The U-shaped Effect of Interpersonal Intimacy on Word-of-Mouth Intention in Consumption Failure Contexts: A Motivational Conflict Perspective

Authors: Sun Hongjie, Wang Meiling, Zhong Ke, Zhong Ke

Date: 2023-03-16T00:00:00+00:00

Abstract

[Purpose] In consumption failure contexts, consumers' word-of-mouth communication intentions toward groups with differing intimacy levels are influenced by motivations to protect others' interests and self-image.

[Method] Diverging from prior research that posited a linear relationship between intimacy and word-of-mouth, this study adopts a motivation conflict perspective, constructs a motivation conflict model, and examines the influence of interpersonal intimacy on word-of-mouth communication intentions in consumption failure contexts and its underlying mechanism.

[Conclusion] Through four main experiments and two supplementary experiments, the results reveal that intimacy exerts a U-shaped effect on word-of-mouth communication intentions; consumers demonstrate the lowest word-of-mouth intentions when facing medium-intimacy targets compared to low- and high-intimacy targets. This effect is explained by the tension between consumers' motivation to protect others' interests and their motivation to protect self-image. Seller responsibility moderates this mechanism; when the seller bears high responsibility for the consumption failure outcome, word-of-mouth communication intentions no longer follow a U-shaped relationship with increasing intimacy.

Full Text

Preamble

The U-shaped Effect of Interpersonal Closeness on Word-of-Mouth Intention in Consumption Failure Contexts: A Motivational Conflict Perspective

Hongjie Sun, Meiling Wang, Ke Zhong
(School of Management, Hainan University, Haikou 570228)

[**Objective**] In consumption failure situations, consumers' word-of-mouth (WOM) intentions toward different closeness groups are influenced by two competing motives: protecting others' interests and protecting self-image. [**Methods**] Departing from previous research that identified linear relationships between closeness and WOM, this study adopts a motivational conflict perspective to construct a conflict model examining how interpersonal closeness affects WOM intention following consumption failures and the underlying mechanisms. [**Conclusion**] Through four main experiments and two supplementary experiments, results demonstrate a U-shaped relationship between closeness and WOM intention: consumers show the lowest WOM intention when facing moderately close others compared to low- and high-closeness targets. This effect is explained by the tension between consumers' motivation to protect others' interests and their motivation to protect self-image. Merchant responsibility moderates this mechanism: when merchants bear high responsibility for the consumption failure, the U-shaped relationship between closeness and WOM intention disappears.

Keywords: Consumption Failure, Intimacy, Word-of-Mouth Intention, U-shaped
Classification Number: F274

Abstract

[**Objective**] Consumers frequently share shopping experiences with others, and the strength of social relationships can impact WOM behavior, particularly following unpleasant purchases. While some studies have explored the role of interpersonal closeness in social contexts, little is known about how this diverse range of relationships affects consumers' WOM behavior in consumption failure situations. Previous research has shown that consumers are more likely to spread negative information to individuals with high (vs. low) interpersonal closeness. However, these studies have adopted a binary approach to classifying closeness, ignoring what happens at moderate levels. The impact of relationship diversity requires further investigation.

[**Methods**] This study examines the effect of interpersonal closeness on consumers' WOM intention after consumption failures through six experiments conducted in common social settings, both online (Experiments 1, 2, and Supplementary Experiment 1) and offline (Experiments 3, 4, and Supplementary Experiment 2). Drawing on attitudinal ambivalence literature, this research employs the SIM model to determine motivation conflict levels and examines the U-shaped impact of interpersonal closeness on WOM intention following consumption failures. Experiment 1 (N=143) uses a between-subjects design with a single factor of three closeness levels (low vs. medium vs. high). Participants imagined a negative hotel service experience, then reported their WOM

intention and answered related questions. Experimental materials varied only in the manipulation statements for interpersonal closeness.

Experiment 2 (N=155) was designed to verify the mediating role of motivation conflict. The closeness manipulation method and stimulus material were changed to a poorly performing smartphone purchase. Participants answered related questions after reading the materials. Experiment 3 (N=126) was conducted in an airport waiting room to simulate a more natural face-to-face communication setting, shifting the social context from WeChat to a waiting room. The U-shaped relationship between interpersonal closeness and WOM intention was verified, and the mediating effect of motivation conflict was confirmed.

Experiment 4 (N=298) uses a 3 (interpersonal closeness: low vs. medium vs. high) × 2 (merchant responsibility: low vs. high) between-subjects design to validate the moderating effect of merchant responsibility. The stimulus material described a negative private custom tour experience, with manipulations of both interpersonal closeness and merchant responsibility. In the low merchant responsibility condition, the merchant only provided reference options and consumers chose the travel route. In the high merchant responsibility condition, consumers chose the strongly recommended route provided by the merchant. Domestic samples were recruited from a professional survey website (Credamo) and completed online questionnaires, while foreign samples were recruited from another professional survey website (Prolific). Samples can be considered representative of mainstream consumer groups.

[**Results**] The main findings are as follows: (1) Consumers are least likely to discuss negative consumer experiences with moderately close others compared to low- and high-closeness targets, demonstrating a U-shaped relationship between closeness and WOM intention. (2) This difference is caused by conflict between the motivation to protect others' interests and the motivation to protect self-image: when facing moderately close individuals, consumers are most concerned with protecting their self-image, leading to high motivational conflict and resulting in the lowest WOM intention. (3) Merchant responsibility moderates the effect of closeness on WOM intention. When merchants bear low responsibility, the effect of closeness on WOM intention is U-shaped. However, when merchants bear high responsibility, consumers' motivation to protect self-image decreases when facing moderately close others, causing the motivation to protect others' interests to become dominant and leading to low levels of motivational conflict. This results in WOM intention increasing with closeness, yielding an approximately linear effect.

This study contributes to the important fields of WOM communication, social relationships, and WOM intention, providing valuable insights for marketing professionals involved in market research, WOM management, social media operations, and marketing.

Keywords: Consumption Failure, Intimacy, Word-of-Mouth Intention, U-shaped

1.1 Problem Statement

With the increasing popularity of social media and social commerce, social relationships more broadly influence consumer behavior (Appel et al., 2020; De Oliveira Santini et al., 2020). Whether in daily life or on social platforms, everyone maintains contacts with varying degrees of closeness (Cartwright et al., 2021; Wang, 2015). Consumers can share consumption experiences and insights both face-to-face with individuals of different closeness levels and through social media platforms like WeChat, QQ, and Weibo. Consequently, in this era of increasingly diverse and nuanced social relationships, WOM management in social contexts has become particularly important for managers, especially when consumption failures occur (He et al., 2017).

Social relationships profoundly influence consumers' WOM intentions, as different social relationships evoke different social motivations that subsequently affect WOM intention (Liu et al., 2021). However, only a few studies have examined closeness as an important factor affecting WOM in social contexts, revealing a linear relationship between closeness and WOM. For example, Dubois et al. (2016) and Chen (2017) explored the relationship between closeness and WOM, finding that consumers are more willing to spread negative information to high-closeness (vs. low-closeness) targets. Conversely, Olson and Ahluwalia (2021) found that consumers share positive WOM about consumption failures with high-closeness targets to encourage others to make similarly poor choices, thereby gaining psychological satisfaction through social comparison. While these studies confirm that closeness affects WOM behavior, they neither investigate the effect of closeness on WOM intention nor explore the diversity of closeness, simply adopting a binary classification. How this diverse range of relationships influences consumers' WOM intention in consumption failure situations requires deeper investigation.

This study proposes that consumers' WOM intentions toward different closeness groups in consumption failure contexts are influenced by two distinct motivations. Sharing failure experiences through WOM can help others, satisfying consumers' altruistic motivation to protect others' interests (hereinafter "other-protection motivation"). Simultaneously, it exposes one' s own failure, triggering consumers' self-interested motivation to protect self-image (hereinafter "self-image protection motivation") (Dubois et al., 2016; Alexandrov et al., 2013; Berger, 2014; Chen, 2017). These two motivations jointly influence WOM intention. More critically and interestingly, when considering more diverse closeness relationships, a U-shaped relationship emerges between closeness and WOM intention. Compared to low-closeness targets (e.g., strangers) and high-closeness targets (e.g., close friends), consumers tend to experience higher self-image protection motivation when facing moderately close targets (e.g., casual friends). At this point, consumers experience internal conflict between self-interest and altruism, creating tension that reduces WOM intention.

This study explores the U-shaped effect of closeness on WOM intention in con-

sumption failure contexts from a motivational conflict perspective, revealing the underlying conflict mechanism and boundary conditions. Expected contributions include: (1) Revealing the U-shaped effect of closeness on WOM intention, which differs from the linear relationship identified in previous research. (2) Uncovering the conflict mechanism between other-protection and self-image protection motivations in WOM intention, extending the applicability of motivational conflict theory. (3) Advancing WOM marketing research. WOM intention is an important antecedent of WOM behavior, and studying WOM intention in social contexts helps enrich and improve WOM theory. This research also has important practical value, helping to understand how different motivations affect consumers' WOM intentions, enabling firms to recognize the existence of silent dissatisfied consumers in social contexts to obtain genuine feedback through multiple channels, and assisting in developing private traffic management and WOM management strategies.

1.2.1 Different Motivations Affecting Word-of-Mouth Intention in Social Contexts

Word-of-mouth intention is an important antecedent of WOM behavior, referring to the willingness of non-commercial individuals to share information and feelings about brands, products, and services (Loureiro, 2019; Sheng et al., 2022). Scholars have long focused on consumers' WOM intentions, WOM distribution patterns, and WOM biases. Since Anderson (1998) revealed the U-shaped relationship between consumer satisfaction and WOM intention in traditional offline WOM, numerous related studies have emerged (Hu et al., 2009, 2017; Han & Anderson, 2020). In the internet era, consumers' online WOM behavior and WOM intentions across different platforms have attracted widespread academic attention (Hennig-Thurau et al., 2004; Karaman, 2021; Liu et al., 2021; Parra-López et al., 2011). For example, Karaman (2021) revealed that consumers' online WOM intentions exhibit extremity bias and consistency bias—consumers with extreme satisfaction or dissatisfaction are more willing to engage in WOM, while those with moderate attitudes tend to remain silent. Similarly, Liu et al. (2021) found that consumers are less willing to post negative WOM on social platforms than on ordinary e-commerce platforms because they do not want to display excessive emotions in front of acquaintances or be perceived as foolish consumers. However, few studies have examined how different closeness relationships affect WOM intention, even as social media has added numerous moderately close contacts to consumers' networks. When consumption failures occur, WOM intentions toward different relationship targets likely differ significantly, which is crucial for firms seeking to build positive WOM and understand consumer psychology.

WOM intention is driven by different motivations. Based on humans' two fundamental motivational systems– "self-interest" and "altruism" –and integrating relevant research (Dubois et al., 2016), this study identifies two motivations affecting WOM intention: other-protection motivation and self-image protection

motivation. Other-protection motivation drives consumers to publicize their genuine failure experiences to help others avoid losses (Alexandrov et al., 2013; Hennig-Thurau et al., 2004). Self-image protection motivation makes consumers reluctant to discuss failed consumption experiences in social contexts where their identity is exposed, to protect their positive image and avoid damage to their reputation as wise purchasers (Berger & Schwartz, 2011). In summary, in consumption failure situations, consumers' decisions about whether to engage in WOM in social contexts may be simultaneously influenced by these two different motivations, with the strength of conflict between these two forces determining WOM intention.

1.2.2 Interpersonal Closeness, Motivation Conflict, and Word-of-Mouth Intention

Interpersonal closeness refers to the perceived psychological proximity between two individuals (Dubois et al., 2016; Gino & Galinsky, 2012). Previous research has classified interpersonal closeness into high and low levels (Dubois et al., 2016). Based on the core concept of interpersonal closeness, this study divides closeness into three levels: low, medium, and high. Low-closeness targets are defined as individuals with virtually no real-world connection and no expected future interaction, such as strangers online or passersby. Medium-closeness targets are defined as individuals with work or life connections but no deep private contact, such as ordinary colleagues or casual friends. High-closeness targets are defined as individuals with close relationships and frequent private contact, such as best friends or close confidants.

When consumption failures occur, consumers' WOM intentions are typically influenced by both other-protection and self-image protection motivations. Other-protection motivation drives consumers to inform others about their negative experiences, helping them avoid losses (Clark & Mils, 1993; Cross et al., 2000; Dubois et al., 2016; Markus & Kitayama, 1991; Presi et al., 2014; Yoo & Gretzel, 2011), creating minimal resistance to WOM intention. However, when self-image protection motivation is activated, consumers worry that sharing failure experiences will make them appear unwise, weakening the primary effect of other-protection motivation. Additionally, self-image protection motivation is heavily influenced by social context, with different activation levels when consumers face targets of varying closeness (Chen, 2017; De Angelis et al., 2012; Tassiello et al., 2018; Zhu et al., 2008). The two motivations create varying degrees of conflict that pull consumers in different directions, subsequently changing WOM intention. Compared to low and high closeness, consumers experience the highest self-image protection motivation when facing moderately close targets, creating the greatest conflict with other-protection motivation and resulting in the lowest WOM intention. Specifically, the benefits of impression management are greatest in front of moderately close targets, generating the highest self-image protection motivation. On one hand, compared to strangers, consumers facing moderately close targets consider future image-building and

potential benefits more seriously (Alexandrov et al., 2013; Presi et al., 2014). Interactions with low-closeness targets are low-frequency and incidental, yielding low returns on impression management and thus weak self-image protection motivation. On the other hand, consumers typically show their authentic selves to high-closeness targets (Zhu et al., 2008), leaving little room for self-enhancement and thus lower impression management motivation.

To better reveal the internal mechanism of how closeness affects WOM intention, this study draws on attitudinal ambivalence and motivational conflict literature to calculate motivation conflict using the SIM model (T = 3×C−D; Priester & Petty, 1996; Yan et al., 2021), where T represents motivation conflict level, D is the dominant motivation, and C is the conflicting motivation. Based on previous analysis, other-protection motivation is the dominant motivation, while self-image protection motivation is the conflicting motivation. The SIM model accounts for both the similarity and intensity of conflicting motivations. When conflicting motivations are at similar levels and comparable intensity, tension arises. The SIM model simplifies to assume that tension (T) is a linear function of the difference between three times the conflicting motivation (C) minus the dominant motivation (D) (i.e., T = 3×C−D; Priester & Petty, 1996; Yan et al., 2021). This means that when both other-protection and self-image protection motivations are similarly high or similarly moderate, the value of "3×C−D" will be larger, indicating greater motivation conflict. After experiencing service (product) failure, consumers facing moderately close targets experience the strongest self-image protection motivation, creating the strongest conflict with the dominant other-protection motivation and causing significant internal 矛盾, resulting in the lowest WOM intention. When facing low- and high-closeness targets, self-image protection motivation is weaker, creating less conflict with other-protection motivation and stronger WOM intention. Therefore, this study proposes:

Hypothesis 1: In consumption failure contexts, a U-shaped relationship exists between closeness and WOM intention. Specifically, WOM intention decreases from low to moderate closeness and increases from moderate to high closeness.

Hypothesis 2: The U-shaped relationship between closeness and WOM intention is mediated by the conflict level between other-protection and self-image protection motivations.

1.2.3 The Moderating Effect of Merchant Responsibility

Consumption failures can make purchasers feel frustrated and perceive themselves as having made unwise decisions, damaging self-image. However, consumption failures may also result from merchant recommendations. Since merchant recommendations are common marketing practices, examining how merchant responsibility influences the relationship between closeness and WOM intention has important practical significance. This study proposes that merchant responsibility for purchase failure moderates the U-shaped relationship between

closeness and WOM intention. Specifically, compared to low merchant responsibility, when unsatisfactory outcomes are primarily caused by merchants (e.g., through excessive marketing), consumers attribute failure to merchant error rather than their own decision-making mistakes. Consequently, discussing the negative experience will not affect self-image, weakening self-image protection motivation (He et al., 2019; Kelley & Michela, 1980). Meanwhile, when merchants bear high responsibility for failure outcomes, consumers become more angry and develop stronger other-protection motivation, wanting to publicize product or service defects to help others avoid pitfalls (Bougie et al., 2003; Gelbrich, 2010). Therefore, this study predicts that when merchants bear high responsibility for failure outcomes and consumers face moderately close targets, consumers' self-image protection motivation weakens, motivation conflict decreases, and WOM intention no longer shows a U-shaped relationship with closeness. Thus, this study proposes:

Hypothesis 3: Merchant responsibility moderates the U-shaped relationship between closeness and WOM intention. The U-shaped relationship exists under low merchant responsibility; under high merchant responsibility, WOM intention increases linearly with closeness.

[Figure 1: see original paper] presents the research model:

Figure 1. Research Model

This study tests these hypotheses through six experiments: Experiment 1 uses consumption failure (hotel service) as stimulus material to verify Hypothesis 1. Experiment 2 and Supplementary Experiment 1 use product failure (smartphone, electric vehicle) as stimulus material and change the closeness manipulation to replicate Hypothesis 2. Experiment 3 uses consumption failure (accommodation service) as stimulus material and changes the social context from WeChat group chat to face-to-face conversation in an airport waiting room to compare results across communication contexts. Additionally, a cross-cultural experiment (Supplementary Experiment 2) explores whether the U-shaped relationship between closeness and WOM intention differs across cultural contexts. Experiment 4 uses consumption failure (private custom tour) as stimulus material to verify Hypothesis 3 while further expanding the social context from online to offline. All domestic samples were recruited from a professional survey website (Credamo) to complete online questionnaires, while foreign samples were recruited from another professional survey website (Prolific). Participants received corresponding compensation after completing experiments. Domestic participants were all from mainland China, aged 18-60, while foreign participants were from the UK and US, aged 18-55, with relatively balanced income levels and occupations, generally representing mainstream consumer groups. Considering that low engagement and attention during online questionnaire completion might affect data quality, experiments set minimum completion time limits and attention check questions as screening rules. All experiments were completed between May 2022 and September 2022. Sample statistics for all experiments (age, income, occupation, and gender) are presented in Table 1 in the Appendix.

Experiment 1

Experiment 1 aims to verify the U-shaped relationship between closeness and WOM intention (Hypothesis 1). Using G*Power (Faul et al., 2009), with significance level α set at 0.05 and effect size f = 0.3, a minimum of 111 participants were required to achieve statistical power of $1-\beta = 0.8$. This experiment collected 143 valid questionnaires, including 53 males (37.1%), with an average age of 28.65.

Experiment 1 employed a single-factor three-level between-subjects design, with all participants randomly assigned to three closeness groups (closeness: low vs. medium vs. high). Experimental materials asked participants to imagine experiencing poor hotel service and having an opportunity to share this experience with others; materials differed only in closeness manipulation statements. WeChat was chosen as the social context for two reasons: first, as China' s largest social platform, participants are highly familiar with it; second, WeChat' s social network simultaneously includes low-, medium-, and high-closeness contacts, allowing closeness manipulation through minor textual modifications with minimal extraneous variable interference. Detailed experimental materials are presented in Table 2 in the Appendix.

After carefully reading the hotel consumption failure scenario, participants viewed information about a low/medium/high-closeness WeChat group on a separate page: low closeness was a community chat group of local strangers, medium closeness was a casual chat group of ordinary colleagues, and high closeness was a chat group of close friends. Participants then reported their WOM intention using two items ("I am very willing to talk to them about this unsatisfactory hotel service," "The likelihood that I would talk to them about this unsatisfactory hotel service is very high," 9-point Likert scale, r = 0.96) (Leung et al., 2015).

Following these measures, participants completed 9-point scale assessments of perceived closeness and service satisfaction. Perceived closeness was measured with the item: "How close do you think your relationship is with strangers in the community chat group/ordinary colleagues in the colleague chat group/close friends in the close friend chat group?" (1 = "not close at all," 9 = "very close") (Dubois et al., 2016). Satisfaction was measured with: "How satisfied are you with this hotel stay?" (1 = "very dissatisfied," 9 = "very satisfied"). Subsequent experiments used identical measurement approaches for these three variables. Finally, participants reported demographic variables.

2.2 Results

(1) Manipulation Check

One-way ANOVA results showed significant differences in closeness perception across the three groups ($F(2, 140) = 134.24$, $p < 0.001$, $^2 = 0.657$). Compared to the medium-closeness group (M_{medium} = 4.46, SD = 1.50), the low-closeness group was significantly lower (M_{low} = 3.68, SD = 1.63, p <

0.001) and the high-closeness group was significantly higher (M_{high} = 7.98, SD = 0.84, p < 0.001), indicating successful manipulation. Additionally, satisfaction did not differ significantly across groups (F(2, 140) = 2.79, p = 0.065), confirming that satisfaction did not cause between-group differences in other variables.

(2) Main Effect Analysis

One-way ANOVA indicated that closeness (coded: low = 1, medium = 2, high = 3) had a significant quadratic effect on WOM intention (F(1, 140) = 69.20, p < 0.001) and a significant linear effect (F(1, 140) = 8.58, p = 0.004). Contrast analysis revealed that consumers were less willing to spread WOM to medium-closeness targets (M_{medium} = 4.98, SD = 2.07) than to low-closeness targets (M_{low} = 6.89, SD = 1.72, t(93) = 4.91, p < 0.001) and high-closeness targets (M_{high} = 7.88, SD = 0.89, t(94) = -8.92, p < 0.001), as shown in Figure 2 [Figure 2: see original paper]. The difference between low- and high-closeness groups was also significant (t(93) = -3.51, p = 0.001), consistent with previous research. Without considering medium-closeness relationships, the difference between high- and low-closeness groups might be interpreted as a simple linear relationship. However, this study focuses on the U-shaped relationship between closeness and WOM intention; therefore, subsequent analyses report the U-shaped relationship without showing comparisons between low- and high-closeness groups.

Figure 2. WOM Intention Across Different Closeness Levels (Experiment 1)

To further verify that the relationship between closeness and WOM intention is U-shaped rather than another non-linear form, this experiment followed Lind & Mehlum' s (2010) standards for U-shaped tests. Using the "EReg1.0" plugin in SPSS 26.0, principal component regression analysis was conducted with closeness as the independent variable and WOM intention as the dependent variable to test the quadratic effect. Results showed that the linear term of closeness was negative and significant (β = -9.13, p < 0.001), the squared term was positive and significant (β = 2.41, p < 0.001), the inflection point was at 1.90 (95% CI = [1.8162, 1.9673], excluding 0), and slope signs at endpoint values were opposite (range: -3.41 ~ 4.46), consistent with Hypothesis 1. This confirms that the U-shaped hypothesis for the effect of closeness on WOM intention is supported.

Experiment 2

Experiment 1 demonstrated a U-shaped relationship between closeness and WOM intention following consumption failure, with consumers showing higher WOM intention toward low- and high-closeness targets than moderately close targets. While previous research has shown that satisfaction affects WOM sharing and valence, Experiment 1 ruled out satisfaction as an alternative explanation. However, Experiment 1 had two limitations: First, the medium-closeness group used "ordinary colleagues" as the manipulation, but different people may

interpret colleague relationships differently—for example, some may view ordinary colleagues as potential competitors, and colleague relationships can easily trigger impression management motivation (Chen & Xie, 2008; Gardner & Martinko, 1988). Thus, Experiment 1' s results might be explained by these factors. Second, Experiment 1 used a hotel consumption failure scenario, leaving the hypothesis unverified in physical product purchase contexts. Therefore, Experiment 2 adopts a new closeness manipulation and consumption context to further verify the U-shaped relationship and reveal the underlying mechanism.

3.1 Experimental Design

Compared to Experiment 1, Experiment 2 describes medium-closeness targets as casual friends and uses product failure as stimulus material to reduce extraneous variable interference. G*Power calculations indicated a minimum of 111 participants were required. Experiment 2 collected 155 valid questionnaires, including 60 males (38.7%), with an average age of 30.08.

Experiment 2 used a single-factor three-level between-subjects design (closeness: low vs. medium vs. high), with participants randomly assigned to three groups. The stimulus material involved a poorly performing smartphone purchase. Experiment 2 replicated Hypothesis 1 with changed stimulus material and manipulation method to reduce extraneous interference. Additionally, Experiment 2 focused on examining the mediating effect of motivation conflict in the relationship between closeness and WOM intention to verify Hypothesis 2. The medium-closeness manipulation differed from Experiment 1, changing from "ordinary colleagues" to "casual friends," described as: "In your WeChat group chat, there is a casual friend chat group composed of acquaintances who are not very familiar, where people communicate regularly."

Experiment 2' s procedure and variable measurement methods were essentially identical to Experiment 1, except that after measuring WOM intention, items measuring other-protection motivation (Hennig-Thurau et al., 2004) and self-image protection motivation (White & Peloza, 2009) were added. Participants rated their agreement with four statements for each motivation on a 9-point Likert scale: other-protection motivation included items such as "Because I want to warn them this is a bad product" and "Because I want to protect them from having the same experience" ($\alpha = 0.91$); self-image protection motivation included items such as "Because I want to show my good side" and "Because I care whether they have a positive impression of me" ($\alpha = 0.85$).

3.2 Descriptive Statistics

For intuitive and concise data presentation, descriptive statistics for Experiment 2 variables are consolidated in Table 1.

Table 1. Descriptive Statistics for Experiment 2

Variable	Low Closeness	Medium Closeness	High Closeness
Closeness Manipulation Check	3.65 (1.60)	6.28 (1.72)	7.10 (1.42)
Other-Protection Motivation	4.62 (1.77)	5.70 (1.48)	6.75 (5.46)
Self-Image Protection Motivation	10.83 (5.25)	5.24 (1.73)	6.36 (2.01)
Motivation Conflict Level	7.56 (1.13)	7.61 (0.77)	4.07 (1.26)
WOM Intention	4.61 (3.89)	7.54 (0.92)	7.85 (0.78)

Note: Standard deviations in parentheses

3.3 Results

(1) Manipulation Check
One-way ANOVA results showed significant differences in closeness perception across the three groups ($F(2, 152) = 117.37$, $p < 0.001$, $^2 = 0.607$). The low-closeness group was significantly lower ($p < 0.001$) and the high-closeness group significantly higher ($p < 0.001$) than the medium-closeness group, indicating successful manipulation.

(2) Main Effect Analysis
One-way ANOVA results showed that closeness had a significant quadratic effect on WOM intention ($F(1, 152) = 38.96$, $p < 0.001$) and a significant linear effect ($F(1, 152) = 13.40$, $p < 0.001$). Post-hoc contrasts revealed that consumers were less willing to spread WOM to medium-closeness targets than to low-closeness targets ($t(102) = 3.07$, $p = 0.003$) and high-closeness targets ($t(102) = -8.43$, $p < 0.001$).

(3) Mediation Analysis
MANOVA results showed that closeness significantly affected both other-protection motivation ($F(2, 152) = 12.46$, $p < 0.001$, $^2 = 0.141$) and self-image protection motivation ($F(2, 152) = 15.58$, $p < 0.001$, $^2 = 0.170$). Two contrast analyses examined within- and between-group differences in these motivations. First, paired t-tests within each closeness level revealed that the medium-closeness group showed similar levels of other-protection and self-image protection motivations ($t(52) = 1.63$, $p = 0.11$), while low-closeness ($t(50) = 16.78$, $p < 0.001$) and high-closeness ($t(50) = 7.90$, $p < 0.001$) groups showed stronger other-protection than self-image protection motivation. These results

confirm that when facing medium-closeness targets, consumers' two motivations are at similar levels, whereas low- and high-closeness targets elicit dominant other-protection motivation. Second, between-group comparisons showed that the medium-closeness group had stronger self-image protection motivation than the low-closeness ($t(102) = -3.40$, $p = 0.001$) and high-closeness ($t(102) = 6.02$, $p < 0.001$) groups, but weaker other-protection motivation than the low-closeness ($t(102) = 2.64$, $p = 0.009$) and high-closeness ($t(102) = -5.04$, $p < 0.001$) groups.

Drawing on attitudinal ambivalence and motivational conflict literature, this study uses the SIM model ($T = 3\times C - D$; Priester & Petty, 1996; Yan et al., 2021) to calculate the proposed aggregated mediating variable—motivation conflict level—where T represents motivation conflict, D is the dominant motivation, and C is the conflicting motivation. As previously analyzed, other-protection motivation is dominant and self-image protection motivation is conflicting. One-way ANOVA on motivation conflict scores showed that closeness had a significant quadratic effect ($F(1, 152) = 38.11$, $p < 0.001$) and linear effect ($F(1, 152) = 4.81$, $p = 0.03$). As expected, medium closeness generated stronger motivation conflict than low closeness ($t(102) = -3.88$, $p < 0.001$) and high closeness ($t(102) = 6.84$, $p < 0.001$). Figure 3 [Figure 3: see original paper] illustrates the effects of closeness on other-protection motivation, self-image protection motivation, and motivation conflict level.

Figure 3. Two Motivations and Motivation Conflict Level Across Different Closeness (Experiment 2)

To further test whether the conflict between other-protection and self-image protection motivations mediates the above effects, this experiment conducted multicategorical mediation analysis using PROCESS Bootstrap Model 4 (Hayes, 2013) with 5,000 resamples. The model included two dummy variables for the three closeness levels (with medium closeness as reference: D1: low = 1, medium = 0, high = 0; D2: low = 0, medium = 0, high = 1) as independent variables, motivation conflict level as mediator, and WOM intention as dependent variable. Indirect effects showed that differences between medium and low closeness (D1) on WOM intention were mediated by motivation conflict level ($\beta = 0.52$, SE = 0.18, 95% CI = [0.2047, 0.9109], excluding 0). Thus, consumers facing medium-closeness targets experienced stronger motivation conflict than those facing low-closeness targets, resulting in lower WOM intention. Similarly, differences between high and medium closeness (D2) were also mediated by motivation conflict level ($\beta = 0.79$, SE = 0.20, 95% CI = [0.4139, 1.2046], excluding 0). Therefore, Hypothesis 2 is supported.

Experiment 2

Using different stimulus materials and manipulation methods from Experiment 1, Experiment 2 again demonstrated the U-shaped change in consumers' WOM intention when facing targets of different closeness relationships after experi-

encing consumption failure. It also verified the mediating effect of motivation conflict level, supporting Hypothesis 2. This finding indicates that compared to low- and high-closeness targets, consumers experience the strongest self-image protection motivation when facing medium-closeness targets, creating the greatest conflict with the dominant other-protection motivation and generating strong tension. This internal conflict makes consumers unwilling to share service (product) information, resulting in the lowest WOM intention toward medium-closeness targets. Additionally, to rule out effects of different product price elasticities, a supplementary experiment was conducted after Experiment 2, replacing the smartphone with an electric vehicle. This supplementary experiment collected 180 valid questionnaires, including 68 males (37.8%), with an average age of 30.21. Results were consistent with Experiment 2: consumers were less willing to spread WOM to medium-closeness targets (M_{medium} = 5.03) than to low-closeness (M_{low} = 6.54, $p < 0.001$) and high-closeness targets (M_{high} = 7.86, $p < 0.001$), with the U-shaped relationship remaining robust. Motivation conflict level continued to mediate the effect: differences between medium and low closeness (D1) were mediated by motivation conflict level ($\beta = 0.52$, SE = 0.18, 95% CI = [0.2047, 0.9109], excluding 0), as were differences between high and medium closeness (D2) ($\beta = 0.79$, SE = 0.20, 95% CI = [0.4139, 1.2046], excluding 0). This effectively ruled out price as an extraneous variable, increasing the robustness and external validity of the results.

4.1 Experimental Design

Although the first three experiments replicated Hypotheses 1 and 2 by changing manipulation methods, stimulus materials, and product types, all used WeChat as the communication tool. Considering that online communication is only one form of WOM, with much WOM occurring offline, Experiment 3 shifted the social context to encountering strangers/casual friends/close friends while waiting for a flight and sharing accommodation experiences during casual conversation. This scenario offers several advantages. First, airports provide opportunities to encounter targets of different closeness levels, making the independent variable relatively easy and clean to manipulate. Second, waiting for flights typically involves ample free time, creating opportunities for casual conversation and sharing shopping experiences. Finally, using dissatisfaction with a recently completed hotel stay as stimulus material provides a natural conversation topic that makes the interaction more reasonable and authentic. G*Power calculations indicated a minimum of 111 participants were required. This experiment collected 126 valid questionnaires, including 47 males (37.3%), with an average age of 29.49.

Experiment 3 used a single-factor three-level between-subjects design (closeness: low vs. medium vs. high). The stimulus material described an unsatisfactory hotel stay, similar to Experiment 1 (details in Appendix Table 2). After reading the same stimulus material, participants in different groups randomly saw the text: "After your trip, you take a flight home. In the waiting room, you

encounter a stranger/casual friend/close friend. To pass the time, you strike up a casual conversation." Participants then answered related questions based on their genuine feelings. Experiment 3' s procedure was otherwise identical to previous experiments.

4.2 Descriptive Statistics

For intuitive and concise data presentation, descriptive statistics for key variables in Experiment 3 are consolidated in Table 2.

Table 2. Descriptive Statistics for Experiment 3

Variable	Low Closeness	Medium Closeness	High Closeness
Closeness Manipulation Check	4.07 (1.54)	7.03 (0.88)	7.54 (3.75)
Other-Protection Motivation	4.86 (1.20)	7.54 (3.75)	6.71 (1.28)
Self-Image Protection Motivation	4.76 (1.11)	5.87 (2.00)	5.98 (1.28)
Motivation Conflict Level	12.05 (5.28)	5.28 (1.70)	8.28 (0.73)
WOM Intention	7.67 (1.17)	4.42 (1.67)	5.59 (5.34)

Note: Standard deviations in parentheses

4.3 Results

One-way ANOVA results showed significant differences in closeness perception across the three groups ($F(2, 123) = 157.87$, $p < 0.001$, $^2 = 0.720$). The low-closeness group was significantly lower ($p = 0.02$) and the high-closeness group significantly higher ($p < 0.001$) than the medium-closeness group, indicating successful manipulation.

(2) Main Effect Analysis

One-way ANOVA showed that closeness had a significant quadratic effect on WOM intention ($F(1, 123) = 55.29$, $p < 0.001$) and a significant linear effect ($F(1, 123) = 13.05$, $p < 0.001$). Contrast analysis revealed that consumers were less willing to spread WOM to medium-closeness targets than to low-closeness targets ($t(81) = 4.35$, $p < 0.001$) and high-closeness targets ($t(82) = -7.94$, $p < 0.001$).

(3) Mediation Analysis

MANOVA results showed that closeness significantly affected both other-protection motivation ($F(2, 123) = 17.04$, $p < 0.001$, $^2 = 0.217$) and self-image protection motivation ($F(2, 123) = 13.66$, $p < 0.001$, $^2 = 0.182$). Two contrast analyses examined within- and between-group differences. First, paired t-tests within each closeness level revealed that the medium-closeness group showed similar levels of other-protection and self-image protection motivations ($t(40) = -0.23$, $p = 0.82$), while low-closeness ($t(41) = 9.25$, $p < 0.001$) and high-closeness ($t(42) = 9.68$, $p < 0.001$) groups showed stronger other-protection than self-image protection motivation. Between-group comparisons showed that the medium-closeness group had stronger self-image protection motivation than the low-closeness ($t(81) = -4.10$, $p = 0.001$) and high-closeness ($t(82) = 4.78$, $p < 0.001$) groups, but weaker other-protection motivation than the low-closeness ($t(81) = 3.42$, $p = 0.001$) and high-closeness ($t(82) = -5.05$, $p < 0.001$) groups.

One-way ANOVA on motivation conflict scores showed that closeness had a significant quadratic effect ($F(1, 123) = 35.51$, $p < 0.001$) but not a significant linear effect ($F(1, 123) = 3.46$, $p = 0.07$). Medium closeness generated stronger motivation conflict than low closeness ($t(81) = -4.50$, $p < 0.001$) and high closeness ($t(82) = 5.58$, $p < 0.001$).

Multicategorical mediation analysis was conducted. Indirect effects showed that differences between medium and low closeness (D1) on WOM intention were mediated by motivation conflict level ($\beta = 0.71$, SE = 0.22, 95% CI = [0.3312, 1.2023], excluding 0). Thus, consumers facing medium-closeness targets experienced stronger motivation conflict than those facing low-closeness targets, resulting in lower WOM intention. Similarly, differences between high and medium closeness (D2) were mediated by motivation conflict level ($\beta = 1.02$, SE = 0.27, 95% CI = [0.5391, 1.5895], excluding 0). Therefore, Hypotheses 1 and 2 were again supported.

Experiment 3

Experiment 3 shifted the social context from online to offline face-to-face conversation in an airport waiting room, designing a more natural and realistic communication scenario that again verified the U-shaped relationship between closeness and WOM intention and the mediating effect of motivation conflict level. The conflict between self-image protection and other-protection motivations reflects humans' simultaneous possession of egoistic and altruistic motivations (Hoffman, 1976), suggesting a certain universality to this conflict. Meanwhile, the offline context enhanced situational naturalness, expanding the experiment' s external validity and the study' s contributions. Next, this research examines the moderating effect of merchant responsibility to further reveal the internal mechanism and boundary conditions of the closeness-WOM intention relationship, providing practical recommendations for marketing.

Experiment 4

Experiment 4 aims to test the moderating effect of merchant responsibility (Hypothesis 3) while changing the offline communication context and further demonstrating the study' s generalizability. Using G*Power (Faul et al., 2009) with significance level α set at 0.05 and effect size f = 0.3, a minimum of 111 participants were required to achieve statistical power of $1-\beta = 0.8$. In practice, 298 adult participants from mainland China completed Experiment 4, including 121 males (40.6%), with an average age of 29.40. This experiment used a 3 (closeness: low vs. medium vs. high) × 2 (merchant responsibility: low vs. high) between-subjects design, with all participants randomly assigned to six groups.

The stimulus material described a private custom tour service, with manipulations of both closeness and merchant responsibility (details in Appendix Table 2). All experimental groups were consistent except for manipulation variables.

After carefully reading the stimulus and manipulation materials, participants completed measures of WOM intention, self-image protection motivation, other-protection motivation, perceived closeness, satisfaction, and perceived merchant responsibility. Merchant responsibility was measured with a 9-point scale item: "How much responsibility do you think the travel agency bears for your choice of an unsatisfactory travel route?" (1 = "travel agency bears no responsibility," 9 = "travel agency bears all responsibility"). Other variables were measured identically to Experiment 2. Finally, participants reported demographic variables.

5.2 Results

(1) Descriptive Statistics

Table 3 presents means and standard deviations for each measurement variable across manipulation groups.

Table 3. Descriptive Statistics for Experiment 4

Variable	Low Closeness	Medium Closeness	High Closeness
Merchant Low Responsibility			
Closeness Manipulation Check	3.96 (1.78)	5.54 (1.96)	7.70 (1.11)
Merchant Responsibility Manipulation Check	4.40 (1.23)	4.78 (1.28)	5.40 (1.84)

Variable	Low Closeness	Medium Closeness	High Closeness
Other-Protection Motivation	7.03 (0.88)	7.62 (1.05)	7.44 (0.96)
Self-Image Protection Motivation	4.93 (1.52)	4.93 (1.45)	7.47 (4.84)
Motivation Conflict Level	7.35 (4.16)	11.90 (5.02)	7.35 (4.16)
WOM Intention	6.87 (1.14)	4.93 (1.65)	7.82 (0.92)
Merchant High Responsibility			
Closeness Manipulation Check	3.54 (1.80)	5.54 (1.96)	7.70 (1.11)
Merchant Responsibility Manipulation Check	5.99 (1.77)	7.27 (1.27)	7.71 (0.81)
Other-Protection Motivation	7.04 (1.08)	7.44 (0.96)	7.78 (0.77)
Self-Image Protection Motivation	5.96 (1.38)	4.69 (1.70)	4.38 (1.45)
Motivation Conflict Level	6.80 (5.47)	5.44 (4.41)	4.47 (4.69)
WOM Intention	7.18 (0.89)	7.22 (1.12)	8.11 (0.78)

Note: Standard deviations in parentheses

(2) Manipulation Checks

One-way ANOVA showed significant differences in closeness perception across closeness groups ($F(2, 295) = 249.91$, $p < 0.001$, $^2 = 0.629$). The low-closeness group was significantly lower ($p < 0.001$) and the high-closeness group significantly higher ($p < 0.001$) than the medium-closeness group. Merchant responsibility perception also differed significantly across responsibility groups ($F(1, 296) = 143.00$, $p < 0.001$, $^2 = 0.326$). Both manipulations were successful.

Satisfaction did not differ significantly across groups ($F(2, 295) = 0.71$, $p = 0.49$).

(3) Interaction Effect Analysis

A 3 (closeness: low vs. medium vs. high) × 2 (merchant responsibility: low vs. high) ANOVA on WOM intention revealed a significant interaction ($F(2, 292) = 27.61$, $p < 0.001$). Decomposing the interaction, under low merchant responsibility, closeness significantly affected WOM intention ($F(2, 145) = 70.85$, $p < 0.001$); under high merchant responsibility, closeness also significantly affected WOM intention ($F(2, 147) = 15.68$, $p < 0.001$). Under low merchant responsibility, closeness had a significant quadratic effect ($F(1, 145) = 125.94$, $p < 0.001$) and linear effect ($F(1, 145) = 15.75$, $p < 0.001$) on WOM intention. Under high merchant responsibility, closeness had a significant quadratic effect ($F(1, 147) = 6.83$, $p = 0.01$) and linear effect ($F(1, 147) = 24.53$, $p < 0.001$).

Further simple effects analysis found that in the low merchant responsibility condition ($F(2, 292) = 89.93$, $p < 0.001$), participants' WOM intention toward medium-closeness targets was significantly lower than toward low-closeness targets ($p < 0.001$) and high-closeness targets ($p < 0.001$). In the high merchant responsibility condition ($F(2, 292) = 11.51$, $p < 0.001$), participants' WOM intention toward medium-closeness targets did not differ significantly from low-closeness targets but was significantly lower than toward high-closeness targets ($p < 0.001$). Results are shown in Figure 4 [Figure 4: see original paper].

Figure 4. Interaction Effect of Closeness and Merchant Responsibility on WOM Intention (Experiment 4)

These results indicate that when merchants bear low responsibility for consumer dissatisfaction, WOM intention follows the predicted U-shaped trend in Hypothesis 1. However, when merchants bear high responsibility, the effect of closeness on WOM intention no longer shows a U-shaped relationship; instead, WOM intention gradually increases with closeness.

(4) Mediation Analysis

Consistent with Experiment 2, this experiment used the SIM model to construct motivation conflict level (T). A 3 (closeness: low vs. medium vs. high) × 2 (merchant responsibility: low vs. high) ANOVA on motivation conflict level (T) revealed a significant interaction ($F(2, 292) = 7.67$, $p = 0.001$). Decomposing the interaction, under low merchant responsibility, closeness significantly affected motivation conflict level ($F(2, 145) = 23.53$, $p < 0.001$); under high merchant responsibility, closeness also significantly affected motivation conflict level ($F(2, 147) = 5.09$, $p = 0.007$). Under low merchant responsibility, closeness had a significant quadratic effect ($F(1, 145) = 42.51$, $p < 0.001$) and linear effect ($F(1, 145) = 4.55$, $p < 0.001$) on motivation conflict level. Under high merchant responsibility, closeness had a significant linear effect ($F(1, 147) = 9.02$, $p = 0.003$) but not a significant quadratic effect ($F(1, 147) = 1.51$, $p = 0.29$).

Further simple effects analysis revealed that in the low merchant responsibility condition ($F(2, 292) = 23.32$, $p < 0.001$), consumers' motivation conflict level

when facing medium-closeness targets was significantly higher than when facing low-closeness targets ($p < 0.001$) and high-closeness targets ($p = 0.04$). In the high merchant responsibility condition ($F(2, 292) = 5.13$, $p = 0.006$), motivation conflict level when facing medium-closeness targets did not differ significantly from low-closeness targets ($p = 0.57$) but was significantly higher than high-closeness targets ($p = 0.02$). Results are shown in Figure 5 [Figure 5: see original paper].

Figure 5. Interaction Effect of Closeness and Merchant Responsibility on Motivation Conflict Level (Experiment 4)

To retest whether the conflict between other-protection and self-image protection motivations mediates the interactive effect of closeness and merchant responsibility on WOM intention, this experiment conducted a two-step analysis.

First, moderated mediation analysis was performed using PROCESS Bootstrap Model 8 (Hayes, 2013) with 5,000 resamples. Dummy coding (identical to Experiment 2) compared low and high closeness separately against medium closeness. Multicategorical analysis (Model 4) was then conducted for high and low merchant responsibility conditions to simultaneously compare medium closeness with low and high closeness. As expected, a significant moderated mediation effect emerged (β = -0.38, SE = 0.15, 95% CI = [-0.6980, -0.1157], excluding 0). Indirect effect analysis showed that differences between medium and low closeness (β = 0.41, SE = 0.12, 95% CI = [0.1987, 0.6587], excluding 0) and between high and medium closeness (β = 0.59, SE = 0.14, 95% CI = [0.3364, 0.8937], excluding 0) on WOM intention were explained by motivation conflict level under low merchant responsibility. However, under high merchant responsibility, the mediating effect of motivation conflict level between low-medium closeness groups was not significant (β = -0.05, SE = 0.09, 95% CI = [-0.2295, 0.1301], including 0). Multicategorical analysis then examined mediation effects and WOM intention across the three groups. As shown in Figure 6 [Figure 6: see original paper], for the low merchant responsibility condition, indirect effect analysis indicated that motivation conflict level explained differences between medium and low closeness (D1: $\beta = 0.53$, SE = 0.16, 95% CI = [0.2384, 0.8771], excluding 0) and between high and medium closeness (D2: $\beta = 0.77$, SE = 0.20, 95% CI = [0.4027, 1.2038], excluding 0). Thus, medium closeness generated stronger motivation conflict than low and high closeness, leading to lower WOM intention. Similar analysis for the high merchant responsibility condition showed that while motivation conflict level could explain differences between high and medium closeness (D2: $\beta = 0.15$, SE = 0.08, 95% CI = [0.0202, 0.3250], excluding 0), it could not mediate the low-medium closeness difference (D1: β = -0.04, SE = 0.07, 95% CI = [-0.1604, 0.0888], including 0).

Figure 6. Mediation Analysis for Low Merchant Responsibility Condition (Model 4) (Experiment 4)

Note: ** $p < 0.001$; ** $0.001 < p < 0.01$; * $0.01 < p < 0.05$. D1 and D2 are dummy variables representing the three closeness levels, coded as: D1: low = 1,

medium = 0, high = 0, comparing low vs. medium closeness while controlling for high closeness; D2: low = 0, medium = 0, high = 1, comparing high vs. medium closeness while controlling for low closeness.*

Experiment 4

Experiment 4 changed the closeness manipulation method, shifted the WOM context from WeChat to offline face-to-face scenarios, and moved from group to individual targets, again verifying the U-shaped relationship between closeness and WOM intention, the mediating effect of motivation conflict level, and the moderating effect of merchant responsibility, enhancing the study' s robustness and external validity. Results show that when merchants bear low responsibility for consumption failure outcomes, closeness affects WOM intention through motivation conflict level, resulting in a U-shaped WOM intention pattern. When merchants bear high responsibility, consumers' motivation conflict level when facing medium-closeness targets decreases, and WOM intention no longer shows a U-shaped relationship with closeness. This occurs because, compared to low merchant responsibility, high merchant responsibility situations elicit stronger other-protection motivation. Additionally, discussing failed purchases does not make consumers appear unwise, weakening self-image protection motivation when facing medium-closeness targets, reducing motivation conflict, and increasing WOM intention.

6.1 Research Conclusions

This study conducted six experiments to explore the effect of closeness on consumers' WOM intention following consumption failures in common online (Experiments 1, 2, and Supplementary Experiment 1) and offline (Experiments 3, 4, and Supplementary Experiment 2) social contexts. Using different stimulus materials, social contexts, and closeness manipulations, the six experiments ruled out alternative explanations and demonstrated robust results. Specifically, compared to low- and high-closeness targets, consumers are least willing to discuss failed consumption experiences with medium-closeness targets, showing a U-shaped relationship between closeness and WOM intention. The conflict between other-protection and self-image protection motivations explains this difference: generally, when facing medium-closeness targets, consumers have the highest face-saving motivation, worrying that discussing failures will damage their positive image, resulting in high motivation conflict and the lowest WOM intention. Supplementary Experiment 2 suggests that the U-shaped relationship between closeness and WOM intention may be related to specific Chinese cultural factors.

Furthermore, to explore theoretical boundaries, Experiment 4 examined merchant responsibility as a moderator. Results show that when consumers attribute primary responsibility for failure to merchants, their self-image protection motivation decreases when facing medium-closeness targets, other-

protection motivation becomes dominant, motivation conflict is low, and WOM intention increases with closeness, approximating a linear relationship. In summary, all proposed hypotheses were supported.

6.2 Theoretical Contributions

This study examines the effect of closeness on WOM intention in consumption failure contexts, contributing to important research areas including WOM communication, social relationships, WOM intention, and existing biases.

(1) Enriching WOM marketing research from a social relationship perspective. The relationship between satisfaction and WOM is a perennial research topic in marketing, and WOM intention is an important antecedent of WOM behavior with significant research value (Dubois et al., 2016). Previous research has primarily focused on how consumer satisfaction affects WOM intention and its distribution characteristics in non-social contexts such as traditional e-commerce platforms, review platforms, or corporate websites (Anderson, 1998; Hu et al., 2009, 2017; Han & Anderson, 2020). These studies found that the satisfaction-WOM intention relationship is typically non-linear, such as U-shaped (Anderson, 1998) or J-shaped (Hu et al., 2009), suggesting that consumers unwilling to spread WOM are mostly moderately satisfied. This study examines how closeness affects WOM intention in dissatisfaction situations from an interpersonal perspective, considering new contexts of social media and social commerce. It discovers that in medium-closeness situations, consumers are unwilling to spread WOM, extending previous research contexts and revealing findings different from earlier studies, thus deepening and improving WOM intention research.

(2) Revealing the U-shaped relationship between closeness and WOM intention. Previous Western research examined the closeness-WOM relationship using LinkedIn, Facebook, and offline face-to-face contexts, finding a significant linear effect: higher closeness leads to stronger other-protection motivation and greater likelihood of spreading negative WOM (Dubois et al., 2016). This study responds to Dubois et al.' s (2016) call by moving the dependent variable from WOM behavior to WOM intention. In the Chinese context, it reveals a U-shaped relationship between closeness and WOM intention following consumption failures: at medium closeness, consumers' self-image protection and other-protection motivations conflict most strongly, resulting in the lowest WOM intention.

To explore whether cultural context affects the closeness-WOM intention relationship, this study added a supplementary experiment recruiting US and UK participants through Prolific to replicate Experiment 3. This cross-cultural experiment collected 120 valid questionnaires, including 41 males (34.2%), with an average age of 36.44. One-way ANOVA showed a significant linear effect of closeness on WOM intention ($F(1, 117) = 36.26$, $p < 0.001$). Post-hoc contrasts revealed that WOM intention increased with closeness: consumers were

less willing to spread WOM to low-closeness targets than to medium-closeness ($t(77) = -2.69$, $p = 0.009$) and high-closeness targets ($t(79) = -6.63$, $p < 0.001$). MANOVA showed that closeness significantly affected other-protection motivation ($F(2, 117) = 7.71$, $p = 0.001$, $^2 = 0.116$) but not self-image protection motivation ($F(2, 117) = 0.22$, $p = 0.80$, $^2 = 0.004$). Combining medium- and high-closeness groups, mediation analysis using PROCESS Bootstrap Model 4 (Hayes, 2013) with 5,000 resamples showed that the effect of low vs. high closeness on WOM intention was mediated by other-protection motivation ($\beta = 0.69$, SE = 0.22, 95% CI = [0.2983, 1.1682], excluding 0), while self-image protection motivation did not mediate ($\beta = 0.01$, SE = 0.03, 95% CI = [-0.0655, 0.0846], including 0). Cross-cultural results indicate that both other-protection and self-image protection motivations exist after consumption failures in both Chinese and Western contexts, but the closeness-WOM intention relationship differs. This may be due to cultural differences: previous literature has shown that face concerns are significantly lower in Western than Asian countries (Hu, 1944; Li et al., 2016). Another possible reason is the diversity of social relationships in the Chinese context (Hwang, 1987; Jacobs, 1982; Tsui & Farh, 1997; Tsui, Farh & Xin, 2000; Zhai, 2004).

(3) Revealing different motivations affecting WOM intention in social contexts. Humans inherently possess egoistic and altruistic motivations (Hoffman, 1976). Previous research has found that consumer WOM behavior is influenced by self-enhancement and other-protection motivations (Dubois et al., 2016; Liu et al., 2021). From this perspective, the two motivations validated in this study transcend cultural factors of renqing (human sentiment) and mianzi (face), possessing universality. The two motivations are sometimes compatible (e.g., sharing tips about a new product can both protect others' interests and create a positive image as a helpful person). However, consumption failure creates a situation where "you cannot have your cake and eat it too" —the two motivations point to different behavioral tendencies, with other-protection motivation encouraging WOM but self-image protection motivation discouraging it. Data from five experiments show that after consumption failure, other-protection motivation remains high across all three closeness levels, while self-image protection motivation values determine WOM intention levels. This indicates that altruistic motivation persists as the dominant external motivation in social relationship contexts, but once egoistic motivation becomes elevated, the outcome reverses, suggesting that "self-image protection" under egoistic motivation has a stronger influence.

(4) Providing a new method for examining bias phenomena in WOM intention. Scholars have identified purchase bias and reporting bias in online WOM in traditional non-social contexts, which cause WOM intention to show J-shaped or U-shaped distributions with satisfaction (Anderson, 1998; Hu et al., 2009, 2017), demonstrating the complexity of WOM intention. However, previous research has focused almost exclusively on distribution characteristics of existing online WOM and their consequences, using econometric models with existing online WOM (mostly secondary data) to explore the satisfaction-WOM

intention relationship (Anderson, 1998; Hu et al., 2009, 2017; Han & Anderson, 2020). With these biases present, inferring satisfaction or WOM intention from existing online WOM is inaccurate and likely suffers from survivorship bias. Moreover, this approach loses opportunities to understand the true thoughts of the majority of consumers who do not engage in WOM. Addressing these limitations, this study constructs a new mediating variable based on conflict theory and uses experimental methods to test hypotheses, providing a more comprehensive and accurate approach to studying WOM bias and advancing this research area.

6.3 Marketing Implications

This research offers implications for marketing personnel responsible for market research, customer WOM management, social media operations, and market promotion.

Gain deeper consumer feedback in social contexts. In pure e-commerce contexts, dissatisfied consumers often reflect their opinions about products and services through online WOM, making negative WOM an important information source for understanding genuine consumer feedback. However, in social contexts, dissatisfied consumers may become silent when facing medium-closeness targets, meaning some real problems cannot be effectively identified through online WOM. Therefore, firms should increase channels for understanding genuine consumer feedback to identify problems early and improve customer satisfaction.

Blindly encouraging online WOM sharing is unadvisable in social commerce contexts. Managers often assume dissatisfied consumers are always willing to voice their opinions, while consumers unwilling to post online reviews are satisfied, and thus employ various methods to encourage reviews and WOM sharing. This overlooks the complexity of consumer WOM behavior in social contexts. Based on this study' s conclusions, marketing managers need to analyze the environment in which consumers spread WOM. In social environments, they must consider the closeness between consumers and their audience before deciding whether and how to encourage WOM sharing for optimal effect.

Provide suggestions for better social marketing implementation. Using social platforms for corporate image building, product/service promotion, and customer relationship management represents current and future marketing trends. Overlapping online and offline social networks create new possibilities for firms (Chen & Xie, 2008; Donthu et al., 2021). For example, WeChat is currently China' s most common and largest social platform, containing complex networks of family, friends, classmates, colleagues, like-minded online friends, and strangers. This complex network changes consumer WOM behavior, but few studies have explored this issue. Therefore, this study helps marketing managers more clearly understand differences among various relationship groups and how to appropriately apply relevant mechanisms for marketing promotion, enabling refined private traffic management. Although this study could not rigorously

verify findings using crawled secondary data, e-commerce platforms and brand manufacturers can fully utilize their backend data to capture closeness cues and more accurately apply these findings in management practice.

Encourage merchants to provide multiple options and appropriate suggestions during consumer decision-making while avoiding negative effects of excessive marketing. Experiment 4' s results show that when merchants' strongly recommended services (products) fail, consumers develop strong complaints and dissatisfaction, attributing failure entirely to merchants. Although WOM intention remains high even when facing medium-closeness targets, this greatly increases merchants' risks and losses. Therefore, merchants need to clarify their responsibilities and avoid excessive marketing, but can provide appropriate reference opinions during consumer decision-making, allowing consumers to compare different products and make choices based on their needs and preferences, thereby reducing negative consequences of consumption failure.

6.4 Research Limitations and Future Directions

First, experimental manipulation aspects. The first three experiments all used WeChat as the online social platform to facilitate participants' immersion and reduce extraneous variable interference, but this limits external validity. Future research could attempt other platforms or experimental methods to address this limitation. Additionally, to complement online social context experiments, Experiments 3 and 4 examined offline social scenarios but used individuals rather than groups as closeness targets. Future research could further explore consumers' WOM intentions when facing different closeness groups in offline social contexts.

**Second, given that this study reveals the effect of interpersonal closeness on WOM intention differs from Western findings, this may indicate that precise classification of interpersonal relationships in the Chinese context better reveals their inherent complexity. This study defined and manipulated three closeness targets based on common real-world relationship types, but this classification is not the only possible approach. How to use more precise classification variables to achieve better alignment between variable connotation and research phenomena deserves further exploration. Future research could examine the closeness-WOM behavior relationship using classifications from other dimensions.

**Third, the relationship between self-image protection and other-protection motivations is complex in reality, sometimes possibly manifesting as maintaining self-image through altruistic behavior. However, this study primarily considered common consumption failure scenarios and followed Dubois et al.' s (2016) simplified approach to motivation classification. Future research could consider more refined motivation classification methods.

**Fourth, future research could examine other boundary conditions beyond merchant responsibility, such as failure severity, product popularity (popular vs. niche products), and consumers' own face consciousness levels.

**Fifth, this study used identical experimental scenarios to verify differences between Chinese and Western (US/UK) contexts in the closeness-WOM intention relationship. However, due to large differences between Chinese and Western participants and experimental platforms, this does not constitute rigorous evidence of cultural moderation. Strict, standardized cultural moderation research remains to be conducted. Additionally, considering the complexity and diversity of social relationships, whether certain special relationships in Western cultures might exhibit patterns similar to medium closeness in the Chinese context awaits future exploration.

References

[1] Alexandrov, A., Lilly, B., & Babakus, E. (2013). The effects of social- and self-motives on the intentions to share positive and negative word of mouth. *Journal of the Academy of Marketing Science*, 41(5), 531–546. doi: 10.1007/s11747-012-0323-4

[2] Anderson, E. W. (1998). Customer satisfaction and word of mouth. *Journal of Service Research*, 1(1), 5–17. doi: 10.1177/109467059800100102

[3] Appel, G., Grewal, L., Hadi, R., & Stephen, A. T. (2020). The future of social media in marketing. *Journal of the Academy of Marketing Science*, 48(1), 79–95. doi: 10.1007/s11747-019-00695-1

[4] Berger, J. (2014). Word of mouth and interpersonal communication: A review and directions for future research. *Journal of Consumer Psychology*, 24(4), 586–607. doi: 10.1016/j.jcps.2014.05.002

[5] Berger, J., & Schwartz, E. M. (2011). What drives immediate and ongoing word of mouth? *Journal of Marketing Research*, 48(5), 869–880. doi: 10.1509/jmkr.48.5.869

[6] Bougie, R., Pieters, R., & Zeelenberg, M. (2003). Angry customers don' t come back, they get back: The experience and behavioral implications of anger and dissatisfaction in services. *Journal of the Academy of Marketing Science*, 31(4), 377–393. doi: 10.1177/0092070303254412

[7] Cartwright, S., Davies, I., & Archer-Brown, C. (2021). Managing relationships on social media in business-to-business organisations. *Journal of Business Research*, 125, 120–134. doi: 10.1016/j.jbusres.2020.11.028

[8] Chen, Y., & Xie, J. (2008). Online consumer review: Word-of-mouth as a new element of marketing communication mix. *Management Science*, 54(3), 477–491.

[9] Chen, Z. (2017). Social acceptance and word of mouth: How the motive to belong leads to divergent WOM with strangers and friends. *Journal of Consumer Research*, 44(3), 613–632. doi: 10.1093/jcr/ucx055

[10] Clark, M. S., & Mils, J. (1993). The difference between communal and

exchange relationships: What it is and is not. *Personality and Social Psychology Bulletin*, 19(6), 684–691.

[11] Cross, S. E., Bacon, P. L., & Morris, M. L. (2000). The relational-interdependent self-construal and relationships. *Journal of Personality and Social Psychology*, 78(4), 791–808. doi: 10.1037//0022-3514.78.4.791

[12] De Angelis, M., Bonezzi, A., Peluso, A. M., Rucker, D. D., & Costabile, M. (2012). On braggarts and gossips: A self-enhancement account of word-of-mouth generation and transmission. *Journal of Marketing Research*, 49(4), 551–563. doi: 10.1509/jmr.11.0136

[13] De Oliveira Santini, F., Ladeira, W. J., Pinto, D. C., Herter, M. M., Sampaio, C. H., & Babin, B. J. (2020). Customer engagement in social media: A framework and meta-analysis. *Journal of the Academy of Marketing Science*, 48(6), 1211–1228. doi: 10.1007/s11747-020-00731-5

[14] Donthu, N., Kumar, S., Pandey, N., Pandey, N., & Mishra, A. (2021). Mapping the electronic word-of-mouth (eWOM) research: A systematic review and bibliometric analysis. *Journal of Business Research*, 135, 758–773. doi: 10.1016/j.jbusres.2021.07.015

[15] Dubois, D., Bonezzi, A., & De Angelis, M. (2016). Sharing with friends versus strangers: How interpersonal closeness influences word-of-mouth valence. *Journal of Marketing Research*, 53(5), 712–727. doi: 10.1509/jmr.13.0312

[16] Faul, F., Erdfelder, E., Buchner, A., & Lang, A. (2009). Statistical power analyses using G*Power 3.1: Tests for correlation and regression analyses. Behavior Research Methods*, 41(4), 1149–1160. doi: 10.3758/BRM.41.4.1149

[17] Gardner, W. L., & Martinko, M. J. (1988). Impression management in organizations. *Journal of Management*, 14(2), 321–338.

[18] Gelbrich, K. (2010). Anger, frustration, and helplessness after service failure: Coping strategies and effective informational support. *Journal of the Academy of Marketing Science*, 38(5), 567–585. doi: 10.1007/s11747-009-0169-6

[19] Gino, F., & Galinsky, A. D. (2012). Vicarious dishonesty: When psychological closeness creates distance from one' s moral compass. *Organizational Behavior and Human Decision Processes*, 119(1), 15–26. doi: 10.1016/j.obhdp.2012.03.011

[20] Han, S., & Anderson, C. K. (2020). Customer motivation and response bias in online reviews. *Cornell Hospitality Quarterly*, 61(2), 142–153. doi: 10.1177/1938965520902012

[21] Hayes, A. F. (2013). *An introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. New York: Guilford Press.

[22] Hennig-Thurau, T., Gwinner, K. P., Walsh, G., & Gremler, D. D. (2004). Electronic word-of-mouth via consumer-opinion platforms: What motivates con-

sumers to articulate themselves on the Internet? *Journal of Interactive Marketing*, 18(1), 38–52. doi: 10.1002/dir.10073

[23] He, Y., Hu, M., Chen, Q., Alden, D. L., & He, W. (2017). No man is an island: The effect of social presence on negative word of mouth intention in service failures. *Customer Needs and Solutions*, 4(4), 56–67.

[24] He, Y., Ju, I., Chen, Q., Alden, D. L., Zhu, H., & Xi, K. (2019). Managing negative word-of-mouth: The interplay between locus of causality and social presence. *Journal of Services Marketing*, 34(2), 137–148. doi: 10.1108/JSM-03-2019-0117

[25] Hoffman, M. L. (1976). Empathy, role-taking, guilt, and development of altruistic motives. In T. Lickona (Ed.), *Moral development and behavior: Theory, research, and social issues*. New York: Holt, Rinehart, & Winston.

[26] Hu, H. C. (1944). The Chinese concepts of "face". *American Anthropologist*, 46(1), 45–64.

[27] Hu, N., Pavlou, P. A., & Zhang, J. J. (2009). Why do online product reviews have a J-shaped distribution? Overcoming biases in online word-of-mouth communication. *Communications of the ACM*, 52(10), 144–147.

[28] Hu, N., Pavlou, P. A., & Zhang, J. (2017). On self-selection biases in online product reviews. *MIS Quarterly*, 41(2), 449–471.

[29] Hwang, K. K. (1987). Face and favor: The Chinese power game. *American Journal of Sociology*, 92(4), 944–974.

[30] Jacobs, J. B. (1982). The concept of guanxi and local politics in a rural Chinese cultural setting. In *Social interaction in Chinese society* (pp. 209–236).

[31] Karaman, H. (2021). Online review solicitations reduce extremity bias in online review distributions and increase their representativeness. *Management Science*, 67(7), 4420–4437.

[32] Kelley, H. H., & Michela, J. L. (1980). Attribution theory and research. *Annual Review of Psychology*, 31(1), 457–501.

[33] Leung, X. Y., Bai, B., & Stahura, K. A. (2015). The marketing effectiveness of social media in the hotel industry. *Journal of Hospitality & Tourism Research*, 39(2), 147–169. doi: 10.1177/1096348012471381

[34] Li, M., Qiu, S. C., & Liu, Z. (2016). The Chinese way of response to hospitality service failure: The effects of face and guanxi. *International Journal of Hospitality Management*, 57, 18–29.

[35] Lind, J. T., & Mehlum, H. (2010). With or without U? The appropriate test for a U-shaped relationship. *Oxford Bulletin of Economics and Statistics*, 72(1), 109–118. doi: 10.1111/j.1468-0084.2009.00569.x

[36] Liu, H., Jayawardhena, C., Osburg, V. S., Yoganathan, V., & Cartwright, S. (2021). Social sharing of consumption emotion in electronic word of mouth

(eWOM): A cross-media perspective. *Journal of Business Research*, 132, 208–220. doi: 10.1016/j.jbusres.2021.04.030

[37] Loureiro, S. M. C. (2019). Exploring the role of atmospheric cues and authentic pride on perceived authenticity assessment of museum visitors. *International Journal of Tourism Research*, 21(4), 413–426. doi: 10.1002/jtr.2265

[38] Markus, H., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review*, 98(2), 224–253.

[39] Olson, N. J., & Ahluwalia, R. (2021). When sharing isn' t caring: The influence of seeking the best on sharing favorable word of mouth about unsatisfactory purchases. *Journal of Consumer Research*, 47(6), 1025–1046.

[40] Parra-López, E., Bulchand-Gidumal, J., Gutiérrez-Taño, D., & Díaz-Armas, R. (2011). Intentions to use social media in organizing and taking vacation trips. *Computers in Human Behavior*, 27(2), 640–654.

[41] Presi, C., Saridakis, C., & Hartmans, S. (2014). User-generated content behaviour of the dissatisfied service customer. *European Journal of Marketing*, 48(9/10), 1600–1625.

[42] Priester, J. R., & Petty, R. E. (1996). The gradual threshold model of ambivalence: Relating the positive and negative bases of attitudes to subjective ambivalence. *Journal of Personality and Social Psychology*, 71(3), 431–449. doi: 10.1037/0022-3514.71.3.431

[43] Sheng, G., Dai, J., & Ou, Y. (2022). Research on the impact of pop-up store experience on consumers' online word-of-mouth intention. *Statistics & Information Forum*, 37(8), 106–115.

[44] Tassiello, V., Lombardi, S., & Costabile, M. (2018). Are we truly wicked when gossiping at work? The role of valence, interpersonal closeness and social awareness. *Journal of Business Research*, 84, 141–149. doi: 10.1016/j.jbusres.2017.11.013

[45] Tsui, A. S., & Farh, J. L. L. (1997). Where guanxi matters: Relational demography and guanxi in the Chinese context. *Work and Occupations*, 24(1), 56–79.

[46] Tsui, A. S., Farh, J. L., & Xin, K. R. (2000). Guanxi in the Chinese context. In *Management and organizations in the Chinese context* (pp. 225–244). London: Palgrave Macmillan.

[47] Wang, B. (2015). The rise and differentiation of differential patterns in network society. *Chongqing Social Sciences*, 249(08), 33–39.

[48] White, K., & Peloza, J. (2009). Self-benefit versus other-benefit marketing appeals: Their effectiveness in generating charitable support. *Journal of Marketing*, 73(4), 109–124.

[49] Yan, L., Keh, H. T., & Chen, J. (2021). Assimilating and differentiating: The curvilinear effect of social class on green consumption. *Journal of Consumer Research*, 47(6), 914–936. doi: 10.1093/jcr/ucaa041

[50] Yoo, K. H., & Gretzel, U. (2011). Influence of personality on travel-related consumer-generated media creation. *Computers in Human Behavior*, 27(2), 609–621. doi: 10.1016/j.chb.2010.05.002

[51] Zhai, X. (2004). Renqing, mianzi, and power reproduction: Social exchange patterns in a reasonable society. *Sociological Studies*, (05), 48–57.

[52] Zhu, H., Zhou, Y., & Huang, M. (2008). Do consumers always keep silence in the internet era when dissatisfied? In *2008 4th International Conference on Wireless Communications, Networking and Mobile Computing* (pp. 1–4).

(Corresponding Author: Ke Zhong, E-mail: zhongke66@foxmail.com)

Author Contribution Statement:

Hongjie Sun: Proposed research proposition, built research model, designed research plan
Meiling Wang: Built research model, implemented research process, conducted experiments, collected, cleaned, and analyzed data
Ke Zhong: Built research model, proposed model validation methods
Hongjie Sun, Meiling Wang, Ke Zhong: Drafted manuscript
Hongjie Sun, Meiling Wang, Ke Zhong: Revised final manuscript

Note: Figure translations are in progress. See original paper for figures.