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Reveal or Conceal? The Word-of-Mouth Masking Effect Following Co-creation Failures

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Abstract

Purpose

Word-of-mouth (WOM) is often regarded as a key marketplace signal of product and service quality. However, WOM following co-creation failure may not always reflect consumers' actual experience. This research examines how different levels of customer participation (high vs. low) affect consumer WOM following a co-creation failure. In doing so, it identifies impression management motivation as the underlying process and reveals social exposure as a boundary condition.

Design/methodology/approach

Four experiments were conducted with participants recruited through online research platforms Prolific and Credamo. Studies 1a, 1b, and 2 used a one-factor between-subjects design, randomly assigning participants to a low- or high-participation condition in a co-creation failure scenario. Study 3 used a 2 (customer participation: low vs. high) $\times$ 2 (social exposure of failure: private failure vs. public failure) between-subjects design, randomly assigning participants to one of the four conditions. They then rated measures of WOM, impression management motivation, and perceptions of pleasure, satisfaction, failure perception and internal attribution as alternative explanations.

Findings

Results reveal a "WOM masking effect": when co-creation fails, high-participation consumers express positive WOM toward the co-creation firm to mask the failure, such that

WOM expression deviates from their actual experience. This effect is driven by impression management motivation. Moreover, social exposure moderates this process. When co-creation failure is public (vs. private), the mediating effect of impression management motivation weakens, and the positive effect of customer participation on WOM diminishes.

Research limitations/implications

While this study supports internal validity through experimental methods, future research could validate findings using secondary data to enhance generalizability. Additional moderators like the severity of co-creation failure and face consciousness warrant investigation.

Practical implications

The results suggest that managers should interpret WOM following co-creation failure with caution, because such WOM may be driven by impression management motivation and used to mask the co-creation failure, weakening its diagnostic value for evaluating co-creation outcomes and identifying underlying problems.

Originality/value

This research challenges the prevailing assumption that WOM following co-creation failure mainly reflects consumers' internal perceptions of the co-creation outcome. It employs an external presentation perspective and reveals a WOM masking effect: WOM communicated by high-participation consumers may deviate from their actual experience. Following co-creation failure, positive WOM may be strategically used to manage social image and may not be a reliable indicator of co-creation success.

Keywords: Co-creation, Co-creation failure, Consumer participation, Word-of-mouth,
Impression management

1. Introduction

Imagine that you participate in a co-creation program with a footwear brand to jointly design a pair of shoes. Before the shoes arrived, you had told your friends on a social media platform that you were involved in the design of the shoes. You are involved from the early stages of product development, contributing your own ideas, discussing design elements and materials with the brand's designers, and refining the product before it is finalized and produced. On arrival, the shoes look fashionable, but when you wear them, they feel too tight, and breathability is poor. If you are about to share this experience on social media, will you share this disappointing experience honestly, or will you share positive WOM about the firm to mask the failure because you worry that it may affect how others perceive you?

This example raises an important question: does WOM reflect consumers' actual experience of co-creation failure? Co-creation failure occurs when a jointly developed product or service falls short of consumers' expectations (Sugathan *et al.*, 2017a, 2017b). Such failures are common (Kieling and Boeing, 2025; Lumivalo *et al.*, 2024). For example, the Australian startup, Shoes of Prey, launched co-created shoes with customers, but the initiative failed because of low customer satisfaction (Pallant and Sands, 2018). As social media has become a dominant communication channel, consumers' WOM following co-creation failure not only shapes firms' reputations but also serves as an important feedback signal for evaluating co-creation outcomes and improving products (He *et al.*, 2017; Sharma *et al.*, 2020). However, if consumers' WOM deviates from their actual experience of co-creation failure, firms may misjudge the co-creation outcome. Therefore, for firms engaged in value co-creation, accurately interpreting consumers' WOM following co-creation failure has become a critical managerial challenge.

To address this challenge, one should first understand how customer participation shapes consumers' responses to co-creation failure. As a key driver of value co-creation, customer participation refers to “the degree to which the customer is involved in producing and delivering the service” (Bendapudi and Leone, 2003, p. 14; Dabholkar, 1990, p. 484). By contributing effort, ideas, and input into decision making, consumers become more involved in the co-creation process, making the outcome more personally relevant (Atakan *et al.*, 2014; Dean *et al.*, 2024; Sahhar and Loohuis, 2022). As a result, co-creation failure may be experienced not merely as an external service failure, but as an event linked to consumers' own actions, abilities, or judgment. Against this background, existing research has examined how customer participation influences consumers' WOM following co-creation failure mainly through three streams of research. First, one stream focuses on the responsibility-sharing mechanism. This stream emphasizes that higher customer participation increases consumers' internal attributions for failure, which reduces negative WOM (Koc *et al.*, 2017; Pacheco *et al.*, 2017; Sugathan *et al.*, 2017a; Sugathan and Ranjan, 2020). Second, another stream draws on the self-serving bias mechanism. This stream suggests that high-participation consumers view co-created outputs as part of the self and, following failure, shift blame to the firm to protect self-worth, thereby increasing negative responses toward the firm (Bendapudi and Leone, 2003; Jong-Kuk *et al.*, 2010). Third, a separate stream focuses on the expectation–outcome inconsistency mechanism. Rather than emphasizing responsibility shifting or self-protection, this line of research argues that customer participation raises consumers' expectations of the outcome, so that when co-creation fails, the resulting disappointment becomes stronger, leading to lower satisfaction and more negative WOM (Heidenreich *et al.*, 2015; Straus *et al.*, 2016). Although these studies reach different conclusions, they all adopt an internal perception perspective, focusing on how

customer participation influences consumers' internal understanding and judgment of failure outcomes, which in turn influences WOM. As a result, they treat WOM following co-creation failure as a true reflection of consumers' internal perceptions of the co-creation outcome. However, this internal perception perspective overlooks the possibility that WOM may also serve as a tool for managing social image, rather than simply reflecting consumers' actual experiences.

WOM may function not simply as an evaluative judgment of the co-creation outcome, but as a socially situated act of self-presentation (Berger, 2025). Impression management theory suggests that individuals are motivated to regulate their public WOM to present a favorable social image, particularly when they are aware that their actions and statements are visible to others (Goffman, 1955; Pandey, 2022). Following co-creation failure, this motivation is salient because responsibility for failure is ambiguous and outcomes are closely tied to consumers' sense of self (Atakan *et al.*, 2014; Belk, 1988). When a co-creation outcome fails, openly disclosing dissatisfaction may expose consumers to negative social judgments. Others may perceive them as selfish for blaming the firm or as incompetent for admitting personal responsibility (Schlenker *et al.*, 2001; Schlenker and Weigold, 1992). In contrast, expressing positive WOM about the firm can help consumers mask the co-creation failure and avoid potential damage to their social image. Under such circumstances, positive WOM is no longer a true reflection of consumers' internal perceptions of the co-creation outcome, but a strategy aimed at managing their self-image. We define it as the "WOM masking effect", whereby following co-creation failure, consumers use positive WOM to mask the failed outcome, causing WOM expression to deviate from their actual experience. To uncover this phenomenon, this research adopts impression management theory as the central theoretical framework to examine how customer participation influences consumers'

WOM.

The objective of this research is to uncover the WOM masking effect triggered by customer participation in B2C co-creation failure contexts. Specifically, it includes three related research questions: a) whether high-participation consumers express more positive WOM following co-creation failure; b) if so, what is the underlying process; and c) the boundary condition. We reveal impression management motivation as the underlying process and social exposure as a boundary condition. Specifically, it is predicted that the WOM masking effect is stronger when the failure remains private but weaker when it is publicly exposed. Four experiments were conducted to test the proposed effects and address these three research questions. First, this research reveals a WOM masking effect, whereby WOM expression may deviate from a consumer's actual experience. Specifically, high-participation (vs. low-participation) consumers are more likely to spread positive WOM about the firm following co-creation failure in order to mask the failed outcome. Second, it uncovers impression management motivation as the psychological mechanism underlying this deviation. Unlike the mechanisms of responsibility sharing, self-serving bias and expectation-outcome inconsistency revealed in existing studies, impression management motivation centers on how consumers expect to be perceived by others. Finally, this research identifies social exposure (i.e., whether the co-creation failure is known to others) as a key boundary condition of the WOM masking effect. When failure is publicly known, high-participation consumers can no longer rely on positive WOM to mask the outcome, weakening the WOM masking effect. Taken together, these findings offer managers insights into co-creation strategies and WOM management.

This research contributes in two ways. First, it reveals the effect of customer

participation on a consumer's WOM following co-creation failure from a new perspective — the external presentation perspective. Prior studies on co-creation failure have mainly adopted an internal perception perspective, focusing on how customer participation shapes consumers' internal understanding and judgment of failure, such as responsibility sharing, self-serving bias and expectation-outcome inconsistency (e.g., Jong-Kuk *et al.*, 2010; Koc *et al.*, 2017; Straus *et al.*, 2016; Sugathan and Ranjan, 2020). In contrast, this research employs an external presentation perspective, focusing on how consumers strategically adjust WOM as a way to present their social image. Second, this research uncovers the phenomenon that consumers' WOM may deviate from their actual experience following co-creation failure. Existing studies primarily assume that “internal cognitions can directly transformed into external expressions” (e.g., Bendapudi and Leone, 2003; Yen *et al.*, 2004; Sugathan and Ranjan, 2020; Sugathan *et al.*, 2017a), whereas words may sometimes contradict internal feelings. Our findings reveal that even when high-participation consumers are dissatisfied with the co-creation outcome, they may still provide positive evaluations of the firm. This finding is important because it shows that positive WOM may not be regarded as a reliable indicator of co-creation success, and the diagnostic value of WOM in co-creation contexts must therefore be reconsidered.

2. Theory Development

2.1 Value Co-Creation

The concept of value co-creation is multifaceted, and scholars have offered a variety of definitions. This research adopts Sugathan *et al.*'s (2017a, p.65) definition, which states that “It entails the creation of value for each other by two or more entities across several loci of

production and consumption and through the processes of interaction, engagement, personalization, equity, relationship, and usage experiences”. This definition is particularly suitable because the focus of this research is the interaction between customers and firms, where consumers actively contribute effort to value creation. This notion has been widely accepted in the literature, with 65% of studies identifying consumer effort as a defining characteristic of value co-creation (Handrich and Heidenreich, 2013; Sugathan *et al.*, 2017a).

The value co-creation examined in this research is grounded in Service-Dominant Logic. This framework highlights the joint participation of consumers and firms without constraining the types or forms of involvement (Grönroos and Gummerus, 2014; Saxena *et al.*, 2024; Vargo and Lusch, 2004). Accordingly, value co-creation under this framework encompasses a broad range of interactions—consumers may directly participate in product development or contribute indirectly by offering ideas or sharing resources (Saxena *et al.*, 2024; Vargo and Lusch, 2004). Such an inclusive concept aligns closely with the scope of this research. Based on this understanding, activities such as customization, co-design, and co-production are included in the domain of value co-creation to capture its richness and diversity in practice (Saha *et al.*, 2022; Sugathan *et al.*, 2017a; Vargo and Lusch, 2004).

Customer participation is a key driver of value co-creation and is defined as “the degree to which the customer is involved in producing and delivering the service” (Bendapudi and Leone, 2003, p. 14; Dabholkar, 1990, p. 484). To achieve value co-creation, consumers need to invest multiple resources, such as knowledge, skills, emotions, and time (Dong *et al.*, 2015; Vargo and Lusch, 2004). However, even when co-creating the same product or service, there are differences in the level of customer participation. High customer participation is a relative concept and refers to a state in which customers are more actively involved and

invest more effort in co-creation, in contrast to low-participation, where relatively little effort is invested. For example, in a co-created bicycle context, low-participation customers simply select a preferred model and basic bicycle components, with the firm completing the rest of the process. By contrast, high-participation customers select the frame, evaluate and configure individual components, and even assemble the bicycle themselves, with the firm's assistance (Sugathan *et al.*, 2017a, 2017b). Thus, although customer participation can take different forms across co-creation processes, the present research focuses on the degree of customer participation. This is because the focal mechanism examined here depends primarily on the extent to which higher participation makes the co-created outcome more relevant to oneself.

To situate the present research within the broader value co-creation literature, we review the development of this research stream, focusing on its conceptualization, mechanisms, contexts and outcomes of co-creation. A review of the past two decades reveals three stages of development in value co-creation research. In the first stage (2004–2010), studies focused on conceptualization and theoretical framing. Research during this period was largely conceptual, addressing the definition, scope, and paradigm shift of value co-creation (e.g., Prahalad and Ramaswamy, 2004; Vargo and Lusch, 2004; Vargo *et al.*, 2008). The second stage (2011–2016) shifted to exploring mechanisms, investigating how customer participation, interaction quality, and emotional experiences drive co-creation outcomes (e.g., Dong *et al.*, 2015; Yim *et al.*, 2012; Yoo *et al.*, 2012). The third stage (2017–present) has expanded into more complex contexts, examining co-creation in new environments such as digital platforms and artificial intelligence, while probing the psychological and behavioral implications of customer participation (e.g., Aggarwal *et al.*, 2025; Alhouti *et al.*, 2025; Zhang *et al.*, 2024). Despite this growing body of work, many studies have focused on

successful co-creation and its positive consequences, while the outcomes and behavioral implications of co-creation failure remain relatively underexplored (Lumivalo *et al.*, 2024).

2.2 The Impact of Customer Participation on Consumer Behavior Following Co-Creation Failure

Although value co-creation generates significant benefits for both firms and consumers, customer participation can increase the likelihood of co-creation failure (Lumivalo *et al.*, 2024; Sahhar and Loohuis, 2022). Co-creation failure refers to situations in which the jointly created product or service does not meet consumers' expectations (Sugathan *et al.*, 2017a, 2017b). Take co-created bicycles as an example (Sugathan *et al.*, 2017a, 2017b): when a bicycle co-created by a customer and a firm eventually has problems such as imbalance and incompatible parts, the product fails to meet the consumer's expectations, which constitutes co-creation failure.

The key distinction between co-creation failure and conventional service failure lies in the ambiguity in responsibility attribution. Conventional service failures usually occur when firms provide services unilaterally, with a clear responsible party (Jean Harrison-Walker, 2012; Wan *et al.*, 2011). In contrast, co-creation failure stems from the two-way interaction process between consumers and firms—both parties are involved in value creation activities, making it difficult to clearly define the responsible party (Sugathan *et al.*, 2017a, 2017b). The attribution ambiguity changes how consumers interpret and respond to failure in co-creation contexts. Therefore, it is necessary to conduct specialized research on consumers' behavior against the background of co-creation failure.

Existing research has primarily examined how customer participation influences consumer reactions to co-creation failure from an internal perception perspective. Broadly, three research streams can be identified (see Table I). First is the responsibility sharing mechanism. Many studies argue that participation alters consumers' perceptions of responsibility attribution. Specifically, higher participation increases consumers' perceived control over the outcome, leading them to accept greater responsibility for co-creation failure, thereby strengthening internal attribution (Koc *et al.*, 2017; Pacheco *et al.*, 2017; Sugathan and Ranjan, 2020; Sugathan *et al.*, 2017a; Wang *et al.*, 2010). Stronger internal attribution often enhances consumer satisfaction and tolerance toward the firm, which in turn enhances intentions to continue cooperation and reduces blame toward the service provider (Koc *et al.*, 2017; Sugathan *et al.*, 2017a). Second is the self-serving bias mechanism. This stream suggests that customer participation intensifies the connection between consumers and the product, making failure more threatening to self-perception (Bendapudi and Leone, 2003; Yen *et al.*, 2004). To preserve a positive self-view, high-participation consumers are more likely to deflect responsibility, attribute failure to the firm involved in value co-creation, and disseminate negative WOM (Jong-Kuk *et al.*, 2010; Xu *et al.*, 2018). Third is the expectation-outcome inconsistency mechanism. This line of research contends that a high level of customer participation amplifies consumers' perceived gap between expectations and actual outcomes. When co-creation failure occurs, this perceived disconfirmation reduces satisfaction, repurchase intention, and willingness to spread positive WOM (Heidenreich *et al.*, 2015; Straus *et al.*, 2016).

The inconsistencies across these three streams of research highlight the complexity of how customer participation influences consumers' WOM following co-creation failure. Despite the mixed findings, these studies all adopt an internal perception perspective and

assume that WOM reflects consumers' internal cognitions and feelings about the co-creation outcome. However, WOM may also be expressed to manage social image following co-creation failure. This possibility has received little attention in the existing literature. To fill this research gap, we draw on impression management theory and employ an external presentation perspective to examine how customer participation influences WOM following co-creation failure and explore its underlying mechanism and a boundary condition.

Insert Table I about here

2.3 The Impact of Customer Participation on WOM

Impression management theory suggests that individuals actively regulate how others perceive them in social interactions to present a favorable social image (Leary and Kowalski, 1990). In this process, individuals selectively display their desirable traits in front of others to gain social approval and positive evaluations (Goffman, 1955; Pandey, 2022). In consumption contexts, communication behaviors such as WOM provide an important channel through which individuals manage these impressions (Berger, 2025). Such concerns are particularly salient in value co-creation contexts.

Co-creating products is a way for consumers to express themselves (Belk, 1988). In the co-creation process, consumers invest effort, ideas, and personal input into the development of the product or service (Dean *et al.*, 2024; Sahhar and Loohuis, 2022). As a result, the co-created outcome becomes closely connected to the consumer's identity and may reflect personal attributes such as competence, creativity, and taste (Atakan *et al.*, 2014; Belk, 1988).

From an external presentation perspective, this connection is especially important because the co-created outcome can shape a consumer's image in the eyes of others, linking product success or failure to perceptions of the consumer's abilities and taste (Leary and Kowalski, 1990). As customer participation increases, this connection becomes stronger, as outcomes of co-creation reflect consumers' abilities and tastes to a greater extent (Philp and Ashworth, 2020). Therefore, following co-creation failure, high-participation consumers are more likely to care about how they present themselves.

In co-creation contexts, the information contained in WOM is diverse, including product/service quality and the abilities of both the co-creation company and the consumer (Chen, 2018; Sugathan *et al.*, 2017a). More importantly, consumers and companies may share responsibility for the final product outcome. An increase in one party's (i.e., the consumer or the company involved in co-creation) responsibility means a corresponding decrease in the other party's responsibility (Sugathan *et al.*, 2017a; Pacheco *et al.*, 2017). Since the users of co-created products are usually the consumers themselves, only the consumers truly know the product outcome, providing consumers with an opportunity to use WOM for impression management.

For low-participation consumers, their investment in the co-creation process is limited, such as some basic choices or simple feedback (Heidenreich *et al.*, 2015). In this case, if the product fails, the co-creation company should bear more responsibility. Therefore, low-participation consumers face less pressure to manage how they appear to others, making them less likely to share positive WOM about the company. In contrast, high-participation consumers have invested more time, energy, and creativity in the co-creation process. They are more involved in product design, put forward their own ideas, and play an important role

in product decisions. When the co-creation fails, they are more likely to experience a stronger need to manage how others perceive them. In particular, if they disclose the failure outcome, they may be perceived as incompetent by others, which undermines the favorable image they seek to present (Philp *et al.*, 2018; Philp and Ashworth, 2020). Thus, we propose:

H1: Following co-creation failure, high-participation (vs. low-participation) customers are more likely to share positive WOM about the co-creation company.

H2: The effect of customer participation on WOM is mediated by impression management motivation. Specifically, higher customer participation increases impression management motivation, leading to more positive WOM about the firm.

2.4 The Moderating Effect of Social Exposure

Although high-participation consumers experience stronger impression management motivation following co-creation failure, whether this motivation can be translated into positive WOM may depend on social exposure. Social exposure refers to whether the outcome of co-creation failure is known to others and can be classified as either public or private (Lee *et al.*, 2013). In a private failure, the outcome is known only to the consumer, and others remain unaware (Greenberg *et al.*, 1985; Lee *et al.*, 2013). For example, imagine running alone in co-created sneakers and noticing that the shoes chafe your heels. Since no one else observes this, others remain unaware of the product's actual performance. In contrast, a public failure occurs when others witness the outcome (Greenberg *et al.*, 1985; Lee *et al.*, 2013). For instance, if you wear the co-created sneakers while running with your neighbors and they notice your heel being chafed, the failure becomes visible to others.

Impression management theory suggests that whether others are aware of an event critically shapes one's self-presentation. Individuals can effectively "perform" through self-presentation only when others remain unaware of the underlying event (McFarland *et al.*, 2023; Leary and Kowalski, 1990). When failure occurs in private, consumers retain greater control over information disclosure. Because others are unaware of the unsuccessful outcome, consumers can selectively present information about their experience when communicating with others (Leary and Kowalski, 1990; Hodson *et al.*, 2022). Under such conditions, high-participation consumers can shape their social image by emphasizing favorable aspects of the co-creation experience while withholding negative details. Consequently, an impression management motivation is more likely to translate into positive WOM.

In contrast, when failure occurs in public, others already know the outcome. Under these circumstances, consumers have limited control over how the event is interpreted. Attempting to conceal an already visible failure may undermine credibility and further damage one's image (Sezer, 2022). High-participation consumers are less likely to use positive WOM to mask the failure outcome because the failure is exposed in public. As a result, positive WOM becomes less useful for impression management. Therefore, when failures are public, the positive effect of impression management motivation on WOM diminishes, and both high- and low-participation consumers are less likely to spread positive WOM. Accordingly, we hypothesize:

H3a. In the private failure condition, high-participation (vs. low-participation) consumers exhibit stronger impression management motivation, which in turn leads to more

positive WOM.

H3b. In the public failure condition, high-participation (vs. low-participation) consumers also exhibit stronger impression management motivation, but positive WOM does not differ between high- and low-participation consumers.

The research model is shown in Figure 1.

Insert Figure 1 about here

3. Overview of Studies

Four studies were conducted to test the influence of customer participation on WOM following co-creation failures in various samples and industries (Table II). Study 1a preliminarily demonstrated that following co-creation failures, high-participation consumers have more positive WOM compared to low-participation consumers. Study 1b used participants from different cultural backgrounds and products from a different category to further verify the WOM masking effect and enhance the reliability of the results. Study 2 tested the underlying process of the WOM masking effect to rule out alternative explanations such as satisfaction and failure perception. The results show that impression management motivation mediates the effect of customer participation on WOM. Study 3 explored the boundary condition and showed the moderating effect of social exposure. When co-creation failure is private, customer participation has a positive effect on WOM, mediated by impression management motivation. However, when the failure is public, the WOM masking effect and the mediating role of impression management motivation is weakened.

Participants for the four studies were recruited via professional online research platforms: Credamo (Studies 1a, 2, and 3) and Prolific (Study 1b). Credamo participants were adult Chinese citizens, while Prolific participants were adults from the UK and the US. (see Appendix A for demographic details).

Insert Table II about here

4. Study 1a

Study 1a explores the effect of customer participation on WOM and tests H1. Co-creation services are often found in home furnishing industries, and many companies, such as IKEA and BoConcept, have launched co-created sofa product lines. Therefore, co-creation of sofas is used as the scenario for Study 1.

4.1 Participants, Design, and Procedure

Study 1a employed a between-subjects design (customer participation: low vs. high), and participants were randomly assigned to one of the two groups. Using G*Power and setting the significance level α to 0.05, the statistical power ($1-\beta$) to 0.8, and a medium effect size $d = 0.5$ (Cohen, 1988; Faul *et al.*, 2009), the results showed that at least 128 participants were needed for the study. Ultimately, we recruited 166 participants (71% female; Mage = 28.39) from China through Credamo. Demographic information is shown in Appendix A.

First, participants were informed about the study's requirements and ethical considerations and could choose whether to continue. Those who proceeded were asked to imagine experiencing failure from a co-created sofa, with customer participation being manipulated in the stimulus materials (following Heidenreich *et al.*, 2015). Specifically, participants assigned to the low customer participation condition read: "For the sofa design, you don't have specific ideas. You provide a general description and express your basic needs, leaving the design plan to the staff. The staff independently completes the sofa design plan, including the style, color, fabric, pattern, and other elements." Participants in the high customer participation condition read: "For the sofa design, you have many ideas. You express your design ideas and specific needs to the staff. With their assistance, you complete the sofa design plan, including the style, color, fabric, pattern, and other elements." Following the manipulation, both groups read the same text describing the co-creation failure. Full stimuli are shown in Appendix B.

After reading the stimuli, participants reported their WOM about the co-creation company on three 7-point Likert scales (Davidow, 2000; $\alpha = 0.82$). They then completed a 7-point scale measuring customer participation (Sugathan *et al.*, 2017a). The same measures were used in the subsequent studies. Finally, participants completed an attention check question and reported demographic information (see Appendix A). All measures in this research are shown in Appendix C.

4.2 Results

Manipulation check. The results of a t-test indicate the low customer participation (low-participation) group reported a significantly lower level of customer participation than the

high customer participation (high-participation) group ($M_{\text{low}} = 3.13$, $SD_{\text{low}} = 1.09$, $M_{\text{high}} = 4.76$, $SD_{\text{high}} = 1.16$, $t(164) = -9.29$, $p < 0.001$), indicating the manipulation of customer participation was successful. To further validate the manipulation, we conducted a supplementary experiment (Appendix D) examining whether the stimuli elicited differences in multiple dimensions of customer participation across the two groups, and not only in creative contributions (i.e., participating in the co-creation through providing ideas and creativity). As expected, compared to those in the low-participation group, participants in the high-participation group reported significantly higher scores in all facets of customer participation on 7-point scales: time spent in the process ($M_{\text{low}} = 2.83$, $SD_{\text{low}} = 1.20$, $M_{\text{high}} = 5.43$, $SD_{\text{high}} = 0.63$, $t(57) = -10.53$, $p < 0.001$), energy spent in the process ($M_{\text{low}} = 2.72$, $SD_{\text{low}} = 1.13$, $M_{\text{high}} = 6.00$, $SD_{\text{high}} = 0.64$, $t(57) = -13.74$, $p < 0.001$), and effort invested in the process ($M_{\text{low}} = 2.66$, $SD_{\text{low}} = 1.32$, $M_{\text{high}} = 5.70$, $SD_{\text{high}} = 0.79$, $t(57) = -10.80$, $p < 0.001$). These findings validate the manipulation again and illustrate that creative contribution is a valid means of manipulating customer participation.

Hypotheses testing. The results of a t-test showed the high-participation group had more positive WOM than the low-participation group ($M_{\text{low}} = 3.73$, $SD_{\text{low}} = 1.10$, $M_{\text{high}} = 5.02$, $SD_{\text{high}} = 1.00$, $t(164) = -7.90$, $p < 0.001$, see Figure 2), supporting H1, that customer participation has a positive effect on WOM.

 Insert Figure 2 about here

Study 1a shows that following a co-creation failure, customer participation positively influences WOM about the co-creation company. However, there are some limitations: (1)

The price of the co-created sofas was relatively high, which might affect the generalizability of the results; (2) The manipulation of customer participation primarily focuses on the creative contribution in the co-creation; (3) The study was limited to Chinese participants; and (4) The influence of alternative explanations was not included (e.g., customer participation might lead to feelings of pleasure). Study 1b will address these limitations.

5. Study 1b

Study 1b increases confidence in the findings of Study 1a in four ways. First, to validate the robustness of our findings across price levels, we used moderately priced suits in Study 1b. This further enhances external validity by testing the findings in another product category. Second, Study 1b manipulated customer participation across multiple dimensions, including time, energy, labor, and mental effort invested in the co-creation process. Third, to assess cultural generalizability, we recruited Western (US/UK) samples. Fourth, given that the high level of customer participation may bring feelings of pleasure to consumers, which in turn may lead to positive WOM, Study 1b measured pleasure to test whether pleasure perception influences the results.

5.1 Participants, Design, and Procedure

The experimental design was the same as in Study 1a. Therefore, we aimed for a sample size of at least 128, as in study 1a, based on the earlier sample size calculation. Study 1b recruited 152 participants from the US and UK through Prolific (63.8% female; Mage = 36.48). Demographic information is shown in Appendix A.

The overall experimental design and procedure of Study 1b were similar to those of Study 1a, with the main differences being the use of new experimental stimuli and a more nuanced manipulation of customer participation. Participants were randomly assigned to either the low- or high-participation conditions. The low-participation group read, “A customer service agent shows you available styles, including the fabric, color, and details. You simply select according to the agent’s recommendations, without having to think about the details. The agent captures your figure data through the 3D virtual fitting feature on the website. You don’t have to participate in the following process. A designer completes the design of the suit based on your choices.” The high-participation group read, “First, you complete a comprehensive online survey on your taste and preference. Next, you participate in an online workshop, called Suit Knowledge, where you learn about fabric properties and basic design knowledge. Instead of choosing an existing style, you try on different styles using the 3D virtual fitting feature on the website. You closely engage in matching the fabric, color and details. Finally, you work with a designer on the specific design of the suit.”

After the manipulation, both groups read the same text describing the outcome of co-creation failure. The stimuli are shown in Appendix B. Subsequently, participants completed the same measurement items as in Study 1a, with the addition of a measure of pleasure (see Appendix C). Finally, they completed attention checks and provided demographic information (see Appendix A).

5.2 Results

Manipulation check. Results showed the low-participation group reported significantly lower customer participation than the high-participation group ($M_{\text{low}} = 3.12$, $SD_{\text{low}} = 1.14$,

$M_{\text{high}} = 4.08$, $SD_{\text{high}} = 0.99$, $t(150) = -5.54$, $p < 0.001$), indicating that the manipulation of customer participation was successful.

Hypotheses testing. Perceived pleasure perception was significantly higher in the high-participation group than the low-participation group ($M_{\text{low}} = 3.42$, $SD_{\text{low}} = 1.35$, $M_{\text{high}} = 5.12$, $SD_{\text{high}} = 1.25$, $t(150) = -8.03$, $p < 0.001$). To rule out the influence of perceived pleasure on the hypothesized effect, a one-way ANCOVA was performed with pleasure perception as a covariate. The results of the ANCOVA show that when perceived pleasure is controlled, the high-participation group still showed more positive WOM than the low-participation group ($M_{\text{low}} = 3.79$, $SD_{\text{low}} = 0.92$, $M_{\text{high}} = 4.88$, $SD_{\text{high}} = 0.78$, $F(1, 149) = 24.70$, $p < 0.001$, $\eta^2 = 0.14$), supporting H1 again and indicating customers' pleasure perception does not influence the WOM masking effect.

These results provide further corroboration of the effect established in Study 1a, using a moderately priced item, a new sample, and a more nuanced manipulation of customer participation. However, this study does not help to understand the mechanism by which customer participation affects WOM. In addition, perceived failure and satisfaction might influence the results. Study 2 aims to address these limitations.

6. Study 2

Study 2 has two purposes. First, it tests the mediating role of impression management motivation, establishing the underlying process. Second, based on the findings of previous literature, perceived failure and satisfaction may affect WOM following co-creation failure (Straus *et al.*, 2016; Xu *et al.*, 2018). Therefore, the two variables were measured to rule out their potential effects. Study 2 used a bracelet co-creation scenario (e.g., the fashion brand

Pandora) in the experimental stimuli.

6.1 Participants, Design, and Procedure

Study 2 recruited 150 Chinese participants through Credamo (75.3% female; Mage = 29.69), in line with the sample size calculations carried out for Studies 1a and 1b.

Demographic information is shown in Appendix A.

Study 2 adopted a one-factor between-subjects design (customer participation: low vs. high), and participants were randomly assigned to one of the two conditions. Before the formal experiment, participants were informed of the basic instructions and requirements. They were then presented with stimulus materials. Participants in the low-participation condition read: “Upon entering the workshop, a staff member shows you available beads and other accessories and introduces the latest popular styles. You select a preferred style from the pre-designed templates. In addition, you choose a small charm from the offering of the staff. The staff creates the bracelet according to the template you choose, and completes the beading, fixing, polishing, and packaging. You can offer suggestions and express your needs as you wish. You spend twenty minutes in the co-creation process.” Participants in the high-participation condition read: “Upon entering the workshop, you spend time learning basic jewelry design principles and researching the latest popular styles. A staff member shows you available beads and other accessories. Instead of choosing a pre-designed template, you create a new style under the guidance of the staff, considering current trends, symbolism, materials, and overall look. You also craft a small charm featuring your initials. Next, you and the staff collaboratively complete the beading, fixing, polishing, and packaging. You spend an hour in the co-creation process.” Afterward, both groups were presented with the same text

describing the failure of the co-created bracelet (see Appendix B).

Participants then answered a series of questions. The measures were largely consistent with those in the first two studies. The difference was that, in addition to WOM ($\alpha = 0.85$), we added measures for impression management motivation (White and Peloza, 2009, $\alpha = 0.91$) and internal attribution (Sugathan *et al.*, 2017a, $\alpha = 0.95$), all assessed on a 7-point Likert scale (see Appendix C). The prior literature emphasized internal attribution, so we incorporated it to examine whether it influenced the proposed effects. In addition, we measured failure perception and satisfaction to rule out their potential influence.

6.2 Results

Manipulation check. The results of the t-test showed that the low-participation group reported significantly lower customer participation than the high-participation group ($M_{\text{low}} = 3.15$, $SD_{\text{low}} = 1.22$, $M_{\text{high}} = 4.88$, $SD_{\text{high}} = 0.82$, $t(148) = -10.23$, $p < 0.001$), indicating the manipulation of customer participation was successful.

Hypothesis testing. The differences between the two groups in failure perception ($M_{\text{low}} = 3.27$, $SD_{\text{low}} = 0.98$, $M_{\text{high}} = 4.41$, $SD_{\text{high}} = 1.03$, $t(148) = -7.00$, $p < 0.001$) and satisfaction ($M_{\text{low}} = 3.15$, $SD_{\text{low}} = 1.17$, $M_{\text{high}} = 4.57$, $SD_{\text{high}} = 1.16$, $t(148) = -7.48$, $p < 0.001$) are significant. These two variables were included as covariates in ANCOVA. The results of ANCOVA showed that the high-participation group had more positive WOM compared to the low-participation group ($M_{\text{low}} = 4.04$, $SD_{\text{low}} = 1.25$, $M_{\text{high}} = 5.47$, $SD_{\text{high}} = 0.79$, $F(1, 146) = 23.44$, $p < 0.001$, $\eta^2 = 0.14$), supporting H1, which hypothesized a positive effect of customer participation on WOM. The results further indicated that failure perception and

satisfaction did not influence the hypothesized effects.

We used PROCESS bootstrapping Model 4 (Hayes, 2013) for mediation analysis, with 5,000 resamples. Specifically, customer participation was the independent variable, WOM was the dependent variable, impression management motivation and internal attribution were the mediators, and failure perception and satisfaction were the covariates. The results showed that the effect of customer participation on WOM was mediated by impression management motivation ($\beta = 0.43$, $SE = 0.13$, 95% $CI = [0.2140, 0.7045]$, excluding 0; see Figure 3) and internal attribution ($\beta = 0.35$, $SE = 0.12$, 95% $CI = [0.1391, 0.5916]$, excluding 0). In addition, the direct effect of customer participation on WOM was not found ($\beta = 0.12$, $SE = 0.19$, 95% $CI = [-0.2476, 0.4946]$, including 0). After controlling for internal attribution, the mediating effect of impression management motivation remained significant ($\beta = 0.35$, $SE = 0.11$, 95% $CI = [0.1527, 0.6072]$, excluding 0). These findings indicate that the mediating role of impression management motivation is independent of internal attribution, providing support for H2.

Insert Figure 3 about here

An additional finding was the significant mediating role of internal attribution. This may be because the manipulation of customer participation leads to differences in perceived responsibility across the two groups. Compared with the low-participation group, the high-participation group believed they bear more responsibility for the co-creation failure, thereby expressing less negative WOM. However, it does not affect the conclusion that impression management motivation mediates the WOM masking effect. This is further tested in the next

study.

Study 3 extends the earlier studies by examining the moderating effect of social exposure and testing H3a and H3b. It further distinguishes which underlying process (impression management motivation vs. internal attribution) drives the WOM masking effect. Because internal attribution represents consumers' intrinsic cognition of responsibility allocation, it should not be affected by extrinsic factors such as social exposure. Thus, we predict that social exposure moderates the effect of customer participation on WOM and the mediating effect of impression management motivation, while it should not moderate the mediating effect of internal attribution.

7. Study 3

Study 3 examines the moderating effect of social exposure and tests H3a and H3b. We further expect to show that, compared to internal attribution, impression management motivation is the key driver of the WOM masking effect. Moreover, value co-creation advocated under the service-dominant logic encompasses not only products but also services (Saha *et al.*, 2022; Vargo and Lusch, 2004). As the stimuli in the first three studies involved tangible products, Study 3 used a service (photo shoots) as the experimental stimulus to enhance the generalizability of the findings. Finally, we attempt to rule out the effects of consumer knowledge and confidence in the hypothesized effects.

7.1 Participants, Design, and Procedure

Study 3 adopted a 2 (customer participation: low vs. high) $\times$ 2 (social exposure: private

failure vs. public failure) between-subjects design. Using G*Power, setting the significance level α to 0.05, the statistical power ($1-\beta$) to 0.8, and a medium effect size of $f = 0.25$ (Cohen, 1988; Faul *et al.*, 2009), the results show that at least 179 participants were needed for the study. Study 3 recruited 222 Chinese participants through Credamo (71.2% female; Mage = 29.34). Demographic information is shown in Appendix A.

Study 3 manipulated customer participation and social exposure. In the first part, customer participation was manipulated. After reading the introduction, participants were asked to imagine experiencing a failed co-created portrait session. In the low-participation condition, participants read: “You do not have many ideas for the photo shoots, so you provide a general description and express basic needs. The staff team completes the design plan, including the theme, layout, clothing, and makeup.” In the high-participation condition, participants read: “You have many ideas for the photo shoots and express your own design ideas and specific requirements. With the assistance of the staff team, you complete the design plan, including the theme, layout, clothing, and makeup.” Participants in both conditions then read the same description of a co-creation failure.

Next, social exposure was manipulated (following Lee *et al.*, 2013). Participants in the private failure condition read: “Your friends know that you have taken the photo shoots but have not seen the photos.” Participants in the public failure condition read: “Your friends have seen the photos shot by this studio.”

After these manipulations, participants completed measures of consumer knowledge, consumer confidence, WOM ($\alpha = 0.87$), impression management motivation ($\alpha = 0.86$), internal attribution ($\alpha = 0.92$), customer participation, and social exposure. The measurement

items are provided in Appendix C.

7.2 Results

Manipulation check. The results of two-way ANOVA showed that the low-participation group has significantly lower perceived participation than the high-participation group ($M_{\text{low}} = 2.77$, $SD_{\text{low}} = 1.03$, $M_{\text{high}} = 4.45$, $SD_{\text{high}} = 1.22$, $F(1, 218) = 122.67$, $p < 0.001$, $\eta^2 = 0.36$), and the interaction effect was not significant ($F(1, 218) = 0.22$, $p = 0.64$). The private failure group has significantly lower perception about the co-creation failure than the public failure group ($M_{\text{low}} = 3.61$, $SD_{\text{low}} = 1.61$, $M_{\text{high}} = 5.41$, $SD_{\text{high}} = 1.05$, $F(1, 218) = 100.94$, $p < 0.001$, $\eta^2 = 0.32$), and the interaction effect was not significant ($F(1, 326) = 2.59$, $p = 0.11$). These results confirmed the successful manipulation of customer participation and social exposure. In addition, two-way ANOVA indicated there were no significant differences among the four groups in consumer knowledge ($F(1, 218) = 0.01$, $p = 0.94$) and consumer confidence ($F(1, 218) = 0.001$, $p = 0.98$), and they had no significant effect on WOM ($p > 0.05$), suggesting that consumer knowledge and confidence do not influence WOM and the hypothesized effects.

Hypotheses testing. A 2 (customer participation: low vs. high) $\times$ 2 (social exposure: private failure vs. public failure) ANOVA was performed with WOM as the dependent variable. The results showed a significant interaction effect between customer participation and social exposure ($F(1, 218) = 18.78$, $p < 0.001$, $\eta^2 = 0.08$). Further analysis showed that in the private failure group, the difference in WOM between the low-participation group and the high-participation was significant ($M_{\text{low}} = 3.13$, $SD_{\text{low}} = 1.16$, $M_{\text{high}} = 4.80$, $SD_{\text{high}} = 1.02$, $F(1, 218) = 71.36$, $p < 0.001$, $\eta^2 = 0.25$). In the public failure group, the difference in WOM

between the public failure group and the private failure group was significant ($M_{\text{low}} = 2.95$, $SD_{\text{low}} = 0.98$, $M_{\text{high}} = 3.42$, $SD_{\text{high}} = 0.98$, $F(1, 218) = 5.61$, $p = 0.02$, $\eta^2 = 0.03$; see Figure 4). In addition, a one-sample t-test was performed to compare WOM scores among the four groups with 4, the midpoint on the 7-point scale. The results show that only the WOM score of the high-participation/private-failure group was significantly higher than 4 ($t(53) = 5.75$, $p < 0.001$), while that of the other three groups was significantly lower than 4 ($t_{\text{low/private}}(55) = -5.60$, $p < 0.001$; $t_{\text{low/public}}(54) = -7.84$, $p < 0.001$; $t_{\text{high/public}}(55) = -4.47$, $p < 0.001$). This indicates that once the failure is public, the WOM of high-participation consumers dramatically shifts from positive (above the midpoint of 4) to negative (below the midpoint of 4), which represents a negative impact for the company.

 Insert Figure 4 about here

PROCESS bootstrapping Model 15 (Hayes, 2013) was used for the moderated mediation analysis, with 5,000 resamples. Customer participation was the independent variable, WOM was the dependent variable, impression management motivation and internal attribution were the mediators, and social exposure was the moderator. The results showed a moderated mediation effect of impression management motivation ($\beta = -0.31$, $SE = 0.11$, 95% CI = [-0.5519, -0.1219], excluding 0). In particular, in the private failure condition, the mediating effect of impression management motivation was significant ($\beta = 0.29$, $SE = 0.09$, 95% CI = [0.1272, 0.4759], excluding 0). Thus, H3a was supported. By contrast, in the public failure contexts, the mediating effect of impression management motivation was not significant ($\beta = -0.03$, $SE = 0.06$, 95% CI = [-0.1490, 0.0818], including 0). Thus, H3b was supported.

The moderated mediation effect of internal attribution was not supported ($\beta = 0.21$, $SE = 0.13$, 95% $CI = [-0.0290, 0.4817]$, including 0). This result suggests that social exposure does not moderate the mediating effect of internal attribution. In other words, internal attribution is consumers' internal process of responsibility allocation, which is not influenced by social exposure and fundamentally distinguished from the WOM masking effect. Therefore, the moderation results clarify when the WOM masking effect occurs, thereby specifying a boundary condition under which WOM is not a reliable reflection of actual experience following co-creation failure.

8. General Discussion

This research used commonly encountered co-created products and services as stimuli and conducted four experiments to systematically examine the WOM masking effect among consumers, following co-creation failure.

Study 1a (co-created sofa) demonstrated that high-participation consumers were more likely than low-participation consumers to engage in positive WOM to mask co-creation failures. Study 1b (co-created suit) replicated this effect while controlling for the role of pleasure. Notably, although the two studies recruited participants from different cultural backgrounds, the findings were consistent across Eastern and Western samples, indicating the cross-cultural robustness of this effect.

Building on these findings, Study 2 (co-created bracelet) further uncovered the underlying mechanism driving the WOM masking effect. Results reveal that high-participation consumers were more inclined to spread positive WOM following failure

because they are motivated to present a favorable image of themselves, avoiding being perceived by others as lacking judgment or competence. Although internal attribution also shows a significant mediating effect, it primarily reflects consumers' perceptions of responsibility allocation (Koc *et al.*, 2017; Sugathan and Ranjan, 2020; Sugathan *et al.*, 2017a) rather than concerns about reputation management. Hence, internal attribution alone cannot fully explain the WOM masking effect. Study 3 provided a more direct test of this proposition.

Specifically, Study 3 (co-created photo shoots) investigated the moderating role of social exposure. Results indicated that in the private failure condition, when others were unaware of the failure, high-participation consumers engaged in positive WOM to mask the outcome, driven by impression management motivation. In contrast, in the public failure condition, when others have already witnessed the failure, consumers can no longer hide the outcome. Consequently, under these publicly visible conditions, impression management motivation no longer triggered positive WOM and may even shift consumers' responses from positive to negative WOM. This finding highlights the critical role of the social environment in shaping the WOM masking effect. Moreover, internal attribution is unaffected by social exposure, further supporting its limited explanatory power for the positive WOM observed among high-participation consumers. Additionally, Study 3 showed that consumer knowledge and consumer confidence did not influence the effect, further strengthening the robustness of the findings.

This research examined the WOM masking effect in the context of co-creation failure and offered important theoretical and managerial contributions to the literature on value co-creation and WOM following co-creation failure.

8.1 Theoretical Contribution

This research examined how customer participation shapes WOM following co-creation failure from an external presentation perspective, offering important contributions to the literature on value co-creation, WOM following co-creation failure, and the value of WOM.

First, unlike the existing literature, which treated WOM following co-creation failure as a reflection of consumers' internal perceptions of the co-creation outcome (Bendapudi and Leone, 2003; Heidenreich *et al.*, 2015; Koc *et al.*, 2017; Sugathan and Ranjan, 2020; Sugathan *et al.*, 2017a), this research revealed a WOM masking effect following co-creation failure, whereby WOM may deviate from consumers' actual experience. We found that high-participation consumers may provide favorable WOM despite experiencing co-creation failure, thereby weakening the diagnostic value of WOM as a reliable source of feedback on co-creation outcomes. This finding reshapes our theoretical understanding of the relationship between value co-creation and WOM, by showing that favorable WOM does not necessarily indicate successful co-creation but may instead be used strategically to mask failure outcomes.

Second, building on impression management motivation as the underlying process, this research reveals why the WOM masking effect occurs. Existing research has mainly examined the internal mechanisms through which customer participation influences WOM following co-creation failure from internal perception perspectives, including responsibility sharing (Koc *et al.*, 2017; Sugathan and Ranjan, 2020; Sugathan *et al.*, 2017a), self-serving bias (Bendapudi and Leone, 2003; Yen *et al.*, 2004), and expectation–outcome inconsistency

(Heidenreich *et al.*, 2015; Straus *et al.*, 2016). By contrast, this research adopted an external presentation perspective to examine the social-motivation mechanism through which customer participation influences WOM. Driven by impression management, consumers may strategically express WOM to influence how others evaluate them. Even though they were dissatisfied, they may communicate positive WOM about the firm to prevent their image from being damaged by the failure outcome. In this way, customer participation influenced not only how consumers perceive co-creation failure but also how they expressed it. This mechanism explains why WOM may deviate from consumers' actual experience and, in turn, lose diagnostic value as a reliable source of feedback on co-creation outcomes.

Moreover, the effects of customer participation on WOM following co-creation failure can be understood through multiple forms of linkage induced by participation. Customer participation can create a responsibility-linkage, linking the co-created outcome to consumers' own actions and leading them to reinterpret responsibility for failure (Koc *et al.*, 2017; Sugathan and Ranjan, 2020; Sugathan *et al.*, 2017a). It can also create an inner self-linkage, making failure threatening to self-worth and expectations (Bendapudi and Leone, 2003; Chen, 2018; Heidenreich *et al.*, 2015). In addition, the co-created outcome may generate a social self-linkage, through which others may evaluate the consumer's social image. Prior studies have mainly focused on the first two linkages. By contrast, this research highlights a social self-linkage to explain why WOM may be strategically expressed to mask co-creation failure.

Third, this research identified social exposure as a boundary condition of the WOM masking effect. The results showed that the role of social exposure lies not in changing the strength of impression management motivation, but in determining what WOM strategy

consumers use to manage impressions. Prior research on consumption failure suggests that greater failure visibility may intensify negative emotions such as embarrassment and anger, which in turn increase negative WOM (He *et al.*, 2017; He *et al.*, 2020; Philp and Ashworth, 2020). However, our results show that social exposure in co-creation contexts did not alter the level of impression management motivation. Instead, it changed the WOM strategy consumers use to manage impressions. Specifically, when the failure is not known to others, high-participation consumers can use positive WOM to mask the failure and manage their social image. When the failure is known to others, however, positive WOM can no longer conceal the outcome, diminishing the WOM masking effect. This research clarified when the WOM masking effect occurs, thereby specifying the boundary condition under which WOM becomes a less reliable reflection of co-creation outcomes.

8.2 Practical Implications

Social media, e-commerce, and value co-creation are expanding rapidly. This research provides important managerial implications for value co-creation, WOM management, and marketing.

First, the central managerial implication of this research is that visible positive WOM following co-creation failure should not be treated as a reliable diagnostic signal. In anonymous environments, consumers face fewer self-presentational concerns, so negative WOM can be a relatively direct signal of dissatisfaction and a useful diagnostic input (Koc *et al.*, 2017; Naumann *et al.*, 2020). However, when consumers communicate in public settings, such as social media, they may regulate what they say to present a favorable image of themselves. As a result, public WOM may not fully reveal product or service problems. To

reduce this risk, firms should build “candid feedback” pathways that lower impression costs, such as anonymous post-use surveys, private complaint channels, and more accessible customer feedback systems. These mechanisms help firms capture defects and dissatisfaction that may not surface in visible WOM.

Second, companies should formulate co-creation and WOM strategies based on the social exposure of their market offerings. For products or services where failures are easily exposed to others, such as hairdressing, it is difficult for consumers to mask a failure. Companies should establish a rapid response system and comprehensive contingency plans, such as immediate apologies and offering discounts. In contrast, for products or services where failure results are less likely to be made public, such as items for personal use or customized travel plans, companies can adopt bolder innovation strategies. They can encourage consumers to participate in innovative co-creation services and provide personalized options to increase their participation and WOM. Through differentiated strategies, companies can effectively control risks while fully leveraging innovation opportunities to maintain a competitive edge in the market.

Third, our findings suggest that co-creation firms can adopt a more open stance toward highly participative co-creation programs. Prior literature has argued that co-creation failures may bring losses and risks to companies (Lumivalo et al., 2024). Our results show that high-participation customers tend to have positive WOM even when encountering co-creation failures. This finding suggests companies can view value co-creation with an open mindset. More importantly, companies can leverage this finding to optimize marketing and promotion plans. For example, they can launch highly interactive co-creation campaigns on social media and encourage consumers to share WOM. This approach not only takes advantage of

consumers' need for impression management, but also attracts new customers, creating co-creation activities that stand out from the competition. In this way, companies can enhance brand image and strengthen customer relationships.

8.3 Limitations and Future Research

Despite its theoretical and practical contributions, this research is not without limitations. First, the experimental design was instrumental in establishing causal clarity and internal consistency. However, such controlled environments may not capture the full nature of co-creation failures. To enhance generalizability, future studies can seek collaborative data-sharing with co-creation firms to analyze spontaneous social media data or deploy longitudinal field experiments that track consumer behavior from the inception of a co-creation project to post-project communication, especially when co-creation failure occurs.

Second, this research identifies a new form of WOM bias. High-participation consumers may generate positive WOM even when dissatisfied with the outcome. In such cases, WOM diverges from consumers' actual experience. However, we did not directly measure the magnitude of this discrepancy. We took an indirect approach: participants were told in the stimuli that they were dissatisfied with the co-creation outcome, and their WOM was subsequently measured. While this design allowed us to reveal customers' WOM masking behavior, it did not quantify the discrepancy between WOM and actual feelings. As self-report methods are less likely to capture internal feelings, especially when they contrast external behaviors in the case of WOM masking, future studies could adopt physiological methods such as fMRI to directly measure actual feelings and demonstrate the magnitude of the discrepancy.

Third, we focused only on the moderating role of WOM environments (i.e., social exposure). Yet the WOM masking effect may also be contingent on other factors. Future research could explore additional boundary conditions such as the severity of co-creation failure, consumer traits (e.g., face consciousness, level of self-construal), the relationship between WOM senders and receivers (e.g., interpersonal closeness), and product type (e.g., utilitarian vs. hedonic). For instance, severe failures may elicit intense negative emotions and trigger retaliatory responses, thereby increasing negative WOM, whereas minor failures may be more tolerable and thus more likely to be downplayed for self-image presentation. In addition, although this research conceptualizes customer participation in terms of degree of participation, future research could further distinguish different types of participation across co-creation processes and examine whether they impact the WOM masking effect. Investigation of these factors would provide a more complete understanding of WOM masking following co-creation failure.

Finally, this research investigates co-creation between firms and consumers in settings involving human employees but does not address the role of artificial intelligence (AI). As AI continues to advance, firms may increasingly use AI to co-create products or services with consumers. Recent studies show that consumer responses to service failure differs between human and AI service providers (Grazzini *et al.*, 2023; Pavone *et al.*, 2023). Yet little is known about how consumers with varying levels of participation respond to co-creation failures when the collaborator is an AI agent. We therefore call for future research to extend the study of value co-creation and co-creation failure into AI-based contexts.

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