

By drawing insights from the literature on the elaboration likelihood model (ELM) (Cacioppo & Petty, 1984; Petty & Briñol, 2011;

Srivastava & Kalro, 2019) and dual-processing theories (e.g., Aguirre-Rodriguez, 2013; Areni, 2003; Bhattacherjee & Sanford, 2006), this research suggests that emojis' influence on consumer responses to companies. Framing emojis as heuristic cues offers two complementary advantages: (1) the impact of heuristic cues can vary based on the extent to which individuals engage with the message, and (2) service characteristics, such as the clarity of the outcome (whether it is favorable or not), can systematically influence the depth of elaboration. Specifically, in situations of low elaboration, driven by favorable experiences, emojis should act as positive heuristic cues, enhancing overall evaluation regardless of their emotional valence—both positive and negative emojis can improve evaluation. Conversely, the heuristic's content becomes relevant in cases of high elaboration due to ambiguous service outcomes. A positive emoji should draw attention to and reinforce the positive aspects of the interaction, while a negative emoji should highlight the negative aspects of the interaction. This is because consumers are likely to attribute negative connotations to this behavior, which deviates from the typical expectations of customer-provider interactions (Bellezza et al., 2014; Chen & Wyer, 2020).

This research makes several substantive and theoretical contributions. First, in examining how emojis work as heuristic cues, we provide a more nuanced picture of how service providers can use emojis to improve service encounters. Second, this work shows that emojis' heuristic effects can magnify positive or negative aspects of the service encounter. When the service outcome is unambiguous (i.e., a service failure recovered by the service provider), low elaboration leads to a positive heuristic cue effect (both positive and negative emojis improve encounter evaluation). In contrast, high elaboration resulting from ambiguous service outcomes reinforces emojis' heuristic cue effect: positive (vs. negative) emojis will highlight the interaction's positive (vs. negative) aspects. Taken together, the current research adds to the body of recent studies (e.g., Béal & Grégoire, 2022; You et al., 2020) and practical knowledge by showcasing how consumers utilize emojis as heuristic cues in assessing online service encounters.

2 | CONCEPTUAL FRAMEWORK

2.1 | Emojis as heuristic cues in digital interactions

Emojis are defined as "a small digital image used to express an idea or emotion in emails, on the internet, or social media" (Oxford Learner Dictionary, n.d.). Emojis are nonverbal cues that enable individuals to express their feelings (e.g., Derks et al., 2008; Li et al., 2019). In general, emojis strengthen relationships (Smith & Rose, 2020), express humor (Derks et al., 2008), and speed up communication (Boutet et al., 2021).

Using emojis is more common in close social contexts (i.e., family or friends) compared to strangers or customer-firm interactions (Huang et al., 2008). However, brands have recently started using emojis in their digital interactions (e.g., Das et al., 2019; Tseng & Hsieh, 2019). For example, IKEA, Coca-Cola, and Taco Bell use emojis in social media posts (Venturebeat, 2016). Emojis are also increasingly prevalent in email marketing, with companies like booking.com, Skyscanner, and Amazon making extensive use of emojis in their email marketing campaigns (Nethunt, 2023). This is driven by the belief that emojis enhance consumer engagement and generate leads (DirectLync Insights, 2019).

The study of emojis in marketing is a growing research area, with evidence showing that emojis increase consumer engagement and satisfaction (Glikson et al., 2018; McShane et al., 2021). For example, sentiment analysis on Twitter indicates significantly different reactions to tweets with or without emojis (Novak et al., 2015). Previous research further suggests that emojis affects warmth and competence perceptions of the service provider (Li et al., 2019). Moreover, emojis amplify emotional expressions (Godard & Holtzman, 2022; Hewage et al., 2021) and enhance the persuasive message appeal (Das et al., 2019; Ge & Gretzel, 2018).

Consumers increasingly use emojis to express reactions to service providers by showing their sentiments about products and brands (😍 = *I love the staff at this restaurant*, or *This service makes me* 😠) (e.g., Aldunate & González-Ibáñez, 2017). In response to this trend, businesses have started incorporating emojis to enhance their messages and persuasion (Willoughby & Liu, 2018). For example, Das et al. (2019) demonstrate the positive impact of emojis in advertisements on purchase intention. However, it is essential to recognize that the effectiveness of emojis can vary depending on the specific audience and context.

Against this backdrop, this paper relies on heuristic information processing to provide a robust theoretical perspective to explain consumers' responses to emojis (e.g., Chaiken & Ledgerwood, 2012; Chaiken & Maheswaran, 1994). Consumers often rely on external cues to judge service providers and services in digital interactions. The heuristic information processing theory suggests that processing information often involves relying on cues that signal the quality or validity of information (Wirth et al., 2007). The ELM (Angst & Agarwal, 2009; Cacioppo & Petty, 1984) suggests that elaboration refers to the process where individuals "enrich" or add something of their own when they evaluate a message rather than simply encoding the content (e.g., Bartsch et al., 2018). We propose that emojis can trigger novel cognitive responses and influence the reinforcement or adjustment of pre-existing beliefs through heuristic processing.

2.2 | Emojis and dual processes for social presence

Social presence is defined as "the degree of salience, in mediated communication, of another person, and thus the salience of their interpersonal interactions" (Biocca et al., 2003, p. 460). Social presence is associated with the perception of human presence (Short et al., 1976) or warmth (Van Doorn et al., 2017).

There is ample research that has focused on the social presence of face-to-face interactions (e.g., Biocca et al., 2003). However, advanced technologies have enabled providers to deliver various services online, shifting the focus toward digital social presence (e.g., Van Doorn et al., 2017). Notably, there is an increasing interest in the effect of online social presence on digital interactions (e.g., Cyr

et al., 2009; Lin et al., 2021; Schroll, Schnurr, & Grewal, 2018; Walsh et al., 2022).

Prior research suggests that cues signaling social presence can enhance consumers' positive reactions to the service provider (e.g., Gefen & Straub, 2003; He et al., 2012). Additionally, in the context of digital communication, prior research has examined how heuristic cues affect consumers' responses (e.g., Araujo, 2018; Nowak & Biocca, 2003). For example, various examples illustrate how different marketing cues improve social presence, such as human voice on social media (Barcelos et al., 2018) or avatars' social presence (Etemad-Sajadi & Ghachem, 2015). Notably, recent research demonstrates the positive impact of emojis on social presence (Hayes et al., 2020). For example, Andel et al. (2020) indicate that emojis improve the online experience via social presence, as consumers feel that they are in the presence of another social entity (Boutet et al., 2021; Hayes et al., 2020). Thus, it is not surprising that companies rely on emojis to reduce negative reactions to service failures (Ketron & Naletelich, 2020; Wang et al., 2023).

However, several recent studies illustrate how various marketing cues might backfire, reducing the social presence if they lack situational or contextual congruence (Walsh et al., 2022). For example, in embarrassing consumption contexts during human-chatbot interactions, social presence diminishes due to feelings of being observed or negatively evaluated (Mozafari et al., 2021). Rafaeli et al. (2017) show that consumers prefer to interact with humans instead of automated responses in the context of negative outcomes. Therefore, emojis might not always be helpful, particularly considering service failures.

According to ELM (Chaiken & Maheswaran, 1994; Petty et al., 1983), individuals will take a central route based on the argument or the content of the message or rely on a peripheral route (i.e., message cues). Emojis are expected to be processed through a peripheral route that simplifies decision-making (Petty & Cacioppo, 1986), increasing social presence for a positive outcome and making the message more engaging (McShane et al., 2021). Relying on ELM, this paper suggests that the effect of emojis on social presence depends on the outcome valence: negative (vs. positive). If the outcome is positive, the message may appear more personal, highlighting the positive side of the interaction. Consequently, social presence might be enhanced (e.g., Cyr et al., 2009), increasing attention to the message and reinforcing the positive aspects of the encounter. On the contrary, in negative situations, emojis fail to enhance social presence because they act as a heuristic cue to draw attention to the negative side of the service encounter. In such cases, emojis might not only emphasize the negative outcome but also deviate from what is typically expected when negative service outcomes and emojis are combined.

Hypothesis 1. *Under a positive (vs. negative) service encounter, happy (vs. sad) face emojis increase (vs. decrease) social presence, which in turn improves customers' reactions.*

2.3 | Emojis and the Dual-Processing of service outcome

We argue that the way consumers process emojis may determine the degree of elaboration, such that when consumers process emojis as heuristic cues, they might see higher relevance in the details that are pertinent to the message's (central route) (Garretson & Burton, 2005; Lee & Koo, 2016). The ELM posits that an individual's motivation to elaborate on the message can be impacted by a variety of factors such as personal relevance (Kitchen et al., 2014; Petty et al., 1983), message content (Xie & Feng, 2023), message source (Markowitz, 2020), and message argument (Petty & Cacioppo, 1984). The peripheral route requires lower cognitive effort in processing the message. Thus, individuals are more likely to use the peripheral route when the service outcome is positive. Consequently, emojis result in a heuristic cue effect. On the contrary, individuals use a central route when the service outcome is negative or ambiguous (Haugtvedt & Petty, 1989).

More specifically, emojis may work as simple cues for a positive outcome, creating positive reactions without much cognitive effort (Guyer et al., 2019). For example, prior research suggests that observing positive cues, such as smiling or nodding, increases trust and agreement (Okubo et al., 2017). Thus, when the outcome is positive, emojis with a happy face will likely enhance the interaction. Since emojis work as cues, they influence the recipient's attitude and attention toward the message (Davis & Burton, 2016). For instance, emojis enhance media richness and convey positive emotions and intentions (Thompson & Filik, 2016). Following this rationale, emojis are predicted to improve consumer responses to positive outcomes.

Conversely, under unfavorable service interactions, emojis will make the content of the heuristic relevant. In other words, emojis with a sad face will reinforce the downside of the interaction. Simply put, when the provider's message conveys a negative outcome, emojis will focus attention on the negative outcome, thus increasing elaboration (Hager, 2019).

Thus, it is reasonable to suggest that when the service outcome is negative, individuals are more likely to use a central route while evaluating the message (Haugtvedt & Petty, 1989). Conversely, when elaboration likelihood is low, information processing occurs via the peripheral route, which requires little cognitive effort. With low elaboration, people's attitudes are relatively unaffected by argument quality (Petty & Briñol, 2011). As such, a message that includes emojis increases attention to both sides of the argument, resulting in increased processing motivations and boosting elaboration likelihood. This implies that unfavorable online service encounters will make the heuristic content more relevant, highlighting the heuristic role of emojis.

Hypothesis 2. *The outcome valence of the interaction (unambiguous vs. ambiguous) moderates the effect of emojis on consumers' reactions.*

Hypothesis 2a. *In the context of low elaboration resulting from unambiguous positive interactions, emojis magnify consumers' positive reactions to the service provider.*

Hypothesis 2b. *In the context of high elaboration resulting from ambiguous interactions, happy (sad) face emojis will bring attention to and reinforce positive (negative) aspects of the interaction affecting consumers reactions.*

3 | OVERVIEW OF THE STUDIES

Across five studies, our findings reveal that consumers exhibit more favorable reactions toward a message with emojis (vs. control), and such an effect is driven via social presence (Study 1). Studies 2 A–2B test the mediating effect of social presence using controlled environments. Study 3 tests the interaction effect between emojis when the outcome valence is positive (vs. negative). The findings of Study 3 show that low (vs. high) elaboration resulting from the valence of the service outcomes influences customers' responses to negative outcomes. Study 4 tests the moderated mediating effect of social presence. All studies except Study 2A[1] were pre-registered using the AsPredicted platform: Study 1 (#57076), Study 2B (#147347), Study 3 (#116690), Study 4 (#56982). The current research contributes to emerging research on the importance of social presence and emojis in online service encounters.

3.1 | Study 1. Pilot study

This exploratory study aims to show that emojis can enhance perceived social presence, thus improving consumers' positive reactions to the message sender.

3.1.1 | Procedure, sample, and measurements

This study employed a content analysis procedure adapted from Karagür et al. (2022) and Shuqair et al. (2023). Content analysis is an effective tool in marketing as it overcomes self-reported measures (e.g., Davis et al., 2011). Two independent coders, blind to the study objectives, gathered 210 social media posts by famous influencers on Instagram. They classify each post by emojis (if it had anthropomorphized emojis or none) and online engagement (number of likes). Moreover, three independent judges were asked to rate the emojis on a scale from 1 (low social presence) to 9 (high social presence). The social presence index was created using the averages of the three coders ($\alpha = .71$).

4 | RESULTS

A linear regression analysis was used to test if the post had anthropomorphized emojis (vs. none) that significantly predicted online engagement. The results indicate that the posts with anthropomorphized emojis influenced engagement 35.8% of the variance ($R^2 = .07$, $F_{(2,55)} = 7.30$, $p < .001$). Anthropomorphized emojis significantly predicted customer engagement ($\beta = .23$, $p < .001$), while the effect with non-emojis was not significant ($\beta = .09$, $p = .21$).

To test social presence as a mediator between the effect of emojis on online engagement, a mediation analysis was conducted using the Hayes (2017) macro-PROCESS with 5000 bootstrapped samples (Model 4). The results indicate a significant effect of emojis on social presence ($b = 0.30$, SE = 0.03, $t(208) = 7.82$, $p < .001$), and social presence positively predicted online engagement ($b = 27.12$, SE = 1.06, $t(208) = 2.69$, $p < .001$). The total effect ($b = 0.45$, SE = 0.20, 95% CI = [0.86–0.31]) and the indirect effect of social presence were significant ($b = 827.94$, SE = 324.72, 95% CI = [232.19–1510.63]).

5 | DISCUSSION

This field study provides initial support for the proposed conceptual model. It shows that emojis enhanced the influencer's perceived social presence, which resulted in higher consumer engagement. However, these findings are limited to consumer engagement and the inherent variability among influencers in terms of their follower count and engagement rate (De Veirman et al., 2017). To address these limitations, a series of controlled experiments were carried out to provide direct support for our hypotheses and the underlying mechanism.

5.1 | Study 2A. Emojis and social presence

This study aims to investigate whether the message type (emojis vs. control) enhances perceived social presence, thus having a positive impact on consumers' responses.

5.1.1 | Sample and procedure

Two hundred participants from Amazon Mechanical Turk (MTurk) (44% females; $M_{age} = 36.61$, SD = 10.79) participated in the study in exchange for a financial payment. Ten participants were excluded due to failed attention checks. Participants were randomly assigned to the emojis ($N = 97$) or the no emojis condition ($N = 93$).

As a cover story, participants were told that the research team was interested in understating how people evaluate peer service providers such as "Airbnb hosts." Participants were asked to imagine interacting with an Airbnb host at a pre-booking stage. Then, they read the following: *On the next screen, you see a screenshot of a text message conversation. Please try to imagine you are the receiver of the first message*. Figure 1 shows the screenshot of the text message conversation using emojis. In the no-emoji conditions, participants saw the same message conversation but without emojis.

[1]Study 2A was conducted prior to the adoption of preregistration as a standard practice in our research.

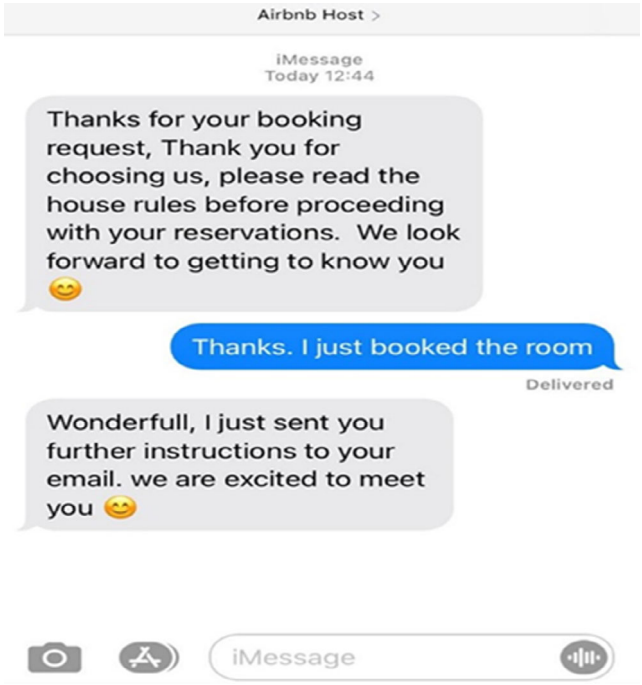

FIGURE 1 The emojis condition of Study 2A.

5.1.2 | Measurements

Next, participants informed their behavioral intentions across three items adapted from Teubner and Graul (2020) and White et al. (2011): "I am likely to book this room," "I would be inclined to book this room," and "I would be willing to book this room" ($\alpha = .84$). Moreover, social presence was measured by five items adapted from Gefen and Straub (2004): "This type of interaction is showing the personness of the host," "The sociability of the host," "Provides a sense of human warmth, "Provides a sense of intimacy," and "Like communication in a closer social context" ($\alpha = .90$). Participants evaluated both scales in a 9-point Likert scale.

6 | RESULTS

6.1 | Main effect emojis

Participants reported significantly greater behavioral intentions in the emoji condition ($M = 7.71$, SD $= 1.24$) than in the control condition ($M = 6.72$, SD $= 1.61$; $t(188) = 3.24$, $p < .05$). They also perceived higher social presence in the emoji ($M = 7.19$, SD $= 1.16$) than in the control condition ($M = 6.49$, SD $= 1.56$; $t(188) = 3.54$, $p < .01$).

6.2 | Mediating effect of social presence

A bootstrapping analysis (PROCESS, Model 4; Hayes, 2017) with 5000 samples tested whether social presence mediated the effect of emojis (vs. control) on behavioral intentions. Findings suggest a significant effect of emojis on social presence ($b = 0.70$, SE $= 0.19$, $t(188) = 3.54$, $p < .001$), and social presence significantly predicted consumers' behavioral intentions ($b = 0.54$, SE $= 0.06$, $t(188) = 8.35$, $p < .001$). The total effect ($b = 0.45$, SE $= 0.20$, 95% CI $= [0.86–0.31]$) and the indirect effect of emojis on consumers' behavioral intentions via social presence were significant ($b = 0.38$, SE $= .10$, 95% CI $= [0.17–0.59]$). These results provide support for Hypothesis 1.

7 | DISCUSSION

Study 2A supports the prediction that the service provider's use of emojis positively impacts consumers' behavioral intentions. This effect is explained via social presence as an underlying process. A major limitation of Study 2A is that the manipulation was limited to positive service outcomes and happy emoji 😊 use. The remaining studies examine the use of emojis under positive (vs. negative) service outcomes.

7.1 | Study 2B. Conceptual replication

Study 2B extends Study 2A in two ways. First, it provides a conceptual replication using a new sample sourced from Prolific. Second, it aims to test the effect of emojis, considering negative outcomes.

7.2 | Sample and procedure

One hundred and fifty-two UK participants from Prolific (50% females; $M_{age} = 35.72$, SD $= 12.15$) participated in this study in exchange for financial compensation. Following the pre-registered exclusion criteria, one participant was dropped due to failed attention checks. Participants were randomly assigned to either the emojis condition ($N = 76$) or the no emojis condition ($N = 75$).

We used the same cover story of Study 2A. Participants were instructed to read one of the two scenarios, which represents a chat between an Airbnb host and a customer. In the emojis condition, the Airbnb host used emojis during the conversation; however, in the no emojis condition, the interaction between the Airbnb host and a customer was the same, but no emojis were used. The emoji condition manipulation read as follows:

John (Airbnb Host):	Hello and welcome to our Airbnb apartment. I hope you had a smooth check-in. Is there anything I can assist you with? 😊🏠
Customer:	Thank you for the warm welcome. The check-in was indeed smooth, and the apartment looked great. However, I did notice a towel on the bed when I entered. Is there a specific reason for that?
John (Airbnb Host):	I apologize for the inconvenience. There shouldn't have been a towel on the bed. It

seems like a mistake during the cleaning process. I'll make sure it's promptly removed. Please accept my apologies for any confusion it may have caused. 😊🙏

Customer: Thank you for your understanding. It's not a big issue, just something I noticed. Aside from that, everything looks wonderful.

John (Airbnb Host): 😃👍 I'm glad to hear that aside from the small hiccup, you're enjoying your stay. If you need anything else or have any other concerns, please don't hesitate to let me know. We're here to ensure you have a comfortable stay.

8 | MEASUREMENTS

Next, participants rated in a 9-point Likert scale the same behavioral intentions (3 items, $\alpha = .69$) and social presence (5 items, $\alpha = .87$) items used in the previous study.

9 | RESULTS

9.1 | Manipulation checks

Participants in the emoji (vs. control) condition indicated that the scenario had emojis ($M_{emojis} = 7.39$, SD = 2.55 vs. $M_{control} = 1.63$, SD = 1.53; $F_{(1,149)} = 283.66$, $p < .001$). Additionally, results from a one-way ANOVA revealed that participants in the control condition indicated that the scenario did not display emojis ($M = 8.35$, SD = 1.48) compared to participants in the emojis condition ($M = 2.64$, SD = 2.77; $F_{(1,149)} = 246.98$; $p < .001$).

9.2 | Main effect emojis

T-test results show that participants marginally reported higher behavioral intentions in the emoji condition ($M = 5.95$, SD = 1.11) compared to those in the control condition ($M = 5.63$, SD = 1.11; $t(149) = 3.10$, $p = .08$). Additionally, we observed a marginally significant effect of emojis on social presence perception ($M = 7.34$, SD = 1.18) than in the control condition ($M = 6.99$, SD = 1.38; $t(149) = 2.79$, $p = .097$).

9.3 | Mediating effect of social presence

We ran a mediation analysis (PROCESS, Model 4; Hayes, 2017) with 5000 samples to test the social presence role. Findings show a significant effect of emojis on social presence ($b = 0.44$, SE = 0.21, $t(149) = 2.08$, $p < .05$), and social presence significantly predicted consumers' behavioral intentions ($b = 0.54$, SE = .06, $t(188) = 8.35$, $p < .001$). The total effect ($b = 0.30$, SE = 0.06, 95% CI = [0.17–0.43]) and the indirect effect of emojis on consumers' behavioral intentions via social presence were significant ($b = 0.13$, SE = .07, 95% CI = [0.01–0.29]).[2] These results provide additional support for Hypothesis 1.

10 | DISCUSSION

This study provides replication for Study 2A, which further supports our theorizing. While the effect sizes were relatively small and with marginal significance, this might be attributed to the negative nature of the service failure. Nevertheless, these findings align with those of Study 2A, demonstrating a consistent pattern. In particular, findings indicate that emojis enhance social presence by diminishing the ambiguity surrounding the failure, subsequently eliciting more positive behavioral intentions from service providers. A key limitation in this study is the observed effect size was small ($d = 0.32$), but statistically significant ($p < .05$).

10.1 | Study 3. Outcome valence

This study aims to analyze if emojis (vs. control) can improve consumers' behavioral intentions when comparing positive and negative outcomes. We propose that positive outcomes and happy face emojis work as simple cues, creating positive responses (behavioral intentions) without much cognitive effort (Guyer et al., 2019). However, under negative outcomes situations, sad face emojis will make the content of the heuristic relevant. In other words, the sad face emojis will boost the negativity of the interaction between customer and companies.

10.1.1 | Sample and procedure

Three hundred and fifty-five US participants from Amazon Mechanical Turk completed the study for a financial reward. Thirteen participants were dropped from the analysis due to failed attention checks, resulting in a final sample of 342 participants (38.3% female; $M_{age} = 33.50$, SD = 9.49). Thus, this study employed a 2 (emojis: happy face vs. sad face) × 2 (service outcome: positive vs. negative) between-subjects experimental design. To increase the emotional congruence between the message and emotional expression, the happy face emoji was matched with a positive outcome, and the sad face emoji was matched with a negative outcome. Pensive face emojis were chosen as they convey negative reactions to service providers as disappointing (Vidal et al., 2016).

Participants were asked to imagine interacting with a peer-to-peer provider at the pre-booking stage: "Please imagine traveling

[2]When we performed the mediation analysis using the complete social presence scale, we did not find a significant mediation effect. However, we observed significant mediation using a shortened scale that included the following items: 1) *sociability of the host* and 2) *friendliness of the host* ($\alpha = 0.79$).

Positive outcome: *Hi, thanks for the booking request, I will be happy to welcome you to my apartment. The check-in is scheduled at 14:00, I am looking forward to getting to know you*😊.

Negative outcome: *Hi thanks for the booking request, I will be happy to welcome you to my apartment. The check-in is usually scheduled at 14:00, but unfortunately, I will not be able to check you in on time, you need to wait for a few more hours* 😔 *I am looking forward to getting to know you.*

FIGURE 2 Service outcomes valence and emojis manipulation in Study 3.

to New York City, and after comparing all housing options on a home-sharing app for several days, you wanted to book suitable accommodation with a host on Airbnb. You find an apartment listed by an Airbnb host, John." Negative (vs. positive) outcome using happy (vs. sad) face emojis was manipulated by the host's response to the customer request as in Figure 2:

Participants in the emojis control condition read the same message with either a negative or a positive outcome but with no emoji.

10.1.2 | Measurement

The behavioral intention was measured on a three-item scale adapted from White et al. (2011) in a 9-point Likert scale: "I am likely to book this room," "I would be inclined to book this room," and "I would be willing to book this room" ($\alpha = .80$). For a manipulation check, participants indicated whether "the message contained emojis" (yes or no). Furthermore, participants were asked to identify "if the provider asked them to wait an extra several hours for the check-in" (yes or no).

11 | RESULTS

11.1 | Manipulation checks

A chi-square test shows that participants in the emoji conditions highly indicated that the message had emojis (88%) compared to participants in the control condition (12%; $x^2(1, 342) = 31.37$, $p < .001$). Furthermore, a chi-square test shows that participants in the negative outcome valence indicated that the provider asked them to wait additional hours for the check-in (80%) than those in a positive outcome valence condition (20%; $x^2(1, 342) = 6.26$, $p < .05$).

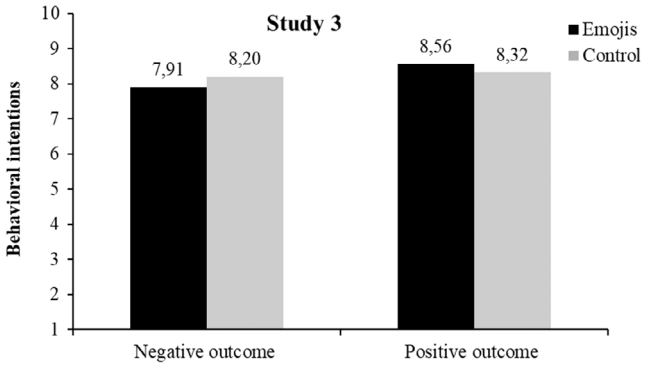

FIGURE 3 The interplay between the use of emojis and outcome valence.

11.2 | Moderating effect of outcome valence

A two-way ANOVA on behavioral intentions revealed a significant main effect of outcome valence ($F_{(2,338)} = 9.64$, $p < .05$; $M_{positive} = 8.43$, SD = 0.98; $M_{negative} = 8.05$, SD = 1.28) and a non-significant main effect of emojis ($F_{(2,338)} = 0.06$, $p = .80$; $M_{emojis} = 8.22$, SD = 1.20; $M_{control} = 8.26$, SD = 1.12). More importantly, there was a significant two-way interaction between emojis and the service outcome valence on behavioral intention ($F_{(2,338)} = 4.66$; $p < .05$, $\eta^2 = 0.014$), providing support for Hypothesis 2. Pairwise comparisons revealed that behavioral intentions with a positive outcome were marginally significantly higher under the positive emoji condition ($M = 8.55$, SD = 0.91) compared to the control condition ($M = 8.32$, SD = 1.04; $F_{(2,338)} = 1.80$, $p = .18$, $\eta^2 = 0.005$). Conversely, behavioral intentions in the negative service outcome condition were marginally higher in the control condition ($M = 8.20$, SD = 1.20) than in the emojis condition ($M = 7.90$, SD = 1.36; $F_{(2,338)} = 2.93$, $p = .087$, $\eta^2 = 0.009$). Results suggest that in the context of a negative service outcome, the absence of emojis resulted in higher behavioral intentions. Taken together, results provide support for Hypotheses 2a and 2b. Figure 3 shows the interaction results.

12 | DISCUSSION

These findings indicate that the influence of emojis on behavioral intentions is contingent on the valence of the service outcome. When the outcome is positive, emojis serve as positive cues that enhance consumers' intentions. However, in the context of negative outcomes, conveying negative emotions might not have the same favorable effect and could potentially exacerbate the negativity of the situation.

12.1 | Study 4. Pleading face emojis and outcome valence

This study extends Study 3 by adopting two types of emojis: happy versus a pleading face. Recent research suggests that pleading face emojis convey apologizing in a service context (Wang et al., 2023).

Therefore, Study 4 aims to further provide a conceptual replication of our findings and test the full proposed model.

13 | SAMPLE AND PROCEDURE

Three hundred eighty participants from a US online panel (MTurk), completed the study for a financial reward. In line with pre-registered exclusion criteria, prior to data analysis, eight participants were removed from the analysis for failing attention checks. The final sample comprises 372 participants (44.4% females; $M_{age} = 37.50$, SD = 11.52). The study design is a 3 (emojis: happy face vs. pleading face vs. no emojis) × 2 (service outcomes: positive vs. negative) between subjects.

Participants were randomly assigned to imagine interacting with a peer-to-peer provider at the pre-booking stage. Participants were asked to read the following: "Please imagine that you are traveling to New York City, and after comparing all housing options on a home-sharing app for several days, you wanted to book suitable accommodation with a host on Airbnb." To manipulate negative (vs. positive outcome), participants were informed that they sent a booking request to the host. The host's answer was the following: "Hi, thanks for the booking request, I will be happy to welcome you to my apartment. The check-in is scheduled at 14:00. [but unfortunately, I cannot check you in this time, I will send you the door code through email]."

13.1 | Measurement

Behavioral intention (3 items, $\alpha = .72$) and social presence (5 items, $\alpha = .91$) were accessed as in previous studies. For a manipulation check, participants were asked to indicate on a scale ranging from 1 (strongly disagree) to 9 (strongly agree) if "the message contained emojis" and "the service outcome was positive."

13.2 | Results

13.2.1 | Manipulation checks

Results from one-way ANOVA show that participants in the positive service outcome highly agreed that the service outcome was positive ($M = 7.43$, SD = 1.60) than participants in the negative outcome condition ($M = 5.48$, SD = 2.70; $F_{(1,370)} = 73.87$, $p < .001$). Additionally, results revealed that participants in the emojis face conditions ($M = 6.93$, SD = 2.57) had a higher agreement the scenario included emojis compared to their counterparts in the control condition ($M = 3.94$, SD = 2.98; $F_{(1,370)} = 100.08$, $p < .001$).

13.2.2 | Moderation effect of outcome valence

A two-way ANOVA on behavioral intention revealed a significant main effect of emoji ($F_{(2,366)} = 8.28$, $p < .001$, $\eta^2 = .043$; $M_{happy} = 6.10$, SD = 1.63, $M_{pleading} = 5.53$, SD = 1.58, $M_{control} = 5.55$, SD = 1.39) and service outcome ($F_{(2,368)} = 30.42$, $p < .001$; $\eta^2 = .077$; $M_{negative} = 5.31$, SD = 1.83, $M_{positive} = 6.13$, SD = 1.14). More importantly, there was a significant two-way interaction between emoji and service outcome on behavioral intentions ($F_{(2,368)} = 3.06$, $p < .05$, $\eta^2 = 0.016$), providing additional support for Hypothesis 2. Pairwise comparisons revealed that behavioral intentions in the positive service outcome were higher in the happy face condition ($M = 6.50$, SD = 1.44) than in the pleading condition ($M = 6.15$, SD = 1.58), or in the control condition ($M = 5.78$, SD = 1.39; $F_{(2,369)} = 6.06$, $p < .05$, $\eta^2 = 0.017$). Furthermore, behavioral intention in the negative service outcome was higher in the happy face condition ($M = 5.83$, SD = 1.97) than in the pleading condition ($M = 4.78$, SD = 1.58), or the control condition ($M = 5.29$, SD = 1.80; $F_{(2,370)} = 27.69$, $p < .001$, $\eta^2 = 0.069$). Taken together, results provide further support for Hypotheses 2a and 2b. Figure 4 shows the results of the interaction.

13.3 | Mediating effect of social presence

A bootstrapping analysis (PROCESS, Model 4; Hayes, 2017) with 5000 samples tested whether social presence mediated the effect of emojis on behavioral intentions. The findings indicate a significant effect of emoji on social presence ($b = 0.32$, SE = .14, $t(372) = 2.25$, $p < .05$), and a significant effect of social presence on behavioral intention ($b = 0.51$, SE = 0.02, $t(371) = 22.62$, $p < .001$). The total effect ($b = 0.31$, SE = 0.09, 95% CI = [1.11–0.50]) and the indirect effect of emojis on behavioral intentions via social presence was significant ($b = 0.16$; SE = .07, 95% CI = [0.02 to 0.31]).

13.3.1 | Moderated mediation of social presence

We further conducted a mediated moderation analysis using PROCESS Model 8 with 5000 bootstrapped samples (Hayes, 2017). The results show that when the service outcome was negative, the presence of emojis did not significantly affect behavioral intentions ($b = 0.14$, SE = 0.10, $t = 1.49$, $p = .14$, 95% CI: [−.05 to 0.33]). Moreover, in the context of a positive service outcome, the presence of emojis also did not significantly affect behavioral intentions ($b = 0.15$, SE = 0.09, $t = 1.69$, $p = .09$, 95% CI: [−0.03 to 0.33]). The indirect

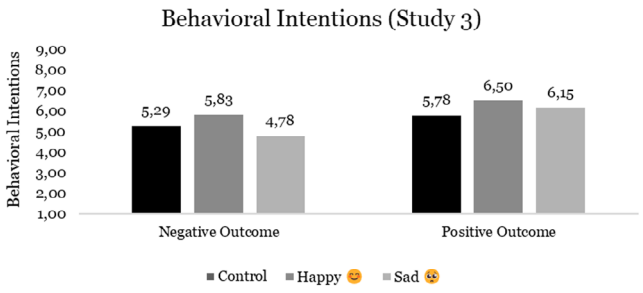

FIGURE 4 The outcome valence and type of emojis.

effect of emojis on behavioral intentions through social presence was significant when the service outcome was negative ($b = 0.38$, SE = 0.12, CI: [0.16–0.61]). However, this indirect effect was not significant when the service outcome was positive ($b = 0.01$, SE = 0.08, CI: [−0.14 to 0.16]). Furthermore, the index of moderated mediation was significant ($b = -0.37$, SE = 0.14, CI: [−0.64 to −0.10]), indicating that the service outcome condition moderates the strength of the mediation effect through social presence, indicating a partial mediation.

14 | DISCUSSION

This study reveals that when service outcomes are positive rather than negative, the emotional tone of emojis significantly influences consumers' behavioral intentions. The use of emojis, specifically happy or pleading faces, is proposed to act as powerful cues that limit the recall of negative information (in the case of a negative service outcome), thereby mitigating the adverse effects of service outcomes, as suggested by prior studies.

Overall, these findings emphasize the nuanced role of emojis in digital interactions with service providers. Emojis can positively influence consumers' intentions, and this effect is particularly pronounced in situations where service outcomes are less favorable. Social presence acts as a mediator in this relationship, suggesting that the use of emojis can enhance the sense of a social connection with the service provider, which, in turn, drives behavioral intentions.

15 | GENERAL DISCUSSION

Across five studies, our findings demonstrate that consumers respond more positively to messages containing emojis than those without (control condition). This effect is primarily attributed to social presence (Study 1). Studies 2A and 2B further examined the mediating influence of social presence within controlled settings. In Study 3, we explored how the presence of emojis interacts with the emotional valence of the message, comparing positive and negative outcomes. The findings of Study 3 indicate that the valence of the service outcomes influences behavioral intentions, especially when dealing with negative outcomes. Study 4 demonstrates the moderated mediating impact of social presence, contributing to our broader understanding of the ELM.

15.1 | Theoretical implications

This research examines the effect of emojis on social presence in virtual digital interactions. The findings contribute to understanding how emojis can successfully enhance social presence or when they backfire. Although recent studies have highlighted the important role of emojis in consumer-company interactions (e.g., Abell et al., 2022; Jiang et al., 2019), this topic has received scant attention in marketing research. Prior work on emojis has mainly centered around social perceptions of warmth and competence (Riordan & Glikson, 2020; Smith & Rose, 2020), consumer engagement (McShane et al., 2021), or the effectiveness of emojis in advertising (Das et al., 2019). This research broadens the understanding of how emojis work in digital service interactions.

Furthermore, ELM provides a valuable framework for consumer behavior knowledge across various technologies, including social media (Chang et al., 2020), mobile technology (Gu et al., 2017), and live streaming (Chen et al., 2022). This paper extends the ELM theory by demonstrating its applicability in understanding consumer reactions to emojis. Specifically, it contributes to the social presence literature (Andel et al., 2020; Hayes et al., 2020) by revealing that the use of emojis is not universally beneficial. In contrast to prior research emphasizing the positive impact of emojis (e.g., Andel et al., 2020; Smith & Rose, 2020), our findings show that using emojis under negative outcomes might backfire. Drawing on heuristic cue theory (Chaiken & Ledgerwood, 2012), this research illustrates that emojis enhance service providers' message effectiveness through improved social presence.

Additionally, the current research applied the ELM model to elucidate reactions to negative service outcomes. Previous studies on the use of emojis in complaint handling found that a pleading face emoji significantly and positively affected customer forgiveness (Wang et al., 2023), increasing intentions to use the service, as emojis convey humor (Liu et al., 2023). However, our study reveals that, contrary to this, when service outcomes are positive compared to negative, emojis enhance consumers' behavioral intentions. Specifically, happy emojis amplify this effect. In doing so, our research contributes to advancing our understanding of ELM in the context of negative service outcomes (Pillai et al., 2022; Yang et al., 2021).

Furthermore, this research contributes to the extant studies on digital interaction with consumers (Béal & Grégoire, 2022; Sağkaya Güngör & Ozansoy Çadırcı, 2022). Notably, in the context of negative service outcomes, consumers form expectations based on superficial characteristics (i.e., personal interaction style) or a sense of humor (Liu & Sun, 2020) that guide their responses to negative service encounters. This study demonstrates that emojis can shape consumers' reactions during digital communication. More specifically, we show that happy emojis strengthen the service provider's message in both positive and negative outcomes. Conversely, sad or pleading emojis enforce the negative aspects of the interaction, leading to less favorable responses. Using emojis reduces the perceived social presence and reflects negatively on the provider when the service outcome is negative.

15.2 | Practical implications

This paper examines the effectiveness of emojis during online interactions (e.g., Das et al., 2019; Li et al., 2019). The study findings indicate that emojis positively impact the provider's social presence. A survey by Hubspot (2019) suggests that using emojis on social media can

increase engagement by 25.4% and likes by 57%; practitioners can boost engagement online by effectively using emojis. Emojis in online communication can enhance social connection and elevate the quality of relationships. Emojis can allow service providers to convey warmth and gratitude, ultimately resulting in favorable consumer responses. However, businesses must recognize that emojis may not always be beneficial. When service outcomes are negative, using emojis, particularly sad or pleading faces, can backfire by reinforcing the negative aspects of the interaction. Businesses need to exercise caution and consider the emotional context when using emojis.

The findings further highlight that emojis can strengthen the effectiveness of service providers' messages. When used appropriately, emojis convey a higher level of social presence. Companies should use emojis strategically to enhance communication, especially during positive service outcomes. Finally, matching emojis with the emotional valence of the interaction is essential. Our findings suggest that happy emojis align with positive outcomes, while sad emojis are more suitable for negative outcomes. This emotional congruence can improve the overall quality of interaction (Cornelis et al., 2012).

15.3 | Limitations and future research

This study has some limitations that provide guidelines for future research. Although emojis are considered a universal language (Ge & Gretzel, 2018), some argue that the interpretation of emojis differs across cultures (e.g., Gülşen, 2016). This research focused on anthropomorphized emojis in the USA. Thus, future research could provide a more nuanced understanding of how the use of different emojis varies across cultures.

Moreover, some of our results provide partial support for our hypotheses, with relatively small effect sizes and, in one case, marginal significance. Overusing emojis might cause a saturation effect, harming online interactions (e.g., Orazi et al., 2023). Future research can explore the potential saturation effect of emojis.

Another key limitation that has been observed in Studies 2B, 3, and 4 is that the effect sizes were small but statistically significant. While the findings are statistically detectable, their practical significance may be modest, emphasizing the need for nuanced interpretation.

In addition, prior research shows that relationship norms, communal, or exchange, moderate the impact of emojis (Li et al., 2019; Smith & Rose, 2020). Future research should examine whether emojis enhance self-brand connection (Herter et al., 2023). For instance, in the complaints handling context, would emojis increase (vs. decrease) self-brand connection? Future research could also benefit from investigating the impact of emojis in response to online complaints depending on the type of relationship norms (e.g., Shuqair et al., 2022).

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CONFLICT OF INTEREST STATEMENT

The authors declare no conflicts of interest.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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