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## Negative Customer Reviews and the Online Decision-Making Process: The Role of Construal Fit

Minji Kim

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NEGATIVE CUSTOMER REVIEWS AND THE ONLINE DECISION-MAKING PROCESS:  
THE ROLE OF CONSTRUAL FIT

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A dissertation submitted in partial fulfillment  
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## **ABSTRACT**

### **NEGATIVE CUSTOMER REVIEWS AND THE ONLINE DECISION-MAKING PROCESS: THE ROLE OF CONSTRUAL FIT**

by

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Consumers seek out online reviews to aid their decision-making, particularly when purchasing products and services online. Given their power to influence consumer behavior, online reviews have been extensively studied in various settings. While much research has focused on what determines the performance of online reviews, limited research has focused on why a particular review receives more or less attention from consumers. This study aims to fill this knowledge gap by exploring how consumers with different mindsets respond to online reviews framed at different levels of construal. Applying the construal fit principle, this research predicts that consumers more fluently process online reviews framed in a way that fits with their construal mindset and thus display more extreme evaluative reactions. To test this prediction, two between-subjects experiments were conducted in an online food delivery setting. Following the premise of construal level theory, different construal mindsets were induced using temporal distance in Study 1 and spatial distance in Study 2. In both Study 1 and 2, negative online reviews were framed at different levels of construal by varying the types of service failure depicted and the levels of language abstraction used in the review content. The direct and indirect effects of mental construal and review framing on intention measures were analyzed using a series of ANCOVAs and a bootstrapping model.

The results of Study 1 demonstrated that temporal distance, through its impact on the construal mindset, determined the relative effectiveness of review framing. Specifically, temporal proximity induced low-level construal, and temporal distance triggered high-level construal. The activation of low-level construal rendered feasibility-related, concrete negative reviews conceptually more fluent. The activation of high-level construal, in contrast, led to more fluent processing of desirability-related, abstract negative reviews. This enhanced processing fluency, in turn, resulted in increased anger and willingness to switch. The results of Study 2 are consistent with those of Study 1, whereby low- and high-level construals triggered by spatial proximity and distance yielded an experience of fluency in processing feasibility-related, concrete and desirability-related, abstract negative reviews, respectively, and then increased consumers' anger and switching intention. Taken together, the results lend support to the prediction that a subjective experience of fluency arising from processing online reviews that are framed to fit rather than misfit with one's construal mindset intensifies emotional and behavioral reactions.

This research extends prior studies on online reviews by looking at both the content- and word-level linguistic styles of review content and by examining how they interact with an individual-level variable (i.e., construal mindset) to predict consumer responses. The current research also provides practical suggestions for restaurateurs to protect their competitive positions in the online food delivery market. The findings emphasize the importance of understanding consumers' delivery ordering patterns to better leverage negative reviews.

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# CHAPTER 1

## INTRODUCTION

With the surge in smartphone usage, online food delivery (OFD) has attracted convenience-seeking customers by allowing them to enjoy their favorite restaurant meal delivered right to their doorstep (Lee et al., 2017). The global OFD market has been growing three times faster than dine-in traffic since 2014 (National Restaurant News, 2016) and is expected to reach \$369 billion in 2030 (Research and Market, 2022). This trend has proliferated various OFD platforms, including Grubhub, DoorDash, and Uber Eats, causing a paradigm shift in the way customers evaluate and choose restaurants (Silva et al., 2020; Yeo et al., 2017). From a business perspective, the OFD market presents a new opportunity for restaurants to increase revenue and market share without expanding seating capacity (Xu & Huang, 2019). However, attracting consumers can be highly competitive as they can easily access an extensive variety of food offers through OFD platforms (Kapoor and Vij, 2018).

Despite the rapid growth of the OFD market and its impact on the restaurant industry, research has yet to address how consumers decide to make purchase decisions on OFD platforms. To date, much of the research attention has been given to OFD service quality (e.g., navigational design, ease of use, variety of options) and its impact on the perceived usefulness of and behavioral intention toward OFD (Koay et al., 2022; Su et al., 2022; Suhartanto et al., 2019; Zhuang et al., 2021). Some researchers argued that customer experience (CE) quality is the key differentiator leading to competitive advantage (Anshu et al., 2022; Ray et al., 2019). They further emphasized that restaurant and OFD operators must be able to serve the needs and expectations of their consumers in order to ensure CE quality.

Expectations represent the “prediction made by customers about what is likely to happen during an impending transaction or exchange” (Zeithaml et al., 1993, p.2). In the confirmation-disconfirmation paradigm, expectations serve as a comparative referent or standard for the evaluation of performance (Oliver, 1980). Supporting this prediction, empirical findings indicated that consumers use their expectations to evaluate their experiences with restaurants (Ryu & Han, 2011) and OFD platforms (Xu & Huang, 2019). More importantly, the formation of expectations was seen as a complex process, affected by various personal and external factors (Yi & La, 2004). For instance, different expectations can be formed depending on consumers’ disconfirmation sensitivity (Cai & Chi, 2021) or involvement level (Olk et al., 2021), and elicited by information from advertising (Kim & Mattila, 2013) or word-of-mouth from other consumers (Lindgreen & Vanhamme, 2005). Recent research has examined the effect of online reviews, as a digital form of word-of-mouth (WOM), on consumers’ expectation formation (Qazi, 2017; L. Zhang et al., 2021).

Unlike dining in a restaurant, any purchase made for delivery through OFD platforms is temporally and spatially separated from consumption (Kim et al., 2022). These temporal and spatial separations can be explained by the concept of psychological distance. According to construal level theory (CLT), the perceived distance in time (i.e., temporal distance) and space (i.e., spatial distance) influences the way individuals construe or mentally represent a target object or event and informs their subsequent judgments and behaviors (Trope & Liberman, 2010). Specifically, the greater the psychological distance, the more likely consumers adopt higher levels of mental construal. The adoption of high- rather than low-level construals, in turn, prompts consumers to place more weight on superordinate versus subordinate, general versus contextual, and essential versus incidental features of an event (Trope & Liberman, 2003; Trope

et al., 2007). Due to the shift in focus, consumers with different construal mindsets attend to different types of information when making purchase decisions (Lee et al., 2014). In general, consumers preferentially attend to information that fits their construal mindset (Fujita et al., 2008; Wright et al., 2012). In this regard, this dissertation investigates how individual mental construal and online reviews influence consumer responses in the OFD context.

### **Problem Statement**

Consumers always have an experience—good, bad, or indifferent—whenever they purchase a product or service (Berry et al., 2002, p. 5). The key is how effectively the firm manages the experience to influence consumers’ current satisfaction and future behavioral intention (Van Vaerenbergh et al., 2012). However, it has become increasingly complex to create and manage one’s experience due to the increased number of channels and touchpoints consumers now encounter in their journey (Bolton et al., 2018; Lemon & Verhoef, 2016). This is particularly true in the restaurant industry due to the growing popularity of OFD services. The existing literature on OFD has primarily sought to identify features of delivery platforms or apps that predict consumers’ adoption of OFD services (Annaraud & Berezina, 2020; Cheng et al., 2021; Suhartanto et al., 2019). Although these studies help restaurant managers identify the likely drivers of CE within the OFD setting, the findings are confined to firm-controlled factors and thus, provide only a partial understanding of the antecedents of CE.

A robust finding in the CE literature is that an experience that delivers value-in-use is perceived as being more positive than one that does not (Bustamante & Rubio, 2017; Jain et al., 2017; McColl-Kennedy et al., 2015). Consumers perceive value based on their personal viewpoint and thus, truly unique to each individual (Helkkula et al., 2012). Then, how do consumers determine the value in their experiences? Empirical research suggests that value in

the experience results from the comparison between what consumers expect to experience and their perceptions of the actual experience (Hwang & Seo, 2016; Meyer & Schwager, 2007; Olsson et al., 2021). Previous studies have predominantly focused on how consumer expectations are shaped by prior experience (e.g., Shahid et al., 2022), yet limited research exists on novice consumers without prior service provider experience. Moreover, consumers are likely to have different expectations when visiting restaurants versus ordering food online through OFD platforms. Although the literature on OFD is growing, there is still a dearth of research that seeks to understand consumer expectation formation in this field.

Given the mounting impacts of online reviews on consumer behavior, review valence is considered one of the most important aspects. Much of the research has supported the presence of negativity bias, whereby negative reviews tend to be more influential than positive ones (Park & Nicolau, 2015; Racherla & Friske, 2012). However, some studies have reported contradictory findings that positive and negative reviews are perceived to be equally helpful (Chua & Banerjee, 2016; Wu, 2013). These mixed findings may arise due to individual differences in information processing styles (Lee & Lin, 2022). The existing literature acknowledges the importance of reader characteristics in determining the effectiveness of online reviews (De Pelsmacker et al., 2018; Hu et al., 2017); however, such a relationship has not been firmly established in negative reviews. Another major gap in the online review research is the lack of studies that directly examine the content of negative reviews, especially at the specific language level. Le and Ha (2021) noted that the performance of negative reviews is influenced by the linguistic framing. While there are many different ways to frame negative reviews, there has been little research on negative review framing.

## **Research Questions**

Based on the problems and gaps identified, this research seeks answers the questions below:

1. Will negative reviews have the same effect on emotions and behaviors for all consumers?
2. Will the effect of negative reviews be enhanced/reduced by review framing?
3. Will the effect of review framing differ by individual construal mindset?
4. Will the perceived fit between review framing and individual construal mindset enhance the persuasiveness of negative reviews?
5. What is the mechanism underlying the fit effect between review framing and individual construal mindset?

## **Purpose of the Study**

This dissertation aims to clarify the influence of negative reviews on consumer decision-making. Thus, the overarching question is whether negative reviews will be equally important for all purchase situations. Specifically, using an online food delivery setting, this dissertation identifies:

1. The effect of negative reviews with different textual framing on consumers' emotional and behavioral responses.
2. How individual construal mindset influences the effects of review framing on consumers' emotional and behavioral responses.
3. The mediating role of processing fluency between review framing and individual construal mindset on consumers' emotional and behavioral responses.

## **Significance of Study**

This dissertation represents an early investigation of online reviews in the OFD context by examining the interplay of individual construal mindset and review framing on consumers' emotional and behavioral responses to the service provider being reviewed (i.e., restaurant and OFD service provider). In doing so, this study advances theoretical knowledge in several significant ways. First, this dissertation contributes to the rich body of research that has examined the persuasive power of online reviews by identifying when and why consumers prefer different types of negative reviews. Second, it advances the literature on OFD by incorporating the concept of psychological distance. The study emphasizes that psychological distance prompts consumers to adopt different construal mindsets and, in turn, influences their decision-making. Last, a theory-driven approach is used to examine the persuasive effect of language abstraction in the context of online restaurant reviews. Specifically, the manipulation of language abstraction level follows the guideline of the LCM and hence, expands the application of the model

The findings of this dissertation will deepen the understanding of the decision-making process in OFD and thus, provide useful insights for practitioners. The central idea of this study is that the extent to which consumers rely on a certain review is enhanced (reduced) by its fitness with the way in which consumers construe information. In other words, the mere delivery of negative reviews may not cause a significant decrease in sales. Although firms have no control over what consumers say about them in online reviews, they do have the power to flag certain reviews as featured or highlighted, warranting placement ahead of an otherwise long and undifferentiated list of reviews. Furthermore, the findings will assist restaurant and OFD service operators to develop effective positioning strategies or search filters and ultimately, minimize the potential harm of negative reviews.

## Terminology

Key concepts and terms used throughout this dissertation are defined as:

- **Construal:** The way people mentally represent a target (Trope et al., 2007).
- **Construal level:** The degree of abstractness of the mental representations people form of the target (Trope et al., 2007).
- **Construal fit:** The congruence (or match) between individual construal mindset and review framing.
- **Desirability:** The value of an action's end-state (Liberman & Trope, 1998)
- **Feasibility:** The ease or difficulty of reaching the end state (Liberman & Trope, 1998).
- **Language abstraction:** the degree of abstractness/concreteness of words used in the textual description (Semin & Fiedler, 1991).
- **Processing fluency:** A subjective sense of ease in processing and comprehending information (Lee & Aaker, 2004).
- **Psychological distance:** The subjective experience of being close to or far away from a target (Trope & Liberman, 2010).
- **Spatial distance:** The perceived physical distance between the self and the target event (Bar-Anan et al., 2006).
- **Temporal distance:** The perceived distance in time between the self and the target event (Bar-Anan et al., 2006).

## **CHAPTER 2**

### **LITERATURE REVIEW**

This chapter provides a review of the relevant literature on key determinants that influence consumer decision-making in the online food delivery context. To provide a thorough background for this dissertation, this review of the literature consists of four sections. In the first section, the formation process of customer experience is presented to introduce its subjective nature. The second section illustrates the importance of online reviews in decision-making. This review includes three different factors influencing the persuasive power of online reviews: reviewer-, review-, and reader-related factors. The third section outlines the theoretical underpinnings and its relation to consumer decision-making. The relationships between the key determinants are hypothesized in the last section.

#### **Customer Experience**

Customer experience (CE) is a consumer's subjective judgment of a firm and its offering (Meyer & Schwager, 2007), which encompasses a series of "moments of truth" that occur before, during, and after the service encounter (Klaus & Maklan, 2013; Lemon & Verhoef, 2016). CE has been identified as the key to business success—superior CE elicits positive responses from consumers, such as satisfaction, engagement, and loyalty (Jain et al., 2017; Roy et al., 2022; Silva et al., 2021). Given its significance in business performance, CE has been the subject of much research over the years. The traditional approach suggests that CE is largely determined by a set of purposefully designed organizational actions, with consumers being the passive recipients of these actions (Helkkula et al., 2012). From this perspective, many studies have been developed to understand the creation of CE by focusing on firm-controlled elements of the marketing mix, such as physical environment (e.g., servicescape), frontline employees,

product attributes, and promotions (Baker et al., 2002; Chen & Hu, 2010; Grewal et al., 2009; Wall & Berry, 2007).

An implicit assumption underlying the traditional approach is that organizational actions are perceived similarly by consumers and thus, firms can exercise control over CE (Kranzbühler et al., 2018). However, this assumption has recently been challenged by studies suggesting individual differences in the experience perception (Jain et al., 2017; Rose et al., 2012; Stein & Ramaseshan, 2016). These studies contend that CE is not so much about specific firm actions; rather, it captures consumers' perceptions or interpretations of the value being produced. Hence, CE is seen as a subjective and context-specific phenomenon, representing a consumer's internal responses (e.g., cognitive, emotional) to any direct or indirect touchpoint or encounter with a firm (Becker & Jaakkola, 2020). More importantly, the formation process of CE is deemed to occur throughout the customer journey rather than at one specific point in time. A number of touchpoints exist along the journey, each of which contributes to an experience as perceived by consumers but does not necessarily reside within direct firm control (Lemon & Verhoef, 2016; Kranzbühler et al., 2018).

In general, researchers have come to agree that CE is defined by consumers and thus, is strictly personal and subjective (Becker & Jaakkola, 2020; Jain et al., 2017). Because every experience is unique to the individual consumer, the same experience can be perceived very differently from one consumer to another (De Keyser et al., 2015). Some researchers argue that this subjective nature of CE can be explained by the expectancy-disconfirmation paradigm proposed by Oliver (1980). According to this paradigm, consumers form their service evaluations by making comparisons between their expectations and perceptions of service performance. If perceived performance is above or below expectations, positive or negative

disconfirmation occurs and thus, increases or decreases in satisfaction are expected (Oliver, 1980). Similarly, consumers may use their previously held expectations as the standard of comparison when assessing their experiences. As consumers are a heterogeneous group, their expectation levels are likely to be different and thus, have different experience perceptions (Gentile et al., 2007). Much of the research on CE has focused largely on the impact of prior experience (e.g., Hwang & Seo, 2016), neglecting other factors that may influence a consumer's experience expectations. In this regard, the current dissertation introduces online reviews as a potential standard on which consumers base their pre-purchase expectations of online food delivery.

### **Online Customer Review**

The advance of digital technologies has shifted consumers' approach to their roles from passive readers to active contributors of content, which has facilitated the explosion of user-generated content (UGC) (Lo & Yao, 2019). UGC refers to any form of content created and shared online by the general public rather than by vendors or paid professionals (Daugherty et al., 2008), of which online reviews are the most popular form of UGC (Lamberton & Stephen, 2016). Similar to the definition of UGC, online reviews can be understood as peer-generated evaluations of consumption experience posted publicly on company websites or third-party forums, such as Yelp.com, TripAdvisor, and Google (Mudambi & Schuff, 2010).

With the emergence of digital media as a dominant medium for information search, online reviews have become a valuable asset for both consumers and companies. Online reviews contain detailed information beyond what is given in product descriptions (Dong et al., 2016), which helps reduce the quality uncertainty inherent in a purchase situation by mitigating information asymmetry between seller and buyer (Manes & Tchetichik, 2018; Mudambi &

Schuff, 2010). Through online reviews, hence, consumers can make informed purchase decisions, and ultimately have more confidence in their choice (Le et al., 2022). From a business perspective, online reviews function as a powerful social proof tool that adds authenticity to the marketing claims (Metzger et al., 2010), promoting the initial trust of prospects in the firm and its product (Sparks & Browning, 2011; Utz et al., 2012). Online reviews also serve as an important source of customer experience data in that they reflect the opinions of actual consumers. This insightful data helps firms to identify areas of opportunity to improve the overall customer experience and, in turn, foster customer satisfaction and loyalty (Mathayomchan & Taecharungroj, 2020; Wu & Gao, 2019).

As online reviews have become increasingly commonplace, consumers have easy access to information necessary for decision-making. However, the abundance of online reviews has resulted in information overload in which consumers are exposed to more information than they can process effectively within their cognitive limits (Park & Lee, 2008; Park & Nicolau, 2015). As such, one's ability to utilize relevant information in decision-making process is significantly hampered, which subsequently increases the decision difficulty (Hu & Krishen, 2019). To cope with information overload and thus, improve efficiency in decision-making, consumers employ a variety of information processing strategies (Jacoby, 1984), and filtering is one of the most commonly used strategies to reduce information load (Savolainen, 2007). That is, consumers purposefully limit the amount of information to be processed by selectively attending to a small subset of information that meets certain criteria (Jacoby, 1984; Alzate et al., 2021). For academics and practitioners alike, this pattern of information processing raised a question of what criteria consumers use to select a subset of online reviews for further processing. Consequently, a large body of research has emerged aiming to uncover factors that drive the

selection of online reviews (e.g., Liang, 2016; Park & Nicolau, 2015). Among the many factors discussed in the literature, the most extensively researched topic is review helpfulness (Wang et al., 2020).

Review helpfulness captures the extent to which consumers find an online reviews to be useful in familiarizing, understanding, and evaluating a product (or service) and its performance (Jiang & Benbasat, 2007; Mudambi & Schuff, 2010). Consumers infer review helpfulness as a cue to signal the quality or diagnostic value of information contained in a review (Lee et al., 2017; Wu, 2013) and thus, utilize review helpfulness to decide which reviews to access or reject (Karimi & Wang, 2017). As a result, the adoption of information from online reviews in decision-making increases when they are perceived as being helpful (versus unhelpful), suggesting that review helpfulness predicts the informational influence of online reviews on consumer attitudes and behavioral intentions (Filieri, 2015). As review helpfulness continues to grow in importance, firms attempt to differentiate themselves from competitors by offering consumers easy access to helpful reviews, rather than merely displaying reviews on their websites (Mudambi & Schuff, 2010). Common ways to make helpful reviews more visible to consumers include presenting the number of helpful votes alongside the review, posting the most helpful reviews at the top of the page, or offering the option to sort search results by helpfulness (Kwok & Xie, 2016; Mudambi & Schuff, 2010). Firms who strategically manage helpful reviews via these practices can better assist consumers in making decisions and subsequently, improve their business performance outcomes such as growth in sales and revenue (Hong et al., 2017; Ye et al., 2011).

The value of online reviews lies in their abilities to shape consumer behavior (Tang et al., 2014), which becomes more evident when they are perceived to be helpful (Filieri, 2015; Meek

et al., 2021). The relative value of helpful versus unhelpful reviews has spurred great interest in review helpfulness, particularly its determinant. Consequently, review helpfulness has been widely discussed and researched across various disciplines (Hu & Chen, 2016), yet no consensus has been reached regarding what makes a helpful review. To provide an overview of literature on determinants of review helpfulness, the current dissertation reviewed relevant studies and identified three distinct groups of determinants: characteristics of reviewer, review, and reader. To briefly summarize the current knowledge on the subject, review helpfulness is predicted by reviewer and review characteristics, whose effects are dependent on reader characteristics (Hong et al., 2017; Zheng, 2021).

### **Reviewer Characteristics**

As abovementioned, the surge in volume of available reviews has posed challenges for consumers in identifying relevant and useful reviews (Hu & Krishen, 2019). Moreover, online reviews are typically anonymous and shared with no regulation or fact-checking (Kusumasondjaja et al., 2012), which requires consumers to spend more time and efforts judging the reliability of the information being shared (Park & Nicolau, 2015). As such, consumers follow a more heuristic approach, either consciously or unconsciously, in determining the utility of online reviews in order to simplify their decision-making processes (Zhang et al., 2016). Under the heuristic approach, the identification of helpful reviews is driven by readily accessible peripheral cues, and reviewer credibility is one such cue that consumers rely on to make judgment about the informative value of online reviews (Baek et al., 2012). Source credibility reflects the perceived ability or motivation of the reviewer to produce accurate and reliable information (Cheung & Thadani, 2012) and its influence on the perception of review helpfulness has been examined in various research settings. A persistent finding is that online reviews from

high-credibility (versus low-credibility) reviewers tend to score higher on measures of helpfulness (M. Lee et al., 2021; Liu & Park, 2015) and review credibility (Kusumasondjaja et al., 2012; Luo et al., 2013) and thus, are more likely to be adopted by consumers. Existing research has identified some reviewer characteristics that contribute to credibility perception, such as reviewer expertise (González-Rodríguez et al., 2016; Hu & Yang, 2021), reviewer reputation (Liu & Park, 2015; Srivastava & Kalro, 2019), reviewer experience (Kwok & Xie, 2016; Liang et al., 2019), and identity disclosure (Karimi & Wang, 2017; Kusumasondjaja et al., 2012).

### **Review Characteristics**

Prior research has covered various quantitative and qualitative characteristics of reviews that are perceived as being helpful. Quantitative characteristics include non-textual features that are easily observable but have little informative value, such as rating consistency, rating extremity, and review length (Baek et al., 2015; Filieri et al., 2018; Kwok & Xie, 2016; Liang et al., 2019). On the other hand, qualitative characteristics contain textual features that have a direct relevance to the quality of information contained in a review, such as valence, readability, timeliness, and comprehensiveness (Hu & Yang, 2021; Singh et al., 2017; Wang et al., 2019; Zhao et al., 2015). While textual and non-textual features jointly affect review helpfulness, their relative importance can vary across the two stages of the choice process (Hu et al., 2014). Some researchers have noted that consumers first reduce a large number of available reviews to a smaller, more manageable subset, after which they further process the subset to arrive at a decision (Dash et al., 2021; X. Li et al., 2019). When screening reviews for inclusion in the subset, consumers adopt simple decision rules to minimize cognitive effort and maximize productivity in the screening process. Once a subset of reviews is selected, consumers attempt to improve their decision

accuracy by carefully scrutinizing the content of each review in the subset. Consequently, online reviews tend to be initially filtered on the basis of their non-textual features and then, the remaining reviews are assessed for their usefulness based on their textual features (Baek et al., 2012; Hu et al., 2014).

Recent studies further extended the discussion of review helpfulness by exploring the effects of linguistic style on review evaluation. This emerging stream of research has been carried out at either content-level or word-level. The fundamental difference between the content- and word-level linguistic styles is that the former refers to the type of information provided in the review, and the latter captures the type of words used to convey the information (Salehan & Kim, 2016). Empirical research revealed that online reviews are evaluated more positively when they present objective (versus subjective), descriptive (versus vague), explicit (versus implicit), and two-sided (versus one-sided) information (Baker & Kim, 2019; Filieri et al., 2018; Lopez & Garza, 2021; Packard & Berger, 2017). The perceived helpfulness is also found to be enhanced by the prominent use of second-person (versus first-person) pronouns, as well as concrete (versus abstract), cognitive (versus affective), and figurative (versus literal) language was found to enhance the perceived value of online reviews (Hlee et al., 2021; Huang & Liang, 2021; Leung, 2021; Wang & Karimi, 2019). These findings suggest that what and how information is conveyed in a review can affect its helpfulness and persuasiveness (Liu et al., 2019).

### **Reader Characteristics**

Despite extensive research on reviewer and review characteristics, their impacts on review helpfulness remain mixed. A plausible explanation is that they are processed subjectively by readers and thus, given different weights in interpreting the helpfulness of the review (De

Pelsmacker et al., 2018). This prediction finds support in empirical research examining the potential effects of reader characteristics on the perceived review helpfulness. For instance, online reviews with positive (negative) emotions and attribute-specific (host-specific) information are perceived by male (female) consumers as more informative (Chen & Farn, 2020; Shin et al., 2022). The subjectivity of the review content positively affects its helpfulness when consumers are less involved in decision-making (Aureliano-Silva et al., 2021) or evaluate hedonic products (Liu et al., 2018; Moore, 2015). Some researchers argue that consumers draw more or less value from a particular review due to the adoption of different information processing styles (Liu et al., 2018; Shin et al., 2022). More importantly, research suggests that consumers derive more utility from and thus, persuaded by online reviews written in a manner that matches (versus mismatches) with their own information processing style or cognitive mode (Korfiatis et al., 2012; Mafael, 2019). This is because a cognitive fit occurs when there is a close match between how the review is linguistically constructed and how the review is processed by readers. The cognitive fit, in turn, prompts more fluent processing of the information presented in the review and thus, enhances the perceived helpfulness of the review (Korfiatis et al., 2012; Liu et al., 2019).

The content- and word-level linguistic styles are inherently inseparable in online reviews, yet little research exists on their joint effect. As evidenced above, the linguistic style predicts the performance of online reviews, such as helpfulness; however, its impact on consumer responses has rarely been explored within negative reviews. Moreover, much of the limited research on the linguistic style of negative reviews has focused on its interaction with reviewer or review characteristics (e.g., Sparks & Browning, 2011), while ignoring the possible effects of reader characteristics. Hence, this dissertation aims to address the gap in the literature by looking at

how individual differences in processing modes manifest themselves in perceptions of different linguistic styles used in negative reviews. This dissertation utilizes construal level theory (CLT) as a theoretical underpinning to explain the mechanism by which processing mode influence consumer responses to negative reviews.

### **Construal Level Theory**

The primary goal of studying consumer behavior is to understand how consumers evaluate alternatives and make purchase decisions. A substantial amount of research has demonstrated that consumers form their purchase decisions based not only on the quality and desirability of a product but also on a variety of less central factors (Trope et al., 2007). The question is what makes central factors exert more or less influence on consumer decision-making than peripheral factors at any given point. CLT suggests that psychological distance determines the relative salience of central versus peripheral factors used in the evaluation process (Trope et al., 2007).

### **Psychological Distance and Construal Level**

Psychological distance is “a subjective experience that something is close or far away from the self, here, and now” (Trope & Liberman, 2010, p. 440). CLT specifies four dimensions of psychological distance: (a) temporal—how much time from now the target event would take place (e.g., tomorrow versus next week), (b) spatial—how much geographical space separates the self from the target (e.g., local neighborhood versus another city), (c) social—how distinct is the social target from the self (e.g., friends versus strangers) and (d) hypotheticality—how likely is the target event to occur (e.g., likely versus unlikely) (Bar-Anan et al., 2006). Because all four dimensions have the same egocentric reference point of the self in the here and now, CLT proposes that they are cognitively interrelated and have a similar effect on level of construal

(Trope & Liberman, 2010). That is, distancing a target on any dimension of psychological distance stimulates higher levels of construal (Fujita et al., 2006b).

The term *construal* refers to the way people mentally represent a target (e.g., events, objects, actions) and *level of construal* indicates the degree of abstractness of the mental representations people form of the target (Trope et al., 2007). According to CLT, high-level *construals* extract the gist from available information and leave out surface-level details and therefore, are characterized as abstract, coherent, decontextualized, and superordinate. In contrast, low-level *construals* emphasize contextual details of the present situation and make a less clear distinction between primary and secondary features, thereby characterized as concrete, incoherent, contextualized, and subordinate (Ledgerwood et al., 2015; Trope & Liberman, 2003). While people can mentally represent the same target at different levels of *construal*, CLT contends that they use increasingly higher levels of *construal* to represent the target as psychological distance from the target increases (Trope & Liberman, 2010). This is because there is often less available information about distant than proximal targets. Thus, people mentally represent distant targets in terms of their defining features that remain relatively invariant across all possible manifestations (i.e., high-level *construals*) and proximal targets by their incidental features that are context specific (i.e., low-level *construals*) (Fujita et al., 2006a; Rim et al., 2009).

CLT further predicts that the association between distance and *construal level* is overgeneralized, such that people use high-level *construals*, rather than low-level *construals*, even in situations where there is equivalent information about distant and proximal targets (Trope et al., 2007). For instance, Liberman et al. (2002) used a categorization task to examine how temporal distance influenced the breadth of categories into which the objects were

classified. They primed participants with temporal proximity or temporal distance by asking them to imagine themselves going on a camping trip in either the upcoming weekend or a few months later. They, then, asked participants to classify the items related to the event (e.g., matches, camera, rifle) into as many categories as they thought appropriate. As expected, participants in the distant-future condition grouped the same set of 38 items into fewer, broader categories than participants in the near-future condition, suggesting that temporal distance facilitates higher levels of construal, or abstraction. This finding is further extended in the study of Bar-Anan et al. (2006) who demonstrated implicit conceptual association of construal level with all four dimensions of psychological distance.

### **Psychological Distance, Evaluation, and Choice**

According to CLT, people make choices with respect to their representations, or construals, of objects rather than the objects themselves (Liberman & Trope, 2008). When choosing organic food, for example, people do not decide on the food itself but rather on their representation of organic food—pursuing a healthy lifestyle or being environment-friendly. This explains why consumers have different evaluations and preferences for the same product: namely, due to their different representations of the product. CLT argues that one's mental representations of objects hinge not only on the actual attributes of the objects but also on their psychological distance from the objects. Thus, the different dimensions of psychological distance (proximity) similarly influence evaluation and choices inasmuch as they all elicit more abstract (concrete) representations, or higher (lower) level construals (Trope & Liberman, 2010). To summarize, psychological distance systematically affects the way people mentally represent objects and that representation, in turn, affects their decision-making (Trope & Liberman, 2000).

As noted, CLT assumes that the greater the psychological distance, the more likely are people to use higher level construals in their mental representations of objects and events. CLT predicts, then, that psychological distance increases the relative weight of high- versus low-level construal value in decision-making. In other words, as psychological distance increases, people are more likely to base their judgments on the value associated with high-level construals rather than low-level construals (Trope & Liberman, 2003). Hence, when an option has more positive high-level construal value than low-level construal value, its overall attractiveness increases with psychological distance. In contrast, when an option has more positive low-level construal value than high-level construal value, its overall attractiveness decreases with psychological distance (Trope & Liberman, 2000). For example, an interesting guest lecture scheduled at an inconvenient time (i.e., positive high-level construal but negative low-level construal) would seem more appealing when the lecture takes place later in time, occurs in a remote location, is planned for others, and is improbable to happen (Trope & Liberman, 2010). These distance-dependent differences in preference formation have important implications for how consumers make trade-offs among product attributes. The current dissertation focuses on the two key attributes by which consumers evaluate alternatives: desirability and feasibility.

### ***Desirability versus Feasibility Considerations***

While CLT posits that the same action can be construed at different levels of abstraction, it distinguishes between high- and low-level construals of actions in terms of their emphasis on desirability versus feasibility of outcomes (Liberman & Trope, 1998; Sagristano et al., 2002). Desirability refers to the value of an action's end-state that answers 'why' the action is performed, whereas feasibility pertains to the ease or difficulty of reaching the end state that supplies the details of how the action is to be performed (Liberman & Trope, 1998). They are

orthogonal rather than polar ends of a continuum, such that options that are high on both desirability and feasibility dimensions are the most desirable. In reality, however, consumers often face a choice conflict where they need to make trade-offs between desirability and feasibility (Lu et al., 2013). For consumers, thus, it is imperative to find a balance between desirability and feasibility concerns during their decision-making process.

CLT suggests a close association between psychological distance and the desirability/feasibility trade-offs consumers make. Specifically, CLT predicts that consumers weigh desirability more (less) than feasibility aspects when psychological distance from the decision increases (decreases); as a result, the preference for highly desirable but less feasible options over less desirable but highly feasible options increases (decreases) with psychological distance (Fiedler, 2007; Trope et al., 2007). The differential weighting of desirability and feasibility considerations is grounded on the premise that distal (proximal) entities activate high-level (low-level) construals, which in turn prompts people to preferentially attend to high-level (low-level) features (Trope & Liberman, 2003). CLT claims that desirability considerations constitute a higher level of construal than feasibility considerations because the former are superordinate to the latter in the sense that the subjective importance of feasibly attaining the end state depends on the desirability of the end state more than vice versa (Liberman & Trope, 1998; Sagristano et al., 2002). This distinction parallels the distinction made in action identification theory (Vallacher & Wegner, 1987). According to this theory, the same action can be identified in many ways and these act identities can be arrayed in a cognitive hierarchy, from those specifying the “how” of the action to those capturing the “why” of the action. The question of why (versus how) to pursue an action is more central to the meaning of the action; hence, “why”

identifications are superordinate in nature than “how” identifications (Liberman & Trope, 1998; Vallacher & Wegner, 1987).

The expected effect of psychological distance on the weight given to desirability versus feasibility has been empirically demonstrated for all four dimensions: temporal distance (Jin & He, 2013; Lee & Zhao, 2014), spatial distance (Ryoo et al., 2017; Van Kerckhove et al., 2015), social distance (Baskin et al., 2014; Lu et al., 2013), and hypothetical distance (Todorov et al., 2007; Wakslak et al., 2006). In the hospitality context, for example, research found that temporal distance (proximity) increases the effect of desirability (feasibility) on preference, such that tourists exhibited a greater preference for destination/hotel higher in desirability (feasibility) when the travel was expected to take place in the distant (near) future (Basoglu & Yoo, 2015; Kim et al., 2018; Q. Li et al., 2019). Moreover, studies documented that consumer become more price sensitive (i.e., feasibility-oriented) as the temporal distance from an event decrease (Wakefield & Wakefield, 2018), while they place a greater emphasis on the quality ((i.e., desirability-oriented) when planning a vacation in the distant-future and to a far destination (Zhang & Kalra, 2014). There are a few studies that acknowledge the role of psychological distance in restaurant consumer behavior (e.g., Jeong & Jang, 2015) but remain limited in scope. The work of Tatavarthy et al. (2019), one of the very rare studies in restaurant settings, reported that temporal and social distance increases the effects of desirability over feasibility on service evaluation as well as customer satisfaction.

### ***Abstract versus Concrete Language***

The desirability-feasibility distinction is only one aspect that determines level of construal. Another aspect is the abstractness of language, which denotes the level of linguistic abstraction used in descriptions of persons, events, experiences, and behaviors (Semin & Fiedler,

1998). CLT posits that the level of language abstraction varies as a function of psychological distance, with more abstract (concrete) language used for distant (proximal) entities (Lieberman et al., 2002). This proposition is in line with the findings of Semin and Smith (1999), who demonstrated that temporal distance of past events is closely associated with its relative linguistic abstractness. Participants created more abstract narratives of distant past events and more concrete descriptions of recent past events. The reverse direction of influence was also observed: namely, abstract narratives prompted participants to recall more distant events, while concrete narratives led them to retrieve more recent past events. Studies within CLT further provide empirical evidence in support of the proposed relationship. Research has shown, for example, that people preferred using more abstract than concrete language when depicting events occurring in remote places (Fujita et al., 2006a), to dissimilar others (Menegatti & Rubini, 2013), and with low probability (Grinfeld et al., 2021). The question may be, then, raised as to how the level of abstraction in language can be determined. The linguistic category model (LCM; Semin & Fiedler, 1988) provides a basis for answering this question.

The LCM is a taxonomic framework that classifies interpersonal terms into four categories along a continuum of concreteness and abstractness (Semin & Fielder, 1988). At the most concrete end of the continuum, descriptive action verbs (DAVs) refer to a single observable behavioral event (e.g., talk, push, kiss) that have a perceptually invariant feature (e.g., push always involved the hand). They do not reveal anything beyond the situation at hand, and thus are highly objective and leave little room for interpretation. Interpretive action verbs (IAVs) also pertain to a single behavioral episode but are more abstract than DAVs in that they denote a more general class of behaviors (e.g., help, hurt). Unlike DAVs, IAVs no longer involve an invariant physical feature and have evaluative connotations, either positive (e.g., encourage,

entertain) or negative (e.g., cheat, threaten). State verbs (SVs) refer to psychological states of the actor that generalize beyond specific behaviors and situations (e.g., like, respect, hate). Although SVs preserve a direct reference to a specific object, they are detached from a specific instance of behavior; hence, they have greater abstractness relative to DAVs and IAVs. The most abstract category in the LCM are adjectives (ADJs), which correspond to the actor's general traits or characteristics (e.g., aggressive, friendly, honest). ADJs reflect more enduring properties of persons without situational or behavioral specifications and therefore, show greater generality across situations, behaviors, and objects. To summarize, as the level of linguistic abstraction increases, descriptions convey more information about the subject and less about the situational context in which the propositions refer. Consequently, they become less verifiable and more disputable, and allow more leeway for interpretation (Fiedler & Semin, 1988; Semin & Fiedler, 1988, 1991).

The LCM has inspired much research interest, whereby the focus has mainly been on systematic differences in language use with their effects on social-cognitive processes (Fiedler, 2008). While different linguistic categories are found to have different cognitive implications, research in the field of cognitive psychology has provided convergent evidence for the concreteness effect: namely, concrete verbal stimuli are more vividly imageable and thus, easier to process and recall compared to abstract verbal stimuli (Acheson et al., 2010; Hansen & Wänke, 2010; Ter Doest, 2002). However, some researchers argued that the concreteness effect is not universal but depends on multiple factors, such as product type (Krishnamoorthy, 2015), prior knowledge (De Angelis et al., 2017), and message valence (Schellekens et al., 2010). Supporting this argument, research within CLT suggests that psychological distance amplifies

the concreteness effect, whereas psychological proximity attenuates the effect (Choi et al., 2019; Jäger & Weber, 2020; Kim et al., 2019; S. Y. Lee et al., 2021; Macdonnell & White, 2015).

Indeed, the strategic use of language appears to be the main vehicle for persuasion. Surprisingly, there is a dearth of empirical research on this topic in the hospitality sector. Among the limited exceptions, Kim et al. (2016) examined the persuasiveness of information abstractness in hotel advertising. They showed that an abstract promotional message yields more positive attitudinal responses from travelers who plan a vacation in the distant-future or to a distant-destination, whereas a concrete hotel description is more effective for travelers who plan a vacation in the near-future or to a near-destination. Similar findings were reported by Wang and Lehto (2020), who found that high (low) language abstraction positively influences attitudes toward the message and toward the destination advertised when the temporal and spatial distance to the trip increases (decreases). In their study of online review helpfulness, Shin et al. (2016) demonstrated that abstract reviews are perceived as being more helpful than concrete reviews when consumers make a distant-future travel decision. Subsequently, abstract reviews exert a much stronger impact on forming a positive pre-travel expectation and visit intention.

### **Construal Fit and Persuasion**

Message persuasiveness connotes the recipient's subjective assessment regarding the relevance or utility of the message claim to the judgmental task at hand (Chandran & Menon, 2004). As a result, the outcome—persuasion—can be contingent on how individual recipients perceive and evaluate the information conveyed in the message (Cesario & Higgins, 2008). There is much evidence to suggest asymmetry in persuasion, whereby the same message becomes more or less compelling to different recipients of the message (e.g., Lee & Aaker, 2004). With respect to this phenomenon, CLT proposes an impact of psychological distance,

through mental construal, on the asymmetric conditional importance of the message in decision-making. That is, psychological distance (versus proximity) prompts higher levels of mental construal and, in turn, directs the relative attention to high- versus low-level message claims. Subsequently, the effect of high-level (low-level) message on judgment increases (decreases) with psychological distance (Fujita et al., 2008). Examples of high- versus low-level messages in the literature include desirability versus feasibility arguments (Han et al., 2019), gain versus loss frames (White et al., 2011), benefit versus attribute appeals (Hernandez et al., 2015), and textual versus pictorial descriptions (Choi et al., 2017).

While the operationalizations of high- versus low-level messages differs from study to study, there is general agreement on the persuasive effects of construal fit: namely, people are more responsive to a persuasive message that matches their mental construal triggered by psychological distance (Fujita et al., 2008; Lee et al., 2010). This view parallels findings in the social cognitive literature that people rarely allocate their attention to all available information but focus, instead on selective pieces of information. Research demonstrated that people are motivated to defend their position and hence, preferentially attend to information consistent with their attitudes, beliefs, and behaviors and neglect inconsistent information (Frey, 1986; Festinger, 1962; Hart et al., 2009). Similarly, people with high-level (low-level) construal are prone to focus selective on high-level (low-level) information in order to support, rather than challenge, their point of view.

A fit in construal between message and recipient promotes persuasion through a sense of processing fluency (Lee et al., 2010). A message that aligns with one's current mindset or mental representational state stimulates a subjective experience of feeling right in that the message sustains the person's underlying position. The feeling of rightness is, then, transferred to the

judgment of the message argument, making the claim more relevant and meaningful (Higgins, 2000; Avnet & Higgins, 2006). As a result, the person becomes more engaged in message processing, which makes the message argument feel easier to process and hence, more persuasive (Cesario et al., 2004; Lee & Aaker, 2004). Supporting this notion, research shows that construal fit elicits a subjective feeling of ease or fluency, and in turn, increases message acceptance (White et al., 2011; Yao & Chen, 2014). Empirical findings further indicate that fit within the message itself can lead to similar effects (Roose et al., 2019; Wang et al., 2020). For instance, Amit et al. (2009) had participants classify items depicted in either a pictorial or verbal format. The pictorial (verbal) format speeded the classification task when denoting proximal (distal) objects, suggesting that a fit between stimulus object and mode of presentation enhances cognitive processing.

The extant literature on persuasion acknowledges that the metacognitive experience of fluency from fit increases the value of what a person is doing—referred to as “value from fit” (Cesario et al., 2008; Higgins, 2000). This additional sense of self-efficacy translates into greater confidence in and reliance on one’s evaluative reactions to the message target, resulting in more extreme evaluations: namely, evaluative responses become more positive for positive advocacy messages and more negative for negative advocacy messages (Cesario et al., 2004; Avnet et al., 2013). Consistent with this premise, previous studies have documented that the presence of fit intensifies the magnitudes of the reactions and, in turn, enhances the persuasive outcomes of a message. For example, research on regulatory focus demonstrated that promotion-oriented individuals tend to adopt a higher-level construal than prevention-oriented individuals and thus, experienced a better fit when exposed to gain-framed (versus loss-framed) messages, resulting in more favorable attitudes and intentions toward the advertised product (Lee et al., 2010; Zhang et

al., 2018). Reasoning along the same line, research on self-construal showed that individuals with an independent self-view were promotion focused, thereby tending to provide higher ratings of positivity for a promotion appeal relative to a prevention appeal. The reverse occurred for individuals with interdependent self-view as they are prevention focused (Aaker & Lee, 2001; Kareklas et al., 2012). Prior work in cause-related marketing reached a similar conclusion that the brand-cause fit leads to more fluent processing of the marketing claim and elicits more favorable emotional and behavioral responses toward the brand (Gupta & Pirsh, 2006; Kuo & Rice, 2015).

### **Hypotheses**

Building on the notion that the experience of fit from construal enhances message receptivity, this dissertation proposes that the persuasiveness of online reviews hinges on the fit between the consumer's mental construal and the level at which the online review is construed. While there are chronic individual differences in construal level (Vallacher & Wegner, 1989), situational cues can also prompt people to construe the same target at different levels by inducing a psychologically proximal or distant perspective (Fiedler, 2008; Liberman & Trope, 1998). In other words, the level at which a target (e.g., event, object, action) is construed or mentally represented can vary as a function of one's chronic propensity as well as the situation.

A number of studies have consistently shown that construal level, either chronic or situational, yields systematic differences in the types of information individuals use as a basis for decision-making. The activation of low-level construals, as opposed to high-level, reinforces the tendency to overweight feasibility rather than desirability considerations, thereby increasing effort put forth to determine feasible (versus desirable) attributes to pursue (Liberman & Trope, 1998; Todorov et al., 2007). Consequently, individuals in low-level construal preferentially

search for and rely on feasibility information (e.g., price discount) rather than desirability information (e.g., improved quality), whereas the opposite pattern occurs for individuals in a high-level construal (Fujita et al., 2008). Construal level also directs differential attention to concrete versus abstract information. The same information can be construed at different levels of abstraction depending on its richness in details or/and its linguistic style. Specifically, information is construed at a concrete (abstract) level when it contains more (less) contextual details (Zhao et al., 2014) and is written in concrete (abstract) language (Hansen & Wänke, 2010). When both concrete and abstract information is accessible, the former grabs the attention of individuals with low-level construals, whereas the latter draws the attention of individuals with high-level construals (Dogan & Erdogan, 2020; Macdonnell & White, 2015).

According to Festinger (1957), individuals differ significantly in their preference for certain types of information because they are intrinsically inclined to seek logical consistency among their cognitions. That is, individuals intend to maintain cognitive by selectively exposing themselves to information that confirms rather than challenges their viewpoint. Festinger's prediction aligns with the mechanism underlying the construal fit effect: namely, a message that fits one's construal level prompts individuals to feel right about the message itself and their reaction to the message, thereby increasing the attention to and reliance on the message (Cesario et al., 2008). Hence, individuals with different construal levels may allocate their attentional resources strategically to feasibility or desirability information and to concrete or abstract information in order to reach a positive state of consonance and have a sense of feeling right. Prior studies have confirmed this argument by demonstrating the interaction of construal level and message type on persuasion. Specifically, low-level construal individuals were found to devote more attention to messages with a feasibility appeal or a concrete frame, whereas high-

level construal individuals appeared to pay closer attention to messages with a desirability appeal or an abstract frame (Czeizler & Garbarino, 2017; Kim et al., 2016; Wang & Lehto, 2020; Yao & Chen, 2014).

A review of the literature suggests that processing fluency underlies the persuasive effects of fit between construal level and message framing. That is, construal fit versus misfit makes a message conceptually more fluent and hence, increases the persuasive power of the message (Lee & Aaker, 2004; Lee et al., 2010). Prior research on CLT has shown that individuals experience construal fit when exposed to message claims construed at a level that matches their mental construal. More specifically, those in a low-level construal mindset experience fit when the information conveyed in a message is construed at a low- rather than a high-level of construal, whereas those in a high-level construal mindset experience fit when the information is construed at a high rather than a low-level of construal (Gu & Chen, 2021; Han et al., 2016; Wan & Rucker, 2013). Regardless of their construal level, individuals who experience construal fit (versus misfit) demonstrate a higher level of engagement with the information being presented. The enhanced engagement from fit, in turn, produces greater processing fluency and more extreme responses (Higgins & Scholer, 2009; Lee et al., 2010).

Building on the principles of CLT, this dissertation predicts that construal fit enhances the processing fluency of stimuli. According to Avnet et al. (2013), a message becomes more persuasive and compelling when it is processed with greater fluency, increasing the confidence individuals have in their evaluative reactions to the message; consequently, they respond more positively to messages framed positively and more negatively to messages framed negatively. Similarly, the enhanced processing fluency from construal fit may increase the perceived negativity of complaints contained in negative reviews, influencing the intensity of the anger

consumers experience and subsequent behavioral intentions. That is, negative reviews framed at a low construal level produce construal fit for consumers in a low-level construal but a misfit for consumers in a high-level construal, and negative reviews framed at a high construal level does the reverse. As construal fit yields processing fluency, negative reviews may be processed more fluently under fit versus misfit conditions, which in turn elicit higher levels of anger. The heightened anger from fluency, in turn, prompts consumers to exhibit greater intentions to engage in revenge behaviors in order to vent their negative emotional state. Therefore, the following hypotheses (summarized in Figure 1):

- H1. Negative reviews whose framing fits consumers' construal level will produce greater processing fluency.
  - H1a. Consumers with low-level construals will process feasibility-related, concrete negative reviews more fluently.
  - H1b. Consumers with high-level construals will process desirability-related, abstract negative reviews more fluently.
- H2. Negative reviews whose framing fits consumers' construal level will induce more intense negative emotions.
  - H2a. Consumers with low-level construals will experience a higher level of anger after exposure to feasibility-related, concrete negative reviews.
  - H2b. Consumers with high-level construals will experience a higher level of anger after exposure to desirability-related, abstract negative reviews.
- H3. Negative reviews whose framing fits consumers' construal level will increase the likelihood of engaging in revenge behaviors.

H3a. Consumers with low-level construals will exhibit higher intentions to (a) switch to a competing service provider and (b) spread negative word-of-mouth after exposure to feasibility-related, concrete negative reviews.

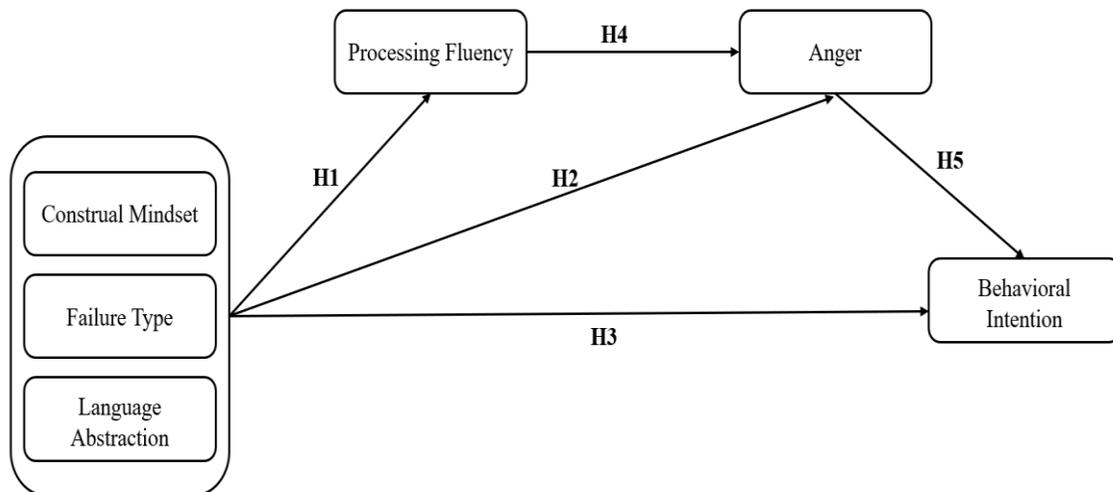
H3b. Consumers with high-level construals will exhibit higher intentions to (a) switch to a competing service provider and (b) spread negative word-of-mouth after exposure to desirability-related, abstract negative reviews.

H4. Processing fluency will mediate the interaction between construal level and review framing on the level of anger consumers experience.

H5. The level of anger will mediate the interaction between the construal level and review framing on behavioral intentions.

Figure 1

*A Summary of Hypotheses*



To test the proposed construal fit effects, construal level will be experimentally induced using temporal distance in Study 1 and spatial distance in Study 2. Specifically, participants will be presented with a decision-making scenario that occurs either in the near or distant future (Study 1) or at near or distant location (Study 2). Psychological distance is a major determinant of construal level, and its four dimensions (i.e., temporal, spatial, social, and hypothetical distances) influence the level of construal in a similar way: namely, increasing (decreasing) distance on any of those dimensions induces higher (lower) levels of construal (Trope & Liberman, 2010). Hence, a low-level construal mindset should be induced when the experimental scenario pertains to the near future or near location, whereas a high-level construal mindset should be elicited when the scenario pertains to the distant future or distant location.

The framing of negative reviews will be manipulated in order to alter the level at which the reviews are construed. Specifically, the framing manipulation in both studies 1 and 2 will be operationalized using two textual features of the reviews. The first is the types of service failures depicted in negative reviews, which comprises two types: feasibility- and desirability-related failures. As mentioned in the previous section, desirability captures the primary reasons for behavioral performance (i.e., the “why” aspects), whereas feasibility reflects the means by which an action is performed (i.e., the “how” aspects) (Liberman & Trope, 1998). When consumers place a food order for delivery, the quality of restaurant service is the behavioral outcome they desire to attain, and the quality of delivery service is the means they use to achieve the outcome. In this regard, complaint scenarios will be created in the form of negative reviews describing failure incidents that occurred either in the service outcome (desirability-related) or in the service delivery (feasibility-related).

The second operationalization of review framing is the level of language abstraction in the complaint scenarios. Studies 1 and 2 build on the LCM to distinguish two levels of abstraction (i.e., abstract and concrete). The LCM provides a four-level classification of linguistic terms along a dimension of concreteness-abstractness, each of which produces systematic differences in the level of abstraction at which behavioral episodes are represented (Semin & Fiedler, 1989). In accordance with the LCM, the abstraction level will be defined with the proportion of abstract and concrete terms used to describe each type of failure incident. Specifically, state verbs and adjectives will be used predominantly in the abstract reviews, while action verbs will appear more frequently in the concrete reviews. The desirability-related complaints will be construed at a higher level when paired with abstract rather than concrete terms, representing a fit for consumers with high-level construals. The feasibility-related complaints, in contrast, will be construed at a lower level when paired with concrete rather than abstract terms, creating a fit for consumers with low-level construals.

## **CHAPTER 3**

### **METHODOLOGY**

This chapter presents the proposed methodology to answer the research questions of interest. An experimental design will be used with random assignment of subjects to different experimental groups. Experimental design allows researchers to not only alter systematically one or more independent variables but also control possible contamination from extraneous variables, thereby offers more compelling support for causal inferences than exploratory or descriptive research designs (Cooper & Schindler, 2013). As this research seeks to establish causal links among the study variables, an experimental design is considered an ideal approach despite its artificiality. Two experiments, each of which concerns different dimensions of psychological distance will be conducted. Study 1 uses temporal distance to examine the hypothesized construal fit effect. Study 2 replicates the results of Study 1 with spatial distance to examine the robustness of construal fit effect. A detailed discussion on each experiment is provided in the subsequent sections, including the design of experiments, operationalization of variables, sampling strategy, stimuli development and procedures, and measurement of the dependent variables.

#### **Study 1**

Study 1 aims to provide empirical evidence to support the hypotheses that the fit in construal level between message and recipient evokes processing fluency and, in turn, intensifies reactions. To examine the proposed fit effect, Study 1 manipulates the construal level of participants through temporal distance and examines its effects on participants' emotional and behavioral responses to online reviews framed at different levels of construal.

## Study Design

Study 1 uses a 2 (temporal distance: near, distant) x 2 (complaint type: feasibility-related, desirability-related) x 2 (language abstraction: concrete, abstract) between-subjects experimental design to test the proposed hypotheses (H1- H5). Table 1 displays the experimental design for Study 1.

Table 1

### *Experimental Design for Study 1*

		Complaint type			
		Feasibility-related		Desirability-related	
Language abstraction		Concrete	Abstract	Concrete	Abstract
Temporal distance	Near	42	40	42	40
	Distant	41	40	41	40

## Variable Operationalization

Temporal distance is defined as the period of time between completion of the food order being placed by consumers and receipt of the order. This is manipulated at two levels, near and distant, by varying the point at which consumers receive the food they ordered. A near condition is operationalized as an order being placed for “as soon as possible” delivery. A distant condition is operationalized as an order scheduled to be delivered “tomorrow.” The time frame of “as soon as possible” in the near condition is intended to activate low-level construals, whereas the time frame of “tomorrow” in the distant condition is aimed to induce high-level construals. The use of

a specific time frame is a common practice to operationalize temporal distance, which in turn promotes different construal levels (Amaral & Jiao, 2021; Pfeiffer et al., 2014).

Failure type refers to the problem source that prompts customer complaints or dissatisfaction. Two types of service failure, desirability- and feasibility-related, are operationalized as the complaints presented in negative reviews. The manipulation of desirability-related failure involves negative reviews describing unpleasant dining experiences (e.g., wrong order) where the blame is attributed to the restaurant. The manipulation of feasibility-related failure contains negative reviews portraying disappointing delivery experiences (e.g., irresponsible driver) where the blame rests on the delivery service provider. The desirability- and feasibility-related failure scenarios were selected based on the pretest results (see Chapter 4).

Language abstraction reflects the degree of abstractness in descriptive language. The linguistic category model (LCM) is utilized to operationalize different levels of language abstraction in the negative reviews. Two versions of negative reviews are created for each failure type by using different word categories that vary in abstractness. The concrete reviews present the events of service failures in an objective manner using mainly action verbs. The abstract reviews were formulated with abstract language where the same events are portrayed in a subjective manner using mainly adjectives and state verbs. These manipulations of language abstraction are consistent with prior research that employed the LCM to examine the effect of language style on persuasion (Hansen & Wänke, 2010; Semin et al., 2005; Wang & Lehto, 2019).

## Subjects

Subjects in this study are composed of adult consumers ( $\geq 18$  years old) who have made at least one purchase using an OFD platform within the last six months. Qualified participants were recruited through a market-based online research firm, Qualtrics. A total of 326 participants were included in this study, with 40 – 42 subjects per condition. The calculation of G\*Power confirmed that the sample size had adequate sensitivity to detect a medium effect size at a 5% significance level and a power of 0.95 (Cohen, 1992). The demographic profile of the sample is presented in Table 2.

Table 2

### *Study 1: Demographic Profile*

Characteristic	Frequency	Characteristic	Frequency
<i>Gender</i>		<i>Education</i>	
Male	78 (23.9%)	High School or Less	86 (26.4%)
Female	248 (76.1%)	2-year degree/some college	128 (39.3%)
<i>Age</i>		Bachelor's degree	78 (23.9%)
18-24	36 (11.0%)	Graduate degree	34 (10.4%)
25-34	106 (32.5%)	<i>Ethnic Group</i>	
35-44	63 (19.3%)	Caucasian	254 (77.9%)
45-54	47 (14.4%)	African American	43 (13.2%)
55-64	42 (12.9%)	Hispanic	15 (4.6%)
65 or older	32 (9.8%)	Asian	8 (2.5%)
<i>Annual Income</i>		Other	6 (1.8%)
Less than 50K	179 (54.9%)	<i>Marital Status</i>	
\$50K - \$74,999	63 (19.3%)	Single	102 (31.3%)
\$75K - \$99,999	37 (11.3%)	Married	132 (40.5%)
\$100K - \$149,999	32 (9.8%)	Divorced/separated/widowed	80 (24.5%)
\$150K or more	15 (4.6%)	Other	12 (3.7%)

## **Stimuli**

The stimuli comprised a simulated restaurant review page that mimics the layout of OFD platforms. The simulated page contained a set of four reviews—one neutral, two negative, and one positive—about a fictitious restaurant. All reviews were adapted from actual customer reviews posted on sites, such as Yelp.com, in order to closely resemble a real-life scenario. The original text and star ratings of the reviews were maintained with some modifications for wording. Specifically, negative reviews were slightly reworded to vary only by the targeted causes of service failure and level of language abstraction.

Apart from the manipulations, the stimuli were the same in order to minimize the possibility of confounds. First, the order of presentation of the four reviews were kept constant to avoid sequential bias. The neutral review always appeared first in the sequence, followed by two negative reviews with the positive review always presented last. The posting date and word count were also controlled in that the timeliness and length of online reviews serve as a cue to infer the quality of information contained in a review, in turn, influencing intention to adopt the review (Fileri, 2015). Second, a generic username was used for the reviewer without disclosing information about the reviewer's identity (e.g., age, location) and reputation (e.g., helpful rating). This was done to isolate the effects of the study variables from those caused by reviewer attributes. Finally, the general information about the restaurant (e.g., name, price, cuisine) was not provided; thus, the reviews were the only source of information from which participants can form their attitudinal and behavioral responses. By doing so, any differences observed in the experiment can be attributed to the intended manipulations rather than to participants' pre-existing disposition.

## Procedure

Upon consenting to participate in the study, participants were asked to answer two screening questions regarding their recent OFD experience and age. Participants who are under 18 years old or/and have no experience of using OFD services in the last six months were redirected to the end of the survey without further questions being asked. Only those who passed the two screener items were randomly assigned to one of the eight experimental conditions through the randomizer function in Qualtrics.

Participants were first instructed to imagine themselves in a hypothetical online purchasing scenario where they are looking for a place to order their dinner to be delivered either “as soon as possible” or “tomorrow”. Following the scenario, participants completed the behavioral identification form (BIF) to assess their level of construal triggered off by the different temporal distances. Participants were then provided with the following instruction: “After a few minutes of searching, you come across a restaurant that serves your favorite cuisine at a reasonable price. Since this is your first time ordering from this restaurant, you decide to do a bit more research before making your final decision. You tap on the restaurant to read reviews from previous customers”.

The subsequent screen was a simulated restaurant review page displaying four reviews: one neutral, two negative, and one positive reviews. All aspects of the simulated page remain the same across conditions, except the manipulated variables of failure type and language abstraction in negative reviews. A sample of the review stimuli is shown in Figure 2 (see Appendix C for the entire set of stimuli). The two negative reviews presented in the simulated page described either feasibility- or desirability-related service failures accompanied with concrete or concrete language. After reading the reviews, participants answered the questions regarding the target of

complaint made by the reviewers and the abstractness of language used in the reviews. Dependent and control measures followed, and demographic questions concluded the survey.

Figure 2

*An Example of Stimulus: Feasibility-related, Concrete Review Condition*

 Kala ★★★★☆	For the amount of money I spent, I'd say the food was okay – not bad but not great. The delivery was okay, too – average, not speedy.
 Adley ★★★★☆	Ordered my food at 12:35. Estimated delivery time was 1:10 pm and then, it jumped to 13:40. I got my food at 14:50, more than 2 hours after ordering it.
 Noah ★★★★☆	The delivery man couldn't find my apartment, so he dropped the food off at a different location, marked it delivered, and never responded to customer service calls to him.
 Wyatt ★★★★★	The driver was very courteous, and our delivery was early. The food was hot and delicious. I will <u>definitely</u> order again and try other things on the menu.

## Measures

A survey instrument was developed based on validated measures in the literature. Conceptual fluency was operationalized with three items referring to ease of processing, comprehensibility, and sense of feeling right (Cesario & Higgins, 2008; Lee & Aaker, 2004). Participants indicated their subjective experience of fluency on a seven-point bipolar scale: 1 = difficult to process, difficult to understand, felt wrong; 7 = easy to process, easy to understand,

felt right. Anger as an emotional reaction elicited by online reviews was measured using four items (Dillard & Shen, 2005). Participants rated the extent to which they felt anger, annoyance, aggravation, and irritation on a scale of 1 (not at all) to 7 (a great deal) while reading the reviews. Two measures of behavioral intention were included in this study as the outcome variables of anger. Switching intention as a proxy indicator of direct revenge behavior was measured by three items capturing the likelihood of switching to a competitor (Kim et al., 2006). Negative WOM intention as a proxy for indirect revenge behavior was reflected in three items assessing the likelihood to transmit negative information about the service provider (Bougie et al., 2003). Responses to these measures was on a seven-point (disagree-agree) scale. The detailed measurement items are displayed in Table 3.

Table 3

*Measurement Items for Outcome Variables*

Variables	Measurements
Conceptual fluency	How easy was it for you to process the reviews? How easy was it for you to understand the reviews? How did you feel when reading the reviews?
Anger	To what extent, if at all, did the reviews make you feel... ...angry ...annoyed ...aggravated ...irritated
Switching intention	I am considering switching to another service provider with better customer reviews The likelihood of me switching to another service provider is high I am determined to switch to another service provider with better customer reviews
Negative WOM intention	I will say negative things about the service provider to other people I will recommend this service provider to someone who seeks my advice I will discourage friends and acquaintances to do business with this service provider

The survey contained three manipulation checks to determine the effectiveness of experimental manipulations. First, Vallacher and Wegner's (1989) BIF was adopted to assess the efficacy of temporal distance manipulation. Although the BIF was originally designed as a measure of dispositional construal level (Vallacher & Wegner, 1989), subsequent research has established its validity as a measure of situational construal level (Agrawal & Wan, 2009; Baskin et al., 2014; Lalwani & Wang, 2019). As listed in Table 4, the BIF contains a set of 25 actions (e.g., taking a test) along with two alternative identifications: one corresponding to the low-level, how identification (e.g., answering questions) and the other corresponding to the high-level, why identification (e.g., showing one's knowledge). Participants were forced to choose between two alternative identifications for each target action, where low- and high-level identifications were assigned a value of 0 and 1, respectively. The scores on all 25 items were summed to compute an overall BIF score, with higher scores reflecting an activation of distant-future mindset or higher-level construals. Second, the manipulation of failure type was measured with two items from Tatavarthy et al. (2019) on a seven-point (disagree-agree) scale: "Any complaints made by the reviewers are mainly about a process failure" and "Any complaints made by the reviewers are mainly about an outcome failure." Last, language abstraction manipulation was checked using a single item adopted from Wang and Lehto (2020), asking participants to rate the degree to which they perceived the reviews to be concrete (1) or abstract (7).

Table 4

*The BIF*

<ol style="list-style-type: none"> <li>1. Making a list             <ol style="list-style-type: none"> <li>a. Getting organized</li> <li>b. Writing things down</li> </ol> </li> <li>2. Reading             <ol style="list-style-type: none"> <li>a. Following lines of print</li> <li>b. Gaining knowledge</li> </ol> </li> <li>3. Joining the Army             <ol style="list-style-type: none"> <li>a. Helping the Nation's defense</li> <li>b. Signing up</li> </ol> </li> <li>4. Washing clothes             <ol style="list-style-type: none"> <li>a. Removing odors from clothes</li> <li>b. Putting clothes into the machine</li> </ol> </li> <li>5. Picking an apple             <ol style="list-style-type: none"> <li>a. Getting something to eat</li> <li>b. Pulling an apple off a branch</li> </ol> </li> <li>6. Chopping down a tree             <ol style="list-style-type: none"> <li>a. Wielding an axe</li> <li>b. Getting firewood</li> </ol> </li> <li>7. Measuring a room for carpeting             <ol style="list-style-type: none"> <li>a. Getting ready to remodel</li> <li>b. Using a yardstick</li> </ol> </li> <li>8. Cleaning the house             <ol style="list-style-type: none"> <li>a. Showing one's cleanliness</li> <li>b. Vacuuming the floor</li> </ol> </li> <li>9. Paining a room             <ol style="list-style-type: none"> <li>a. Applying brush strokes</li> <li>b. Making the room look fresh</li> </ol> </li> <li>10. Paying the rent             <ol style="list-style-type: none"> <li>a. Maintaining a place to live</li> <li>b. Writing a check</li> </ol> </li> <li>11. Caring for houseplants             <ol style="list-style-type: none"> <li>a. Watering plants</li> <li>b. Making the room look nice</li> </ol> </li> <li>12. Locking a door             <ol style="list-style-type: none"> <li>a. Putting a key in the lock</li> <li>b. Securing the house</li> </ol> </li> <li>13. Voting             <ol style="list-style-type: none"> <li>a. Influencing the election</li> <li>b. Marking a ballot</li> </ol> </li> </ol>	<ol style="list-style-type: none"> <li>14. Climbing a tree             <ol style="list-style-type: none"> <li>a. Getting a good view</li> <li>b. Holding on to branches</li> </ol> </li> <li>15. Filling out a personality test             <ol style="list-style-type: none"> <li>a. Answering questions</li> <li>b. Revealing what you're like</li> </ol> </li> <li>16. Toothbrushing             <ol style="list-style-type: none"> <li>a. Preventing tooth decay</li> <li>b. Moving a brush around in one's mouth</li> </ol> </li> <li>17. Taking a test             <ol style="list-style-type: none"> <li>a. Answering questions</li> <li>b. Showing one's knowledge</li> </ol> </li> <li>18. Greeting someone             <ol style="list-style-type: none"> <li>a. Saying hello</li> <li>b. Showing friendliness</li> </ol> </li> <li>19. Resisting temptation             <ol style="list-style-type: none"> <li>a. Saying "no"</li> <li>b. Showing moral courage</li> </ol> </li> <li>20. Eating             <ol style="list-style-type: none"> <li>a. Getting nutrition</li> <li>b. Chewing and swallowing</li> </ol> </li> <li>21. Growing a garden             <ol style="list-style-type: none"> <li>a. Planting seeds</li> <li>b. Getting fresh vegetables</li> </ol> </li> <li>22. Traveling by car             <ol style="list-style-type: none"> <li>a. Following a map</li> <li>b. Seeing countryside</li> </ol> </li> <li>23. Having a cavity filled             <ol style="list-style-type: none"> <li>a. Protecting your teeth</li> <li>b. Going to the dentist</li> </ol> </li> <li>24. Talking to a child             <ol style="list-style-type: none"> <li>a. Teaching a child something</li> <li>b. Using simple words</li> </ol> </li> <li>25. Pushing a doorbell             <ol style="list-style-type: none"> <li>a. Moving a finger</li> <li>b. Seeing if someone's home</li> </ol> </li> </ol>
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Two control measures were included in the survey in order to account for unobserved individual-specific effects. The first control variable concerns individual differences in general attitudes towards online reviews. It is deemed necessary to control such differences in that the general attitudes of consumers towards online reviews appears to have an impact on their reliance on the reviews for judgment formation (Park et al., 2007; Qiu et al., 2012; H. Zhang et al., 2021). Hence, a four-item scale was adapted from Bambauer-Sachse and Mangold (2011) to gauge participants' attitudes toward online reviews in general. The four items are: "I often read other consumers' online reviews to know what products/brands make good impressions on others", "To make sure I buy the right product/brand, I often read other consumers' online reviews", "I often consult other consumers' online reviews to help choose the right product/brand", and "I frequently gather information from online reviews before I buy a certain product/brand". The second control variable is prior OFD experience. The service literature acknowledges the role of prior experience in the formation of customer expectations, which sets a reference point for evaluative decisions (Chuang et al., 2012; Liljander & Mattsson, 2002; Tran et al., 2021). To eliminate any extraneous effect of prior experience, participants were asked to evaluate their prior experience with OFD services using a five-item, seven-point scale from Otterbring and Lu (2018). The five items include: dissatisfied-very satisfied, unfavorable-favorable, unpleasant-pleasant, disgusted-contented, and terrible-delighted.

## **Study 2**

The primary goal of Study 2 is to demonstrate the robustness of the effect of construal fit on persuasion, thereby enhance the generalizability of the study findings. To address this goal, Study 2 seeks to replicate Study 1 with another dimension of psychological distance: spatial distance. Different from Study 1, where temporal distance operationalized the level of mental

construal, Study 2 induced different levels of construal by varying the spatial distance between the participant and the restaurant.

### Study Design

Study 2 uses a 2 (spatial distance: near, distant) x 2 (failure type: feasibility-related, desirability-related) x 2 (language abstraction: concrete, abstract) between-subjects experimental design to test the same hypotheses (H1-H5) examined in Study 1. Table 5 summarizes the experimental design for Study 2.

Table 5

#### *Experimental Design for Study 2*

		Service failure type			
		Feasibility		Desirability	
Language abstraction		Concrete	Abstract	Concrete	Abstract
Spatial distance	Near	41	42	40	40
	Distant	41	40	41	41

### Variable Operationalization

Spatial distance is defined as how close or far in physical space a restaurant is from consumers. Following a similar approach used in previous studies (Fujita et al., 2006b; Huang et al., 2016), the manipulation of spatial distance is operationalized at two levels—near and distant—by the location of the restaurant for which participants make hypothetical purchasing decisions. The target restaurant is described as being located either “2 miles” (spatially near) or

“6 miles” (spatially distant) away from the participants’ current location. As the 2-mile distance is relatively closer to the participant than the 6-mile distance, the former is expected to elicit low-level construals and the latter to trigger high-level construals.

Failure type and language abstraction are operationalized in the same manner as in Study 1. Service failure is a negative incident that elicits customer dissatisfaction, while service failure type indicates the cause of such incident. Service failure type, as a form of online complaint was manipulated to include two types: desirability- and feasibility-related failures. In the desirability-related failure condition, online complaints are made against the restaurant for dissatisfying outcome quality (e.g., wrong order). In the feasibility-related failure condition, online complaints are made against the OFD service for process quality dissatisfaction (e.g., irresponsible driver). The scenarios for each failure type condition were identical to those in Study 1.

As in Study 1, language abstraction is defined as the relative abstractness of the language and operationalized at two levels at two levels—concrete and abstract—within each service failure scenario using the LCM categories. In the concrete condition, customer complaints of outcome and process quality are written in an objective tone using primarily action verbs. In the abstract condition, customer complaints of outcome and process quality are presented in a subjective tone through dominant use of state verbs and adjectives.

## **Subjects**

Participants were recruited from the same subject pool used in Study 1. An online survey was distributed through Qualtrics targeting individuals over 18 years old and had made at least one transaction from OFD platforms in the past six months. The sample included a total of 327 subjects (40 - 42 per condition), providing a statistical power of 0.95 or greater for a medium effect size of 0.25 (Cohen, 1992). The demographic profile of the sample is presented in Table 6.

Table 6

*Study 2: Demographic Profile*

Characteristic	Frequency	Characteristic	Frequency
<i>Gender</i>		<i>Education</i>	
Male	77 (23.5%)	High School or Less	86 (26.3%)
Female	250 (76.5%)	2-year degree/some college	129 (39.4%)
		Bachelor's degree	78 (23.9%)
		Graduate degree	34 (10.4%)
<i>Age</i>		<i>Ethnic Group</i>	
18-24	36 (11.0%)	Caucasian	255 (78.0%)
25-34	107 (32.7%)	African American	43 (13.1%)
35-44	63 (19.3%)	Hispanic	15 (4.6%)
45-54	47 (14.4%)	Asian	8 (2.4%)
55-64	32 (9.8%)	Other	6 (1.8%)
65 or older	42 (12.8%)		
<i>Annual Income</i>		<i>Marital Status</i>	
Less than 50K	180 (55.0%)	Single	102 (31.2%)
\$50K - \$74,999	63 (19.3%)	Married	133 (40.7%)
\$75K - \$99,999	37 (11.3%)	Divorced/separated/widowed	80 (24.5%)
\$100K - \$149,999	32 (9.8%)	Other	12 (3.7%)
\$150K or more	15 (4.6%)		

**Stimuli and Procedure**

To facilitate comparability between studies, Study 2 employed the same stimuli and procedure as for Study 1, with one exception. In Study 2, participants were presented with a hypothetical online purchasing scenario where they consider ordering from a restaurant that is located either nearby or far away from their current location; instead of making a restaurant decision for either a near- or distant-future consumption as in Study 1.

At the beginning of the survey, participants were informed about the purpose of the study and asked for their informed consent to participate in the study. Only those who opt in to participate in the study were asked to complete the following screening questions: “what is your

age?” and “have you used any OFD service for food delivery at least once in the last six months?”. Only participants aged over 18 years old with experience of OFD service were identified as eligible for the study and thus, randomly assigned to one of the eight experimental conditions.

Once participants were assigned to an experimental condition, they read a scenario where they are searching on OFD application for food delivery. The scenario then described that the participants found a restaurant that can satisfy their cravings with a reasonable price. Participants were further informed that the restaurant is located either “2 miles” or “6 miles” away from their home depending on the condition they are assigned. After reading the scenario, the 25-item BIF was measured as a manipulation check for spatial construal.

The next screen displayed a simulated review page that contained four online reviews of the hypothetical restaurant, including one neutral, two negative, and one positive reviews. The stimuli were exactly the same across conditions, except for the two negative reviews with experimental manipulations. The textual content of two negative reviews was about either feasibility- or desirability-related service failures described using either concrete or abstract language (see Figure 2 for a sample stimulus). After reviewing the simulated page, participants completed the manipulation checks for service failure type and language abstraction level of the online reviews. They then responded to measures of outcome and control variables as well as demographic information.

## **Measures**

The same measures from Study 1 assess processing fluency as well as emotional and behavioral responses of participants in Study 2. Conceptual fluency was measured by a three-item, seven-point semantic differential scale anchored as follows: 1 = difficult to process,

difficult to understand, felt wrong; 7 = easy to process, easy to understand, felt right (Cesario & Higgins, 2008; Lee & Aaker, 2004). Anger is conceptualized as negative emotional responses to service failure incidents depicted in online reviews and measured with four items using a seven-point rating scale from 1 = not at all to 7 = a great deal (Dillard & Shen, 2005). Two behavioral outcome variables: switching intention and negative WOM intention serves as a proxy for indirect revenge behavior. A three-item seven-point Likert scale was adapted from Kim et al. (2006) and Bougie et al. (2003) to assess switching intention and negative WOM intention, respectively. The full measurement items are exhibited in Table 3.

The effectiveness of the experimental manipulations was assessed using the same items as in Study 1. First, the BIF was utilized to ascertain whether spatial distance manipulation worked as intended. Adopted from Vallacher and Wegner (1989), the BIF presented a series of forced-choice questions asking participants to choose one of two alternative descriptions of the focal behavior. Of the two alternatives provided, one description corresponds to a low-level representation and the other corresponds to a high-level representation (see Table 4 for a full list of items). Responses for each of the 25 questions were subjected to binary coding (0 = low-level representation, 1 = high-level representation) and summed to yield a BIF score. Higher BIF scores indicate having more abstract, higher-level construals. Second, a two-item scale was adopted from Tatavarthy et al. (2019) to assess the manipulation of failure type. Participants indicated on a seven-point Likert-type scale the extent to which they agree or disagree that the failure incidents depicted in the reviews are process/outcome failures. Last, a single item was employed from Wang and Lehto (2020) as a check for the language abstraction manipulation. Participants rated the degree to which they perceived the textual content of the reviews to be concrete (1) or abstract (7).

Two control variables: general attitudes towards online reviews and prior OFD experience, were measured to ensure that the study results are free of possible confounding effects. All measurement items for control variables were identical to those in Study 1 and evaluated on a seven-point (disagree-agree) scale. The general attitudes of participants towards online reviews were assessed through four items from Bambauer-Sachse and Mangold (2011) measuring the degree to which participants hold positive beliefs about online reviews. Adapted from Otterbring and Lu (2018), prior OFD experience was operationalized with five items measuring participants' level of satisfaction with prior use of OFD services.

## **CHAPTER 4**

### **RESULTS**

This chapter reviews the results as outlined in Chapter 3. Two experiments were conducted to examine the persuasive impact of fit between construal mindset and review framing. Specifically, Study 1 manipulated construal mindset indirectly through temporal distance and examined its effects on consumers' anger and revenge intentions. Study 2 examined the robustness of the fit effect by replicating the findings of Study 1 using spatial distance as a manipulation of construal mindset. Both Study 1 and 2 further tested processing fluency as a mediator between construal fit and consumer reactions to uncover the mechanism underlying the proposed fit effect. The results of Study 1 and 2 are discussed in the following subsections, along with an explanation of the hypotheses tested.

#### **Pretest**

Two pretests were conducted prior to Study 1 and Study 2 to ensure the appropriateness and realism of the experimental stimuli. The first was to determine the manipulation of the independent variables: complaint type and language abstraction. The second pretest was undertaken to identify realistic online reviews with different valences: positive, neutral, and negative.

#### **Pretest Sample**

The two pretests were carried out using separate participant samples, recruited through a market-based online research firm, Qualtrics. As with the main experiments, the required eligibility criteria for participation included (a) adult over the age of 18 and (b) had made at least one purchase through an OFD platform within the last six months. An online survey link was distributed to qualified Qualtrics panel members, with a total of 57 and 60 participants

completing the survey for pretests 1 and 2, respectively. The demographic profiles of the two pretest samples are shown in Table 7.

Table 7

*Pretests: Demographic Profile*

Characteristic	Frequency (%)	
	Pretest 1 (n = 54)	Pretest 2 (n = 60)
Gender		
Male	17 (31.5%)	23 (38.3%)
Female	37 (68.5%)	37 (61.7%)
Age		
18-24	17 (31.5%)	17 (28.3%)
25-34	11 (20.4%)	13 (21.7%)
35-44	13 (24.1%)	14 (23.3%)
45-54	5 (9.3%)	9 (15.0%)
55-64	2 (3.7%)	5 (8.3%)
65 or older	6 (11.1%)	2 (3.3%)
Annual Income		
Less than 50K	25 (46.2%)	29 (48.4%)
\$50K - \$74,999	13 (24.1%)	8 (13.3%)
\$75K - \$99,999	6 (11.1%)	8 (13.3%)
\$100K - \$149,999	3 (5.6%)	6 (10.0%)
\$150K or more	7 (13.0%)	9 (15.0%)
Education		
High School or Less	12 (22.2%)	8 (13.3%)
2-year degree or some college	24 (44.4%)	28 (46.7%)
Bachelor's degree	11 (20.4%)	14 (23.3%)
Graduate degree	7 (13.0%)	10 (16.7%)
Ethnic Group		
Caucasian	35 (64.8%)	31 (51.7%)
African American	9 (16.7%)	15 (25.0%)
Hispanic	5 (9.3%)	7 (11.7%)
Asian	3 (5.6%)	5 (8.3%)
Other	2 (3.7%)	2 (3.3%)
Marital Status		
Single	27 (50.0%)	26 (43.3%)
Married	16 (29.6%)	28 (46.7%)
Divorced, separated, widowed	10 (18.5%)	5 (8.3%)
Other	1 (1.9%)	1 (1.7%)

## **Pretest Results**

### ***Pretest 1***

The first pretest was conducted with 57 participants to identify the most suitable negative review content as stimuli to be used in the main experiments. Two types of failure (feasibility- and desirability-related) were paired with either concrete or abstract language and five negative reviews were created for each pair. In total, 20 negative reviews were pretested including five feasibility-related concrete reviews, five feasibility-related abstract reviews, five desirability-related concrete reviews and five desirability-related abstract reviews. Participants were exposed to 10 of the 20 negative reviews, one at a time, in random order. After reviewing each review, participants were asked to what extent they thought that the review was about a process failure (i.e., feasibility-related) and an outcome failure (i.e., desirability-related) on a seven-point disagree-agree Likert scale (Tatavarthy et al., 2019). The level of language abstraction was assessed by asking participants to rate linguistic concreteness of the review content on a seven-point scale (1 = concrete, 7 = abstract; Wang & Lehto, 2020). Finally, service failure severity was considered in the stimuli selection due to its possible effect on participants' impression of the review (Sreejesh & Anusree, 2016). Participants were asked to indicate how they felt about the failure incident projected in the review using a three-item, seven-point semantic differential scale: mild/severe, minor/major, and insignificant/significant (Hess et al., 2003).

Table 8

*Pretest 1: Means and Standard Deviations*

Negative Review	Complaint Type		Language Abstraction	Failure Severity
	Feasibility	Desirability		
NE1	5.43 (1.31)	2.70 (1.12)	2.77 (0.82)	4.58 (1.03)
NE2	5.67 (1.30)	3.57 (1.46)	3.33 (1.49)	5.03 (1.50)
NE3	5.37 (1.94)	3.43 (1.87)	3.40 (1.67)	5.29 (1.22)
NE4	5.57 (1.38)	3.03 (1.48)	2.90 (1.40)	4.67 (1.00)
NE5	4.90 (1.75)	3.63 (1.33)	3.23 (1.59)	4.76 (1.71)
NE6	5.00 (2.05)	4.03 (1.97)	4.67 (2.04)	3.69 (1.74)
NE7	5.63 (1.19)	3.20 (1.54)	4.83 (1.68)	4.62 (1.13)
NE8	5.53 (1.25)	2.73 (1.51)	4.87 (1.78)	4.54 (1.44)
NE9	5.43 (1.31)	4.80 (1.79)	3.63 (2.03)	4.44 (1.61)
NE10	5.10 (1.52)	4.73 (1.62)	3.90 (1.92)	4.84 (1.30)
NE11	4.07 (1.53)	5.40 (1.67)	3.03 (1.52)	4.59 (1.38)
NE12	4.60 (1.71)	5.03 (1.63)	3.10 (2.12)	4.83 (1.71)
NE13	3.97 (1.65)	5.20 (1.67)	3.07 (2.32)	4.73 (1.83)
NE14	4.73 (1.95)	5.37 (1.33)	4.30 (1.51)	4.78 (1.46)
NE15	4.60 (1.75)	5.27 (1.34)	3.17 (1.64)	4.49 (1.35)
NE16	4.47 (1.89)	5.07 (1.51)	3.20 (1.98)	4.20 (1.58)
NE17	3.60 (1.87)	5.77 (1.57)	4.80 (1.45)	4.48 (1.41)
NE18	4.10 (2.02)	4.53 (1.76)	4.03 (2.01)	4.27 (1.27)
NE19	4.30 (1.97)	5.43 (1.50)	5.03 (1.35)	4.68 (1.24)
NE20	4.60 (2.01)	5.00 (1.66)	4.83 (1.42)	4.77 (1.31)

*Note.* n = 57; Cronbach's  $\alpha$  for the three items on failure severity was 0.845; standard deviations are in parentheses.

The means and standard deviations of the pretest scores for each review are presented in Table 8. Regarding complaint type, NE2 (mean = 5.67) was perceived to best represent a feasibility-related complaint, followed by NE7 (mean = 5.63), NE4 (mean = 5.57), and NE8 (mean = 5.53). The most representative scenario of desirability-related complaint was NE17 (mean = 5.77), followed by NE19 (mean = 5.43), NE11 (5.40), and NE14 (mean = 5.37). As for language abstraction, NE1 (mean = 2.77) received the lowest mean score (i.e., concrete), followed by NE4 (mean = 2.90), NE11 (mean = 3.03), and NE13 (mean = 3.07). The highest mean score (i.e., abstract) was obtained for NE19 (mean = 5.03), followed by NE8 (mean =

4.87), NE7 and NE20 (mean = 4.83), and NE17 (mean = 4.80). Finally, the mean scores on failure severity were reviewed to rule out potential confounds from using failure incidents varying in intensity.

Table 9

*F-value Comparison between Negative Reviews*

			Desirability-related, concrete		Desirability-related, abstract	
			NE11	NE15	NE17	NE19
Feasibility-related, concrete	NE1	Feasibility	13.86***	4.36*	19.42***	6.91*
		Desirability	41.82***	65.01***	48.08***	63.93***
		Abstraction	0.72	1.43	44.87***	61.80***
		Severity	0.98	0.16	0.24	0.01
	NE4	Feasibility	15.89***	5.62*	21.49***	8.33**
		Desirability	24.87***	37.79***	29.22***	39.05***
		Abstraction	0.13	0.46	26.73***	36.11***
		Severity	1.49	0.35	0.49	0.06
Feasibility-related, abstract	NE7	Feasibility	19.62***	7.14*	15.80***	5.56*
		Desirability	20.06***	30.79***	23.90***	32.34***
		Abstraction	18.90***	15.07***	0.01	0.26
		Severity	0.03	0.18	0.15	0.66
	NE8	Feasibility	16.51***	5.63*	22.17***	8.39**
		Desirability	32.22***	47.73***	37.10***	48.33***
		Abstraction	18.46***	14.82***	0.03	0.17
		Severity	0.54	0.02	0.05	0.04

The mean comparisons of all three measures resulted in two negative reviews per condition. The selected negative reviews were (a) NE1 and NE4 for the feasibility-related, concrete condition, (b) NE7 and NE8 for the feasibility-related, abstraction condition, (c) NE11 and NE15 for the desirability-related, concrete condition, and (d) NE17 and NE19 for the

desirability-related, abstract condition. A series of ANOVAs was further carried out to establish the validity of the review content selected for each condition. As shown in Table 9, the selected eight reviews differed significantly in complaint type and language abstraction, with no significant difference in failure severity.

### ***Pretest 2***

The second pretest was used to closely reflect real-life situations in which multiple reviews mixed in valence were presented simultaneously to influence consumers' online purchase decision-making process. Hence, the objective of the second pretest was to find review content that would vary in evaluative tone. For this purpose, five positive and five neutral reviews were pretested for valence and realism, along with the 20 negative reviews used in the first pretest. A separate sample of 60 participants were randomly shown 15 of the 30 review stimuli. Following each review, the overall tone of the review was measured with a single item asking participants whether they perceived the review as being more positive than negative (1 = strongly disagree, 7 = strongly agree; Sparks & Browning, 2011). The assessment of scenario realism was also measured on a single-item scale from 1 = not at all realistic to 7 = very realistic (Zhang et al., 2016).

Table 10

*Pretest 2: Means and Standard Deviations*

Online Review		Valence	Realism
Positive	PO1	5.85 (1.23)	6.00 (1.11)
	PO2	6.74 (0.71)	5.87 (0.92)
	PO3	6.11 (1.16)	5.96 (0.98)
	PO4	5.85 (1.13)	5.70 (1.17)
	PO5	5.70 (1.44)	5.89 (1.09)
Neutral	NEU1	3.19 (1.12)	5.44 (1.09)
	NEU2	4.37 (1.26)	5.37 (1.12)
	NEU3	3.70 (1.14)	5.89 (1.05)
	NEU4	4.04 (0.81)	5.74 (1.02)
	NEU5	3.78 (0.80)	5.70 (0.95)
Negative	NE1	1.96 (1.06)	5.60 (0.97)
	NE2	2.67 (1.14)	5.56 (1.09)
	NE3	2.41 (1.34)	5.48 (1.01)
	NE4	2.04 (0.81)	6.11 (0.80)
	NE5	2.48 (1.12)	5.44 (1.05)
	NE6	2.70 (1.41)	5.52 (1.19)
	NE7	1.37 (0.74)	5.56 (1.01)
	NE8	1.33 (0.56)	5.63 (0.84)
	NE9	2.04 (1.09)	5.81 (0.79)
	NE10	2.33 (1.27)	5.48 (1.37)
	NE11	1.78 (0.75)	6.04 (0.85)
	NE12	2.33 (1.18)	5.59 (1.18)
	NE13	2.63 (1.33)	5.48 (1.45)
	NE14	2.44 (1.34)	5.78 (0.85)
	NE15	1.96 (1.13)	5.96 (0.94)
NE16	2.19 (1.11)	5.74 (0.90)	
NE17	1.67 (1.30)	5.93 (0.87)	
NE18	2.22 (1.34)	5.52 (0.98)	
NE19	2.00 (1.01)	5.85 (0.86)	
NE20	2.26 (1.53)	5.56 (1.16)	

*Note.* n = 60; standard deviations are in parentheses.

The means and standard deviations of valence and realism measures are shown in Table 10. PO2 scored the highest on the valence measure, and NEU3 had a mean value closest to the scale midpoint of 3.5; hence, they were selected to be included in the stimuli as a positive and a neutral review, respectively. The eight negative reviews generated from the first pretest were

found to have a clear negative tone, with mean scores ranging from 1.67 to 2.04. All the selected positive, neutral, and negative reviews showed mean scores above 5.50, confirming that the scenario depicted in each review was realistic. These reviews were subjected to a series of ANOVAs to ensure that they were effective and suitable to be used in the main experiments. As displayed in Table 11, positive and neutral reviews significantly differed from negative reviews on valence, but no significant statistical differences were found in scenario realism. To sum up, four sets of online review stimuli were finalized based on the results of the two pretests. A full text of the pretested review content is provided in Appendix D.

Table 11

*F-value Comparison between Positive, Neutral, and Negative Reviews*

		Positive: PO2		Neutral: NEU3	
		Valence	Realism	Valence	Realism
Negative	NE1	380.20***	1.17	43.19***	1.16
	NE4	515.18***	0.69	48.78***	0.77
	NE7	736.73***	2.05	90.34***	1.41
	NE8	968.91***	1.61	108.81***	1.01
	NE11	620.82***	0.24	64.41***	0.32
	NE15	347.24***	0.03	40.85***	0.08
	NE17	316.06***	0.89	46.42***	0.02
	NE19	349.17***	1.59	39.92***	0.02

Note. \*\*\*p < 0.001.

### Study 1

Study 1 aimed at exploring the effects of construal fit on persuasion in online reviews. To do so, Study 1 operationalized construal fit by exposing participants to online reviews framed in congruence with their construal mindset induced by temporal distance and examined its

effects on their evaluation of both the review content and the restaurant being reviewed. The data was analyzed using SPSS version 21. A series of 2 x 2 x 2 analysis of covariance (ANCOVA) tests was conducted on each dependent measure to determine the difference among experimental groups, controlling for prior OFD experience and attitude toward online reviews. By taking into account pre-existing individual differences, Study 1 sought to reduce the within-group error variance and thus, produce more accurate estimates of treatment effects (Wickens & Keppel, 2004). Any significant interaction effects were followed up with univariate post-hoc simple effects tests to determine the sources of the interactions. As per the recommendation of Hayes (2018), the significance of the mediating effects of processing fluency and anger was tested using a bootstrapping procedure. In the following sections, the results are organized according to the hypotheses discussed in Chapter 2.

### **Manipulation Checks**

To assess the temporal distance manipulation, participants' responses on the BIF were coded as 0 if the concrete alternative descriptions were chosen for the target actions, and as 1 if the abstract descriptions were chosen. Scores of all 25 items were then summed for each participant to create a BIF score ranging from 0 to 25, with higher scores reflecting a greater tendency toward high- versus low-level construal mindsets. An independent sample t-test revealed a significant difference between temporally near and distant condition ( $t = 8.96, p < 0.001$ ). Participants in the temporally distant condition scored higher on the BIF (mean = 17.33) than those in the temporally near condition (mean = 14.33), confirming the efficacy of the temporal distance manipulation.

The failure type manipulation was checked via independent samples t-test on complaint target and failure severity. The complaint target was assessed by having participants indicate the

extent to which they agreed that the reviewers complained about problems in service delivery or outcome. The failure severity was rated by measuring participants' perceived intensity of the service failure described in the review. A significant difference existed between feasibility- and desirability-related conditions in complaint target ( $t = 8.81, p < 0.001$ ), but not in severity perception ( $\text{mean}_{\text{feasibility}} = 4.49, \text{mean}_{\text{desirability}} = 4.59; t = 0.64, p = 0.524$ ). Participants in the feasibility-related failure condition agreed that the reviewers' complaints were mainly about process failures ( $\text{mean} = 5.35$ ) more than their counterparts in the desirability-related condition ( $\text{mean} = 4.10$ ). The language abstraction manipulation was assessed by asking participants how concrete or abstract the set of online reviews was. An independent samples t-test showed that participants in the concrete condition perceived the review content as being more concrete ( $\text{mean} = 2.82$ ) than those in the abstract condition ( $\text{mean} = 4.44; t = 9.07, p < 0.001$ ). A 2 (failure type) x 2 (language abstraction) ANOVA was additionally performed for scenario realism. The results yielded no significant main and interaction effect ( $p > 0.05$ ), confirming that the review content was perceived as equally realistic across the conditions (overall mean = 5.67). Taken together, the review framing manipulations were effective.

## **Hypotheses Testing**

### ***Processing Fluency***

Three-way ANCOVAs were conducted to determine the effect of independent variables on the processing fluency index (Cronbach's alpha = 0.75), controlling for prior OFD experience and attitudes toward online reviews. The results yielded a main effect of language abstraction ( $F_{(1,316)} = 4.21, p < 0.001$ ), suggesting that concrete reviews ( $\text{mean} = 5.48$ ) were more fluently processed by abstract reviews ( $\text{mean} = 5.08$ ). The results also revealed significant interaction effects between construal mindset and failure type,  $F_{(1,316)} = 68.39, p < 0.001$  and construal

mindset and language abstraction ( $F_{(1,316)} = 57.64, p < 0.001$ ) (see Table 12). Participants with low-level construal experienced more fluency when exposed to feasibility-related (mean = 5.56) versus desirability-related reviews (mean = 5.20;  $F_{(1,160)} = 7.21, p = 0.008$ ) and concrete (mean = 5.68) versus abstract reviews (mean = 5.07;  $F_{(1,160)} = 22.30, p < 0.001$ ). The reverse pattern was observed for participants with high-level construal (mean<sub>desirability</sub> = 5.76 versus mean<sub>feasibility</sub> = 4.60;  $F_{(1,158)} = 57.83, p < 0.001$ ; mean<sub>abstract</sub> = 5.78 versus mean<sub>concrete</sub> = 4.79;  $F_{(1,158)} = 22.67, p < 0.001$ ).

Table 12

*Study 1: ANCOVAs with Processing Fluency as Dependent Variable*

Source	Type III Sum of Squares	df	F-value	p-value	eta <sup>2</sup>
<i>Three-way ANCOVA</i>					
OFD Experience <sup>c</sup>	11.28	1	16.34	0.000	0.049
Review Attitude <sup>c</sup>	0.01	1	0.01	0.921	0.000
Mindset (CM)	19.95	1	2.82	0.094	0.009
Failure (FA)	0.77	1	1.12	0.291	0.004
Abstraction (LA)	12.70	1	18.41	0.000	0.055
CM x FA	47.19	1	68.39	0.000	0.178
CM x LA	39.78	1	57.64	0.000	0.154
FA x LA	0.32	1	0.46	0.497	0.001
CM x FA x LA	9.97	1	14.44	0.000	0.044
Error	218.07	316			
Total	9430.56	326			
Corrected Total	345.15	325			
<i>Two-way ANCOVA – low-level construal mindset</i>					
OFD Experience <sup>c</sup>	4.17	1	5.55	0.011	0.040
Review Attitude <sup>c</sup>	0.47	1	0.74	0.390	0.005
FA	4.89	1	7.67	0.006	0.046
LA	15.22	1	23.87	0.000	0.131
FA x LA	3.70	1	5.81	0.017	0.035
Error	100.65	158			
Total	4878.11	164			
Corrected Total	131.09	163			
<i>Two-way ANCOVA – high-level construal mindset</i>					
OFD Experience <sup>c</sup>	11.34	1	15.57	0.000	0.091
Review Attitude <sup>c</sup>	0.92	1	1.26	0.263	0.008
FA	54.06	1	74.23	0.000	0.322
LA	25.38	1	34.84	0.000	0.183
FA x LA	7.40	1	10.16	0.002	0.061
Error	113.62	156			
Total	4552.44	162			
Corrected Total	210.71	161			

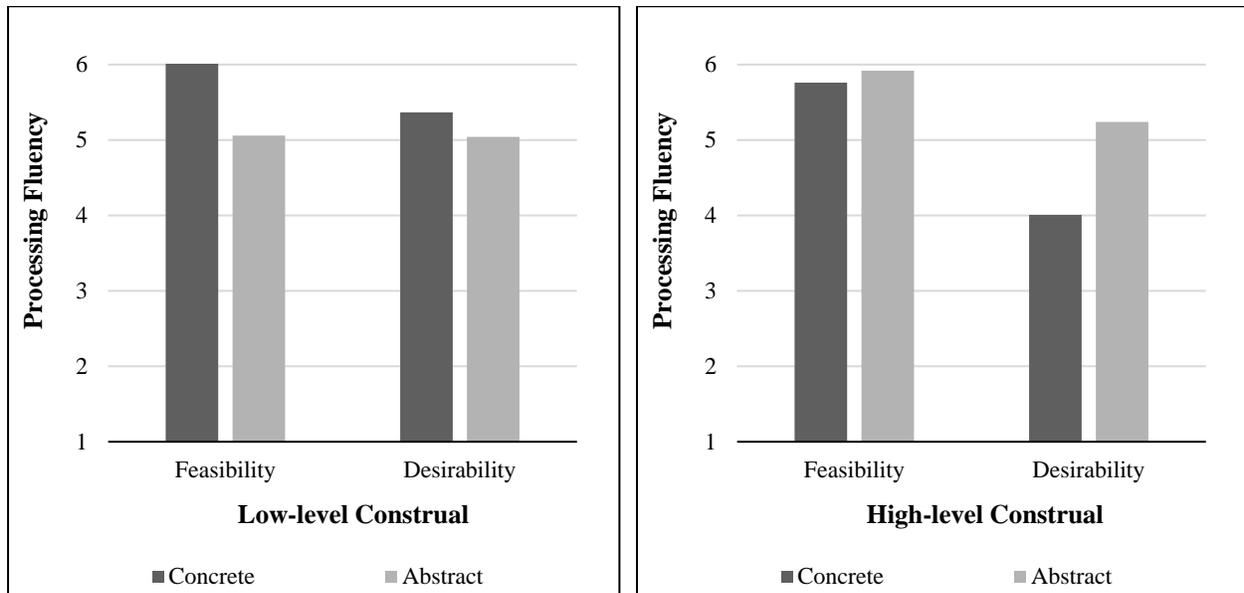
Note. c: covariate.

More importantly, there was a significant three-way interaction among construal mindset, failure type, and language abstraction ( $F_{(1,316)} = 14.44, p < 0.001$ ). To simplify the interpretation

of this interaction, two-way ANCOVAs were conducted separately for participants with low- and high-level construal mindsets (see Figure 3). The results of ANCOVAs revealed a significant failure type x language abstraction on processing fluency for both levels of construal mindset (low:  $F_{(1,158)} = 5.81$ ,  $p = 0.017$ ; high:  $F_{(1,156)} = 10.16$ ,  $p = 0.002$ ). For participants with low-level construal, the follow-up test revealed a significant effect of failure type when the language abstraction was concrete ( $F_{(1,78)} = 33.74$ ,  $p < 0.001$ ). As predicted in H1a, processing fluency was significantly higher for feasibility-related (mean = 6.02) than desirability-related failure scenarios (mean = 5.35). Within the abstract condition, the difference between the two failure types failed to reach significance ( $F_{(1,78)} = 2.35$ ,  $p = 0.129$ ). For participants with high-level construal, the follow-up test showed a significant effect of failure type when the language abstraction was abstract ( $F_{(1,77)} = 15.02$ ,  $p < 0.001$ ). As predicted in H1b, processing fluency was significantly higher for desirability-related (mean = 5.24) than feasibility-related failure scenarios (mean = 4.01). No significant difference on processing fluency was found when the language abstraction was concrete ( $F_{(1,77)} = 3.16$ ,  $p = 0.079$ ).

Figure 3

Study 1: Failure Type x Language Abstraction Interaction on Processing Fluency



### Anger

A three-way ANCOVA was administered with anger as a dependent variable (Cronbach's alpha = 0.92) and prior OFD experience and attitudes toward online reviews as covariates. As seen in Table 13, none of the main and two-way interaction effects were significant, except for construal mindset x failure type ( $F_{(1,316)} = 30.28, p < 0.001$ ). Additional one-way ANCOVAs showed that feasibility-related reviews generated substantially more anger from low-level construal participants (mean<sub>low</sub> = 5.10 versus mean<sub>high</sub> = 4.39;  $F_{(1,160)} = 36.78, p < 0.001$ ), while desirability-related reviews resulted in increased feelings of anger from high-level construal participants (mean<sub>high</sub> = 5.05 versus mean<sub>low</sub> = 4.14;  $F_{(1,158)} = 8.08, p = 0.005$ ).

Table 13

*Study 1: ANCOVAs with Anger as Dependent Variable*

Source	Type III Sum of Squares	df	F-value	p-value	eta <sup>2</sup>
<i>Three-way ANCOVA</i>					
OFD Experience <sup>c</sup>	120.46	1	68.46	0.000	0.178
Review Attitude <sup>c</sup>	0.09	1	0.05	0.818	0.000
Mindset (CM)	3.59	1	2.04	0.154	0.006
Failure (FA)	1.70	1	0.94	0.327	0.003
Abstraction (LA)	0.36	1	0.24	0.652	0.001
CM x FA	53.30	1	30.28	0.000	0.087
CM x LA	1.84	1	0.92	0.316	0.003
FA x LA	4.20	1	2.38	0.124	0.007
CM x FA x LA	12.91		7.34	0.007	0.023
Error	456.28	316			
Total	7887.22	326			
Corrected Total	778.33	325			
<i>Two-way ANCOVA – low-level construal mindset</i>					
OFD Experience <sup>c</sup>	69.02	1	45.32	0.000	0.223
Review Attitude <sup>c</sup>	0.75	1	0.46	0.483	0.023
FA	35.96	1	23.62	0.000	0.130
LA	1.37	1	0.90	0.345	0.006
FA x LA	11.53	1	7.57	0.007	0.046
Error	240.56	158			
Total	3864.33	164			
Corrected Total	363.76	163			
<i>Two-way ANCOVA – high-level construal mindset</i>					
OFD Experience <sup>c</sup>	52.32	1	25.93	0.000	0.143
Review Attitude <sup>c</sup>	0.25	1	0.12	0.726	0.001
FA	17.67	1	8.76	0.004	0.053
LA	6.43	1	3.19	0.076	0.020
FA x LA	15.55	1	7.71	0.006	0.047
Error	314.72	156			
Total	4022.89	162			
Corrected Total	413.54	161			

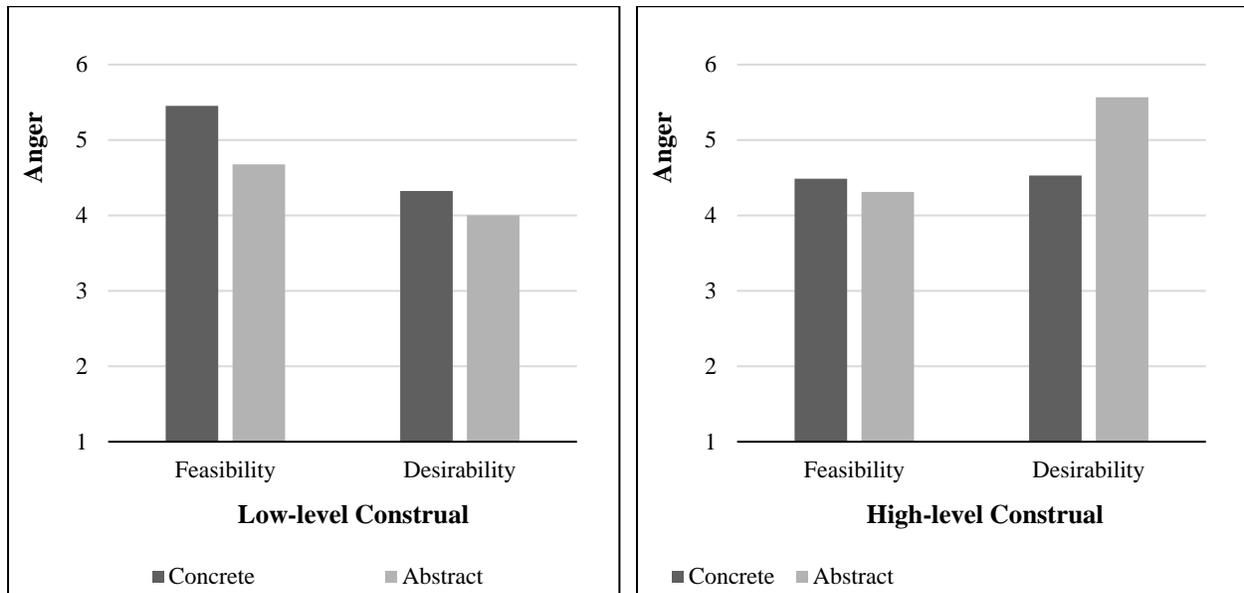
Note. c: covariate.

A significant interaction was found among the three independent variables ( $F_{(1,316)} = 7.33$ ,  $p = 0.007$ ). This three-way interaction was further decomposed by running two-way ANCOVAs

on the two construal mindset conditions. As visualized in Figure 4, the interaction was evident under both the low- and high-level construal conditions (low:  $F_{(1,158)} = 7.57$ ,  $p = 0.07$ ; high:  $F_{(1,156)} = 7.71$ ,  $p = 0.006$ ). In the low-level construal condition, the difference between the two types of failures was significant when language abstraction was concrete ( $F_{(1,78)} = 12.23$ ,  $p = 0.001$ ) but not significant when language abstraction was abstract ( $F_{(1,78)} = 1.06$ ,  $p = 0.306$ ). Consistent with H2a, the level of anger participants experienced was significantly higher after exposure to feasibility-related, concrete reviews (mean = 5.45) than to desirability-related, concrete reviews (mean = 4.33). In the high-level construal condition, failure type effect was significant only for the abstract language condition (abstract:  $F_{(1,77)} = 18.03$ ,  $p < 0.001$ ; concrete:  $F_{(1,77)} = 0.61$ ,  $p = 0.225$ ). As proposed in H2b, participants reported higher levels of anger after reading desirability-related, abstract reviews (mean = 5.57) than feasibility-related, abstract reviews (mean = 4.33).

Figure 4

*Study 1: Failure Type x Language Abstraction Interaction on Anger*



### ***Likelihood of Engaging in Revenge Behaviors***

Two separate three-way ANCOVAs with prior OFD experience and attitudes toward online reviews as covariates were conducted on two behavioral intention measures: switching intention (Cronbach's alpha = 0.90) and negative WOM intention (Cronbach's alpha = 0.79). None of the independent variables had significant main and interaction effects for negative WOM intention (see Table 14).

Table 14

*Study 1: ANCOVAs with Negative WOM Intention as Dependent Variable*

Source	Type III Sum of Squares	df	F-value	p-value	eta <sup>2</sup>
OFD Experience <sup>c</sup>	8.74	1	5.70	0.018	0.018
Review Attitude <sup>c</sup>	11.40	1	7.44	0.007	0.023
Mindset (CM)	0.43	1	0.78	0.598	0.001
Failure (FA)	2.78	1	1.81	0.179	0.006
Abstraction (LA)	0.65	1	0.42	0.516	0.001
CM x FA	0.19	1	0.12	0.726	0.000
CM x LA	1.36	1	0.89	0.347	0.003
FA x LA	2.99	1	1.95	0.163	0.006
CM x FA x LA	0.66	1	0.43	0.511	0.001
Error	484.45	316			
Total	6101.44	326			
Corrected Total	513.71	325			

Note. c: covariate.

As summarized in Table 15, the analysis yielded similar results for switching intention, except for the interactive effect of construal mindset x failure type ( $F_{(1,316)} = 31.43$ ,  $p < 0.001$ ). Specifically, participants with low-level construal exhibited higher levels of switching intention after reading feasibility-related (mean = 5.62) as compared to desirability-related reviews (mean = 4.83;  $F_{(1,160)} = 13.68$ ,  $p = 0.004$ ). The switching intention of high-level construal participants, in contrast, was higher in the desirability-related (mean = 5.43) versus feasibility-related failure condition (mean = 4.87;  $F_{(1,316)} = 8.94$ ,  $p = 0.003$ ).

Table 15

*Study 1: ANCOVAs with Switching Intention as Dependent Variable*

Source	Type III Sum of Squares	df	F-value	p-value	eta <sup>2</sup>
<i>Three-way ANCOVA</i>					
OFD Experience <sup>c</sup>	1.27	1	0.82	0.367	0.003
Review Attitude <sup>c</sup>	0.46	1	0.29	0.588	0.001
Mindset (CM)	1.72	1	1.106	0.294	0.003
Failure (FA)	0.12	1	0.08	0.782	0.000
Abstraction (LA)	0.65	1	0.42	0.517	0.001
CM x FA	31.43	1	20.24	0.000	0.060
CM x LA	3.68	1	2.37	0.125	0.007
FA x LA	0.03	1	0.02	0.899	0.000
CM x FA x LA	15.65	1	10.08	0.002	0.031
Error	490.62	316			
Total	8930.11	326			
Corrected Total	548.49	325			
<i>Two-way ANCOVA – low-level construal mindset</i>					
OFD Experience <sup>c</sup>	1.45	1	0.92	0.338	0.006
Review Attitude <sup>c</sup>	9.07	1	5.76	0.018	0.035
FA	4.24	1	2.69	0.103	0.017
LA	0.18	1	0.12	0.735	0.001
FA x LA	6.95	1	4.42	0.037	0.027
Error	251.69	158			
Total	4615.78	164			
Corrected Total	277.01	163			
<i>Two-way ANCOVA – high-level construal mindset</i>					
OFD Experience <sup>c</sup>	3.78	1	2.49	0.117	0.016
Review Attitude <sup>c</sup>	18.76	1	12.37	0.001	0.074
FA	0.17	1	0.10	0.749	0.001
LA	1.08	1	0.71	0.400	0.005
FA x LA	7.15	1	4.72	0.031	0.030
Error	233.48	156			
Total	4314.33	162			
Corrected Total	270.88	161			

Note. c: covariate.

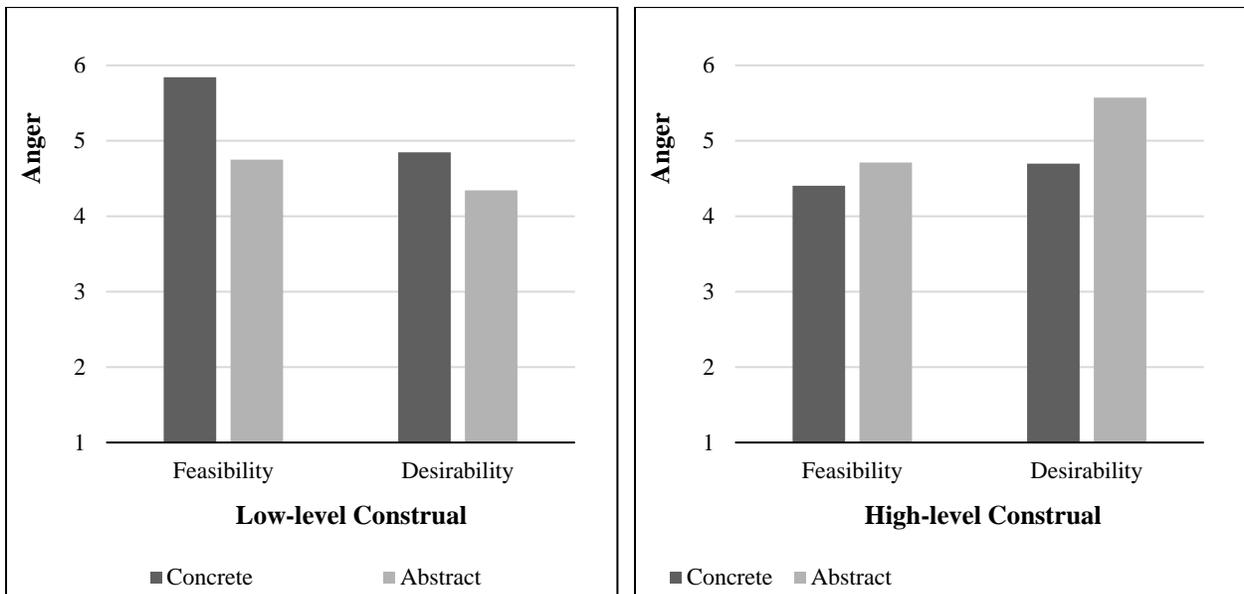
More central to the current research, construal mindset x failure type x language abstract interaction was significant on switching intention ( $F_{(1,316)} = 10.08$ ,  $p = 0.002$ ; See Figure 5).

Follow-up tests indicated different effects of failure type x language abstraction at the level of

construal mindset (low:  $F_{(1,158)} = 4.42, p = 0.037$ ; high:  $F_{(1,156)} = 4.72, p = 0.031$ ). Among low-level construal participants, switching intention differed for feasibility-related, concrete (mean = 5.84) versus desirability-related, concrete reviews (mean = 4.75;  $F_{(1,316)} = 5.60, p = 0.020$ ), whereas such a difference was not evident in the abstract language condition ( $F_{(1,78)} = 0.12, p = 0.732$ ). The reverse held among high-level construal participants: namely, abstract language effects on switching intention differed significantly with failure type (mean<sub>desirability</sub> = 5.57 versus mean<sub>feasibility</sub> = 4.70;  $F_{(1,77)} = 9.40, p = 0.003$ ), and no difference in concrete language condition ( $F_{(1,77)} = 1.16, p = 0.286$ ). These results partially support H3a and H3b.

Figure 5

*Study 1: Failure Type x Language Abstraction Interaction on Switching Intention*



### *Mediating Effects of Processing Fluency and Anger*

A bootstrapping analysis with 5,000 resamples (Hayes, 2018; Model 6) was performed to test whether the effect of construal fit on behavioral intention is mediated by processing fluency and anger. The previous ACOVA results revealed no significant effects of construal fit on negative WOM intention and hence, the mediation analysis was only carried out on switching intention. The experimental condition was recoded into two dummy variables (0 = construal fit condition, 1 = construal misfit condition) and included in the analysis as the independent variable. The same covariates (i.e., prior OFD experience and attitudes toward online reviews) as in the previous ANCOVA analyses were included in this mediation analysis. Construal fit had a significant indirect effect on switching intention through processing fluency was significant ( $b = 0.17$ ,  $SE = 0.19$ ,  $95\% CI = [0.01, 0.06]$ ), but not through anger ( $0.03$ ,  $SE = 0.05$ ,  $95\% CI = [-0.08, 0.13]$ ). Further, the results revealed a significant indirect effect of construal fit on switching intention through both processing fluency and anger in serial ( $b = 0.13$ ,  $SE = 0.04$ ,  $95\% CI = [-0.22, -0.06]$ ). These results confirm that the enhanced processing fluency from construal fit elicits higher levels of anger, which in turn encourages switching intention, supporting H4 and H5.

### **Study 2**

The results of Study 1 suggested that construal fit accounted for heightened anger via enhanced processing fluency, which in turn predicted engagement only in direct revenge behavior (i.e., switching intention). Study 2 replicated these findings using spatial distance to operationalize low- and high-level construal mindsets. In doing so, Study 2 sought to establish the generalizability and robustness of the construal fit effect. The same analysis procedures were used as in Study 1. A three-way ANCOVA was conducted on each dependent measure, followed

by simple effect tests to identify the source of significant interactions. A bootstrapping analysis was carried out to test the indirect effects of construal fit on dependent measures via processing fluency and anger.

### **Manipulation Checks**

As in Study 1, the spatial distance manipulation was checked using participants' BIF scores, which were obtained by summing up their scores for all 25 items in the BIF. An independent t-test on the BIF scores showed a significant effect of spatial distance ( $t = 20.95$ ,  $p < 0.001$ ). Participants in the spatially distant condition had higher BIF scores (mean = 18.92) than those in the spatially near condition (mean = 13.11), suggesting that spatial distance (versus proximity) triggered a higher level of construal.

The same manipulation checks from Study 1 were used to confirm that the review stimuli worked as intended. The manipulation of failure type was checked by asking participants whether they thought the service failure described was an example of process or outcome failure and a severe service problem. Participants in the feasibility-related failure condition agreed that the reviews they read were about process failures (mean = 5.99) than those in the desirability-related failure condition (mean = 4.56;  $t = 4.92$ ,  $p = 0.008$ ), while no significant difference in severity perception was found between the two (mean<sub>feasibility</sub> = 4.87 versus mean<sub>desirability</sub> = 4.96;  $t = 0.49$ ,  $p = 0.829$ ). The language abstraction manipulation was assessed via participants' evaluation of review concreteness. There was a significant difference on this measure ( $t = 5.47$ ,  $p = 0.002$ ), with participants in the concrete condition rating the review as more concrete (mean = 4.54) than those in the abstract condition (mean = 5.32). Finally, a two-way ANOVA on scenario realism was not significant ( $p > 0.05$ ), indicating that participants found the review scenarios

equally realistic across experimental conditions (mean = 6.03). To sum up, all the manipulations were confirmed as successful.

## **Hypotheses Testing**

### ***Processing Fluency***

A three-way ANCOVA was conducted on processing fluency index (Cronbach's alpha = 0.75), with prior OFD experience and attitudes toward online reviews as covariates. The results revealed a main effect of language abstraction type ( $F_{(1,317)} = 20.38, p < 0.001$ ), suggesting that online reviews are processed more fluently when they were written in concrete (mean = 5.45) versus abstract language (mean = 5.04). The interactions between construal mindset and failure type ( $F_{(1,317)} = 65.71, p < 0.001$ ) as well as construal mindset and language abstraction ( $F_{(1,317)} = 66.00, p < 0.001$ ) were found to be significant (see Table 16). For low-level construal participants, feasibility-related (mean = 5.46) versus desirability-related reviews (mean = 5.14;  $F_{(1,160)} = 4.20, p = 0.016$ ) and concrete (mean = 5.64) versus abstract reviews (mean = 4.97;  $F_{(1,160)} = 29.19, p < 0.001$ ) were perceived to be easier to process. The reverse was true for high-level construal participants (mean<sub>desirability</sub> = 5.75 versus mean<sub>feasibility</sub> = 4.61;  $F_{(1,159)} = 57.13, p < 0.001$ ; mean<sub>abstract</sub> = 5.60 versus mean<sub>concrete</sub> = 4.78;  $F_{(1,160)} = 25.03, p < 0.001$ ).

Finally, a significant interaction was found among construal mindset, failure type, and language abstraction ( $F_{(1,160)} = 10.03, p = 0.002$ ). To probe this interaction, follow-up tests were conducted at each level of construal mindset. For participants with low-level construal, the interaction of failure type and language abstraction was significant ( $F_{(1,158)} = 6.83, p = 0.010$ ; see Figure 6). The simple effects test then indicated that failure type effect was significant when language abstract was concrete ( $F_{(1,80)} = 19.82, p < 0.001$ ), with mean = 5.94 and mean = 4.96 for feasibility- and desirability-related failures, respectively. The perceived fluency did not differ

between failure types when language abstraction was abstract ( $F_{(1,76)} = 3.22, p = 0.077$ ). Hence, H1a is supported. For participants with high-level construal, failure type and language significantly interacted to predict processing fluency ( $F_{(1,157)} = 4.30, p = 0.040$ ). The simple effect of failure type was significant within concrete language abstraction ( $\text{mean}_{\text{feasibility}} = 6.01$  versus  $\text{mean}_{\text{desirability}} = 5.15; F_{(1,78)} = 5.20, p = 0.003$ ) but not within abstract language abstraction ( $F_{(1,77)} = 1.76, p = 0.177$ ), supporting H1b.

Table 16

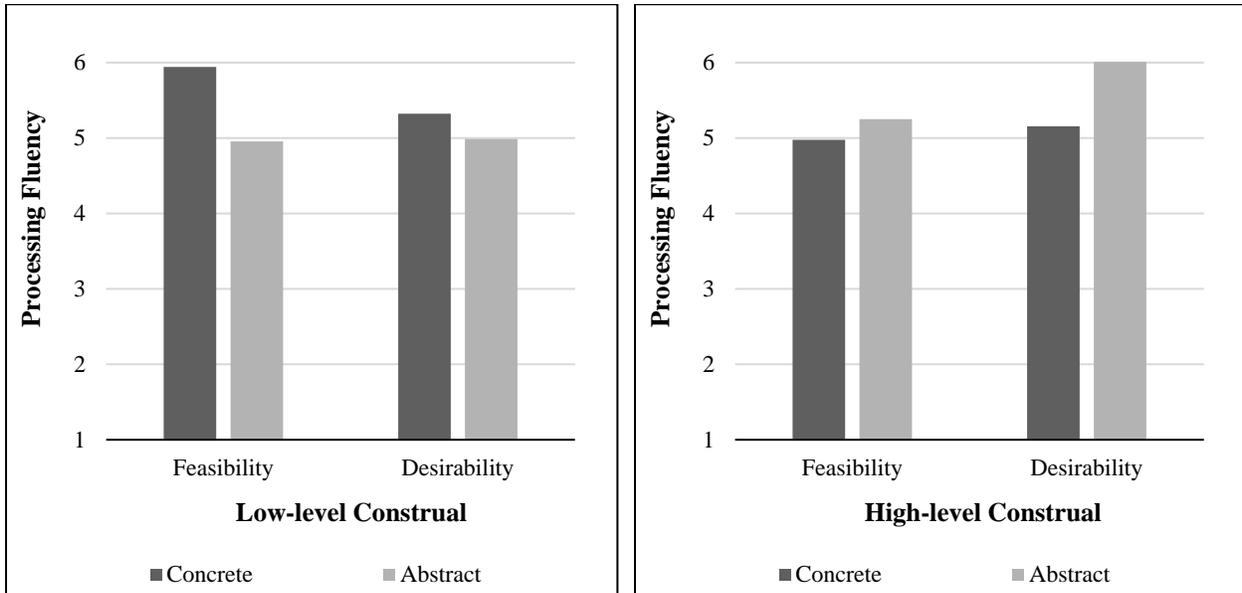
*Study 2: ANCOVAs with Processing Fluency as Dependent Variable*

Source	Type III Sum of Squares	df	F-value	p-value	eta <sup>2</sup>
<i>Three-way ANCOVA</i>					
OFD Experience <sup>c</sup>	9.89	1	14.90	0.000	0.045
Review Attitude <sup>c</sup>	0.01	1	0.01	0.914	0.000
Mindset (CM)	0.56	1	0.84	0.361	0.003
Failure (FA)	00.58	1	0.87	0.352	0.003
Abstraction (LA)	13.53	1	20.38	0.000	0.060
CM x FA	43.64	1	65.71	0.000	0.172
CM x LA	43.84	1	66.00	0.000	0.172
FA x LA	0.03	1	0.05	0.826	0.000
CM x FA x LA	6.66	1	10.03	0.002	0.031
Error	210.54	317			
Total	9331.78	327			
Corrected Total	333.71	326			
<i>Two-way ANCOVA – low-level construal mindset</i>					
OFD Experience <sup>c</sup>	2.97	1	5.10	0.025	0.031
Review Attitude <sup>c</sup>	0.17	1	0.29	0.592	0.002
FA	3.92	1	6.74	0.010	0.041
LA	17.65	1	30.36	0.000	0.161
FA x LA	3.97	1	6.83	0.010	0.041
Error	91.88	158			
Total	4738.89	164			
Corrected Total	123.65	163			
<i>Two-way ANCOVA – high-level construal mindset</i>					
OFD Experience <sup>c</sup>	7.94	1	10.60	0.001	0.063
Review Attitude <sup>c</sup>	0.17	1	0.22	0.638	0.001
FA	52.53	1	70.11	0.000	0.309
LA	27.06	1	36.11	0.000	0.187
FA x LA	3.22	1	4.30	0.040	0.027
Error	117.64	157			
Total	4582.89	163			
Corrected Total	208.91	162			

Note. c: covariate.

Figure 6

Study 2: Failure Type x Language Abstraction Interaction on Processing Fluency



### Anger

A three-way ANCOVA was undertaken using anger as an outcome variable (Cronbach's alpha = 0.92) and prior OFD experience and attitudes toward online reviews as covariates. While main effects did not emerge, a significant interaction was observed between construal mindset and failure type ( $F_{(1,317)} = 29.57, p < 0.001$ ). The results of separate one-way ANCOVAs indicated feasibility-related reviews significantly increased the intensity of anger when participants were in low-level construal (mean<sub>low</sub> = 5.06 versus mean<sub>high</sub> = 4.14;  $F_{(1,160)} = 21.61, p < 0.001$ ). In contrast, desirability-related reviews amplified the anger of participants in high-level construal (mean<sub>low</sub> = 5.05 versus mean<sub>high</sub> = 4.39;  $F_{(1,159)} = 8.36, p = 0.004$ ). No other two-way interaction effects reached significance (see Table 17).

Table 17

*Study 2: ANCOVAs with Anger as Dependent Variable*

Source	Type III Sum of Squares	df	F-value	p-value	eta <sup>2</sup>
<i>Three-way ANCOVA</i>					
OFD Experience <sup>c</sup>	122.09	1	69.58	0.000	0.180
Review Attitude <sup>c</sup>	0.21	1	0.12	0.732	0.000
Mindset (CM)	4.36	1	2.48	0.116	0.008
Failure (FA)	1.35	1	0.77	0.380	0.002
Abstraction (LA)	0.49	1	0.28	0.596	0.001
CM x FA	51.88	1	29.57	0.000	0.085
CM x LA	4.37	1	2.48	0.117	0.008
FA x LA	3.54	1	2.02	0.156	0.006
CM x FA x LA	19.04	1	10.85	0.001	0.033
Error	556.26	317			
Total	7898.33	327			
Corrected Total	780.11	326			
<i>Two-way ANCOVA – low-level construal mindset</i>					
OFD Experience <sup>c</sup>	70.70	1	46.51	0.000	0.227
Review Attitude <sup>c</sup>	1.19	1	0.78	0.377	0.005
FA	34.14	1	22.46	0.000	0.124
LA	2.07	1	1.36	0.245	0.009
FA x LA	12.50	1	8.23	0.005	0.049
Error	240.15	158			
Total	3850.44	164			
Corrected Total	365.47	163			
<i>Two-way ANCOVA – high-level construal mindset</i>					
OFD Experience <sup>c</sup>	52.64	1	26.26	0.000	0.143
Review Attitude <sup>c</sup>	0.26	1	0.13	0.720	0.001
FA	17.85	1	8.90	0.003	0.054
LA	6.52	1	3.25	0.073	0.020
FA x LA	15.76	1	7.86	0.006	0.048
Error	314.74	157			
Total	4047.89	163			
Corrected Total	413.61	162			

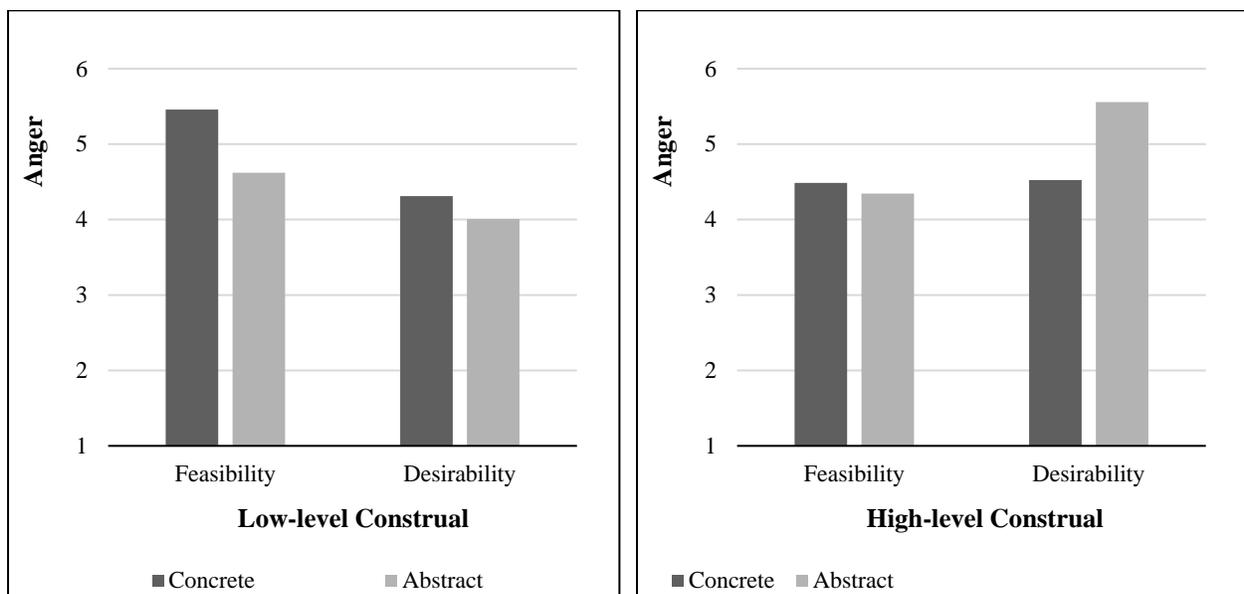
Note. c: covariate.

As expected, the three-way interaction was significant ( $F_{(1,317)} = 10.85, p = 0.001$ ). For easier interpretation of this interaction, separate two-way ANCOVAs were carried out on the low- and high-level construal conditions. For participants in the low-level construal condition,

the analysis yielded an interaction between failure type and language abstraction ( $F_{(1,158)} = 8.23$ ,  $p = 0.005$ ). Significantly higher intensity anger was expressed with feasibility-related, concrete reviews (mean = 5.46) than desirability-related, concrete reviews (mean = 4.62;  $F_{(1,80)} = 14.66$ ,  $p < 0.001$ ). However, anger did not differ between failure types when language abstraction was abstract ( $F_{(1,76)} = 0.92$ ,  $p = 0.341$ ), hence, H2a was supported. For participants in the high-level construal condition, a significant interaction existed ( $F_{(1,157)} = 7.86$ ,  $p = 0.006$ ). Anger was more prominent in desirability-related, abstract (mean = 5.56) as compared to feasibility-related, abstract conditions (mean = 4.53;  $F_{(1,78)} = 18.28$ ,  $p < 0.001$ ). In contrast, both desirability- and feasibility-related reviews elicited similar levels of anger when language abstraction was concrete ( $F_{(1,77)} = 0.23$ ,  $p = 0.64$ ), supporting H2b. The results are visualized in Figure 7.

Figure 7

*Study 2: Failure Type x Language Abstraction Interaction on Anger*



### *Likelihood of Engaging in Revenge Behaviors*

A three-way ANCOVA tested the effects of independent variables on each intention measure—switching intention (Cronbach’s alpha = 0.90) and negative WOM intention (Cronbach’s alpha = 0.79), while controlling for the covariate of prior OFD experience. For negative WOM intention, none of the effects reached statistical significance. The results are summarized in Table 18.

Table 18

#### *Study 2: ANCOVAs with Negative WOM Intention as Dependent Variable*

Source	Type III Sum of Squares	df	F-value	p-value	eta <sup>2</sup>
OFD Experience <sup>c</sup>	8.76	1	5.70	0.018	0.018
Review Attitude <sup>c</sup>	11.38	1	7.40	0.007	0.023
Mindset (CM)	0.89	1	0.58	0.446	0.002
Failure (FA)	3.00	1	1.95	0.164	0.006
Abstraction (LA)	0.31	1	0.20	0.655	0.001
CM x FA	0.47	1	0.31	0.581	0.001
CM x LA	1.40	1	0.91	0.340	0.003
FA x LA	2.10	1	1.37	0.243	0.004
CM x FA x LA	0.76	1	0.49	0.483	0.002
Error	484.06	317			
Total	6108.56	327			
Corrected Total	515.88	326			

Note. c: covariate

For switching intention, there was a significant interaction for construal mindset by failure type ( $F_{(1,317)} = 20.40$ ,  $p < 0.001$ ; see Table 19). In particular, participants with low-level construal reported a higher switching intention in the feasibility-related failure condition ( $\text{mean}_{\text{feasibility}} = 5.39$  versus  $\text{mean}_{\text{desirability}} = 4.842$ ;  $F_{(1,160)} = 8.38$ ,  $p = 0.004$ ), whereas participants

with high-level construal had a higher switching intention in desirability-related failure condition (mean<sub>desirability</sub> = 5.44 versus mean<sub>feasibility</sub> = 4.87;  $F_{(1,159)} = 9.30$ ,  $p = 0.003$ ).

Table 19

*Study 2: ANCOVAs with Switching Intention as Dependent Variable*

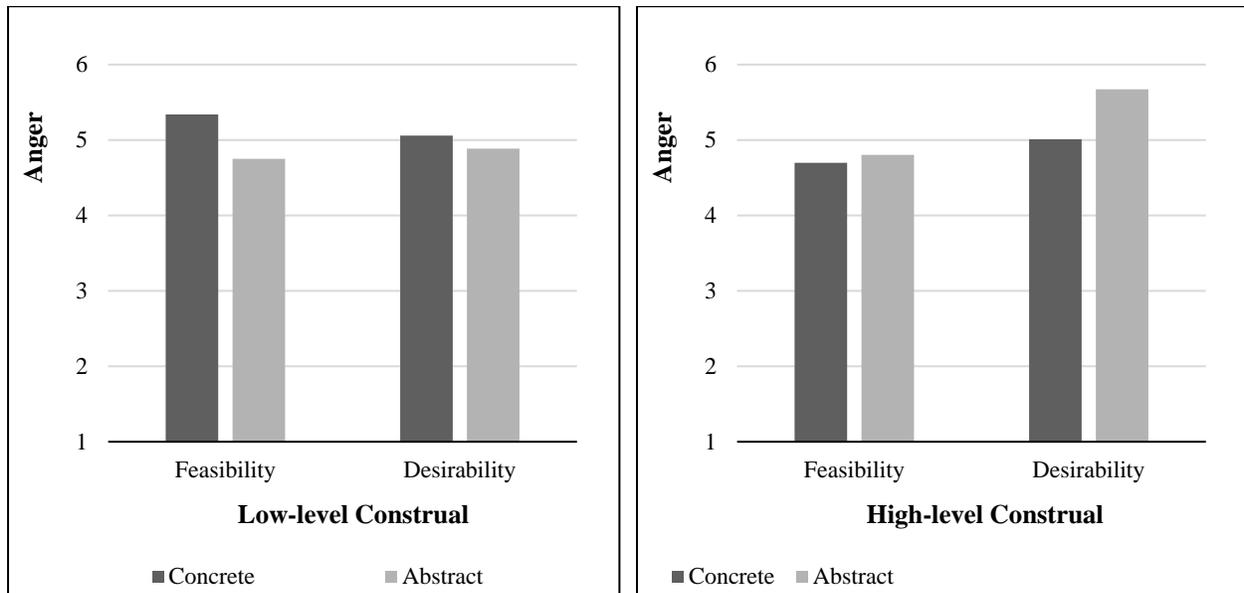
Source	Type III Sum of Squares	df	F-value	p-value	eta <sup>2</sup>
<i>Three-way ANCOVA</i>					
OFD Experience <sup>c</sup>	0.53	1	0.34	0.558	0.001
Review Attitude <sup>c</sup>	0.12	1	0.08	0.782	0.000
Mindset (CM)	1.95	1	1.26	0.262	0.004
Failure (FA)	1.74	1	1.13	0.289	0.004
Abstraction (LA)	0.38	1	0.25	0.620	0.001
CM x FA	31.56	1	20.40	0.000	0.060
CM x LA	4.13	1	2.67	0.103	0.008
FA x LA	0.06	1	0.04	0.849	0.000
CM x FA x LA	14.87	1	9.61	0.002	0.028
Error	490.50	317			
Total	8955.11	327			
Corrected Total	548.49	326			
<i>Two-way ANCOVA – low-level construal mindset</i>					
OFD Experience <sup>c</sup>	1.15	1	0.70	0.405	0.004
Review Attitude <sup>c</sup>	0.03	1	0.00	0.885	0.000
FA	3.63	1	2.21	0.139	0.014
LA	0.73	1	0.44	0.508	0.003
FA x LA	13.37	1	8.13	0.005	0.049
Error	259.90	158			
Total	4357.22	164			
Corrected Total	280.52	163			
<i>Two-way ANCOVA – high-level construal mindset</i>					
OFD Experience <sup>c</sup>	13.38	1	9.38	0.003	0.056
Review Attitude <sup>c</sup>	5.47	1	3.83	0.052	0.024
FA	3.54	1	2.48	0.117	0.016
LA	0.03	1	0.02	0.885	0.000
FA x LA	20.88	1	14.64	0.000	0.085
Error	223.96	157			
Total	4597.89	163			
Corrected Total	265.62	162			

Note. c: covariate

The results also supported the significance of construal mindset x failure type x language abstraction interaction on switching intention ( $F_{(1,317)} = 9.61, p = 0.002$ ). The three-way interaction was further probed by analyzing the simple interaction effect of failure type x language abstraction at each level of construal mindset, which revealed a significant interaction for both construal mindset conditions (low:  $F_{(1,158)} = 8.13, p = 0.005$ ; high:  $F_{(1,157)} = 14.64, p < 0.001$ ). According to the results of subsequent simple effects tests, feasibility-related, concrete reviews (mean = 5.34) led to higher switching intention than desirability-related concrete reviews (mean = 4.75;  $F_{(1,80)} = 6.52, p = 0.013$ ) when participants were in low-level construal. There was no difference in switching intention when the reviews were written in abstract language ( $F_{(1,76)} = 2.16, p = 0.146$ ). When participants were in high-level construal, in contrast, desirability-related, abstract reviews (mean = 5.67) resulted in higher switching intention than feasibility-related, abstract reviews (mean = 5.01;  $F_{(1,78)} = 5.46, p = 0.022$ ). Failure type did not have a significant effect on switching intention when the reviews were written in concrete language ( $F_{(1,77)} = 1.21, p = 0.275$ ; see Figure 8). The overall results provide partial support for H3a and H3b.

Figure 8

*Study 2: Failure Type x Language Abstraction Interaction on Switching Intention*



***Mediating Effects of Processing Fluency and Anger***

A bootstrapping analysis with 5,000 resamples (Hayes, 2018; Model 6) was conducted to test the proposed mediating role of processing fluency and anger. As with Study 1, two dummy variables were created to represent experimental condition (0 = construal fit condition, 1 = construal misfit condition) and used as the independent variable. Prior OFD experience and attitudes toward online reviews were entered into the model as covariate. As predicted, the indirect effect of construal fit on switching intention through processing fluency was significant ( $b = 0.12$ ,  $SE = 0.07$ ,  $95\% \text{ CI} = [0.01, 0.12]$ ), while the indirect effect via anger was not significant ( $b = 0.08$ ,  $SE = 0.05$ ,  $95\% \text{ CI} = [0.02, 0.38]$ ). The reviews further showed that the indirect effect of construal fit on switching intention was sequentially mediated by processing

fluency and anger ( $b = 0.11$ ,  $SE = 0.06$ ,  $95\% \text{ CI} = [-0.18, -0.03]$ ). Therefore, H4 and H5 are supported.

## **CHAPTER 5**

### **DISCUSSION AND IMPLICATIONS**

This chapter provides a summary of the research findings, along with implications for practice and research. The current research carried out two experiments to discover a boundary condition for the adverse effects of negative reviews on online purchase decision-making. The findings of the two experiments are discussed in order of hypotheses tested, from the direct to indirect effects of construal fit on behavioral intentions. This chapter concludes with theoretical and managerial implications of the research, followed by limitations and future research directions.

#### **Discussion of Findings**

The results of two experiments provide support for the association between psychological distance and construal level. Across two dimensions of psychological distance (temporal in Study 1 and spatial in Study 2), the results indicate that psychological proximity stimulates low-level construal and psychological distance promotes high-level construal more than vice versa. Specifically, participants in psychologically proximal conditions scored significantly lower in BIF scores than their counterparts in psychologically distant conditions.

The results further offer convergent evidence for the idea that a shift in construal level affects the preference for certain types of information in making decisions. The feasibility-related, concrete reviews were more influential when low-level mental construal was activated whereas desirability-related, abstract reviews were more persuasive when high-level mental construal was activated. As predicted, the difference in persuasiveness between feasibility-related, concrete and desirability-related, abstract reviews was found to arise due to different levels of processing fluency. Participants with low-level construal indeed experienced greater

fluency in processing feasibility-related, concrete reviews (H1a). Participants with high-level construal, in contrast, reported greater fluency in processing desirability-related, abstract reviews (H1b).

A similar pattern of results was observed for anger and switching intention. Participants with low-level construal exhibited a higher level of anger (H2a) and higher switching intentions (H3a-a) after reading feasibility-related, concrete reviews than desirability-related. The reverse held true for participants with high-level construal (H2b, H3b-a). However, contrary to the prediction, online reviews with different framing yielded no difference between low- and high-level construal participants regarding negative WOM intention (H3a-b, H3b-b). One possible explanation is that consumers engage in negative WOM to vent their negative feelings (Strizhakova et al., 2012; Qiu et al., 2018); however, anger induced from the mere exposure to negative reviews was not strong enough to motivate negative WOM behavior.

Finally, the results confirm that processing fluency is the construct that underlies the effect of fit from construal on consumer anger. A fit (versus misfit) between participants' construal mindset and the construct level at which review content is represented, led to greater processing fluency, resulting in a more extreme state of anger (H4). The heightened levels of anger, in turn, prompted participants to have a greater likelihood of switching to another service provider (H5). To summarize, the overall results demonstrate that construal fit acts as an intensifier of one's evaluations via enhanced processing fluency. This intensification produces a spreading effect, such that people with negative thoughts about the persuasive message report more negative evaluations.

## Theoretical Implications

This research enriches the existing body of literature in several ways. First, the current research represents one of the first studies to introduce the concept of psychological distance in the context of OFD. Perhaps the most unique aspect of OFD is that purchase and consumption do not co-occur, instead, they are temporally and spatially separated. However, this unique aspect has been ignored in previous studies. Hence, the current research extends previous findings by demonstrating how the relative importance of the restaurant (i.e., desirability) and OFD service quality (i.e., feasibility) varies across purchasing situations. Consistent with the basic tenet of CLT, the research findings suggest that psychological proximity (distance) shifts the overall attractiveness of an outcome closer to its low-level (high-level) construal value and away from its high-level (low-level) construal value and thus, increases one's willingness to trade off less desirability (feasibility) for more feasibility (desirability).

Second, this research provides a deeper understanding of how a specific match in review framing and construal mindset affects the persuasive power of negative online reviews. While prior research has identified that the existence of negativity bias influences the persuasiveness of negative reviews (Nazlan et al., 2018; Yang & Unnava, 2016), the current research establishes boundary conditions for these persuasion effects based on the basic premise of CLT. The findings of this study highlight the importance of construal fit as a boundary condition that determines when negative reviews predict consumer attitudes and behaviors. In other words, negative reviews become more influential when they are framed in a way that fits the readers' construal mindset. This finding helps reconcile the inconsistent findings on the relative influence of review valence on consumers' evaluative responses, such as review helpfulness.

Last, this research highlights a novel mechanism underlying construal fit effects by showing that the subjective experience of fluency drives the interaction between review framing and construal mindset. There is ample evidence to support the role of processing fluency as the underlying mechanism through which construal fit influences consumer responses (Gu & Chen, 2021; Lee et al., 2010; Wright et al., 2012). Much of the research has been conducted in the context of a positive message, yet there are limited empirical insights into whether this holds true in the negative message condition. The current research fills this gap by examining the mediating effects of processing fluency in the context of negative online reviews. The results provide evidence that participants indeed experienced greater fluency when the review frame was compatible with their construal mindset, which increased the level of anger that in turn pushed them to look for alternatives.

### **Managerial Implications**

The findings of this research help restaurateurs attain a better understanding of how to minimize the potential harm of negative reviews and thus, protect their reputation online. The adverse effects of negative reviews have been well-documented in the literature (Kim et al., 2022; Nazlan et al., 2018). However, the current research shows that the mere presence of negative reviews does not necessarily deter potential consumers; rather, it is the fit that matters. That is, negative reviews have the power to persuade only when they are framed in a manner consistent with consumers' construal mindset. It is therefore important for restaurateurs to identify how much of their business comes from immediate versus scheduled delivery and then, adopt the right strategy to manage online reviews. For instance, restaurants with a large proportion of immediate delivery sales are advised to make emotional content more available and salient, as it is likely to be construed at a lower level than factual content. They also can

mitigate the harmful effects of negative reviews by asking consumers to write reviews on their general experience, rather than specific attributes (e.g., taste, delivery time).

Although service providers strive for “doing it right” the first time, service failures are inevitable. A range of service failures can occur at any time during the transaction process, including failures related to the restaurant (e.g., wrong order, cold food) and OFD services (e.g., technical issues with apps, late delivery). Restaurateurs should be aware of the importance of managing the customer experience as well as OFD service providers as a satisfactory customer experience predicts customer satisfaction and repeat patronage. Despite its managerial importance, consumers’ experience of OFD platforms or apps is beyond the restaurant’s control. More importantly, the findings of this research indicate that consumers, particularly those with low-level construals, make their choice of restaurant by considering both the quality of the restaurant and OFD services. Restaurateurs are advised to work closely with OFD service providers to manage and improve the overall customer experience and develop appropriate response strategies.

### **Limitations and Future Research**

As with any study, this research has limitations. First, this research used a scenario-based experiment to investigate how construal fit affects the way consumers’ process persuasive messages and subsequent decisions. The scenario-based experiment controlled for extraneous variables, providing confidence in the internal validity of the findings. In order to strengthen the external validity of the findings, the current research conducted two experiments using separate samples of participants. However, external generalizability of the observed construal fit effects may still be questionable due to the artificiality of the experimental setting. It is therefore

important that future studies corroborate the current findings with greater external validity through a field experiment or secondary data.

Second, this research focused on situational construal level, whereby participants were induced into low- and high-level construal mindsets by varying temporal distance (Study 1) and spatial distance (Study 2). Future research may benefit from adopting different manipulations of construal level, such as procedural priming (Tsai & McGill, 2011), category-exemplar task (Fujita et al., 2006b) and pictorial versus verbal representation (Rim et al., 2015). Another promising direction for future research is to replicate and extend the findings of this research in other e-commerce sectors or by looking at chronic construal level.

Last, this research demonstrated that participants generated more extreme reactions under fit versus misfit conditions. However, the question remains as to whether similar results would be obtained when there are levels of fit rather than just the binary fit/misfit examined in the current research. Future research needs to clarify this question by operationalizing construal fit at multiple levels (e.g., low, medium, and high) and further examine the degree to which higher fit leads to enhanced persuasion. Moreover, research on construal fit effects to date, including the present research, have focused on processing fluency to unveil the underlying mechanism through which construal fit affects the formation of behavioral intentions. An interesting avenue for future research would be to explore cognitive and emotional processes that underlie construal fit effects.

**APPENDIX A**

**IRB APPROVAL**



ORI-HS, Exempt Review  
Exempt Notice

DATE: September 20, 2022

TO: James Busser

FROM: Office of Research Integrity - Human Subjects

PROTOCOL TITLE: UNLV-2022-457 The Effect of Online Reviews on The Online Decision Making Process  
SUBMISSION TYPE: Initial

ACTION: Exempt

REVIEW DATE: September 20, 2022 REVIEW TYPE: EXEMPT

REVIEW CATEGORY: Category 2.(i). Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording).

The information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects.

This memorandum is notification that the protocol referenced above has been reviewed as indicated in Federal regulatory statutes 45 CFR 46 and deemed exempt under Category 2.(i). Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording). The information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects.

PLEASE NOTE:

Upon final determination of exempt status, the research team is responsible for conducting the research as stated in the exempt application reviewed by the ORI – HS, which shall include using the most recently submitted Informed Consent/Assent and recruitment materials.

If your project involves paying research participants, it is recommended to contact HSComp@unlv.edu to ensure compliance with the Policy for Incentives for Human Research Subjects.

Any changes to the application may cause this study to require a different level of review. Should there be any change to the study, it will be necessary to submit a Modification request for review. No changes may be made to the existing study until modifications have been approved/acknowledged.

All unanticipated problems involving risk to subjects or others, and/or serious and unexpected adverse events must be reported promptly to this office. Any non-compliance issues or complaints regarding this protocol must be reported promptly to this office.

DELETE IF NOT RELEVANT: Waiver of HIPAA Authorization has been approved for this study.

Please remember that all approvals regarding this research must be sought prior to initiation of this study (e.g., IBC, COI, Export Control, OSP, Radiation Safety, Clinical Trials Office, etc.).

If you have questions, please contact the Office of Research Integrity - Human Subjects at IRB@unlv.edu or call 702-895-2794. Please include your study title and study ID in all correspondence.

Office of Research Integrity - Human Subjects  
4505 Maryland Parkway. Box 451047. Las Vegas, Nevada 89154-1047 (702) 895-2794.  
FAX: (702) 895-0805. IRB@unlv.edu

## APPENDIX B

### INFORMED CONSENT FORM

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**TITLE OF STUDY: The effect of online reviews on the online decision-making process**  
**INVESTIGATOR(S): Dr. James Busser and Minji Kim**

For questions or concerns about the study, you may contact Dr. James Busser or Minji Kim via email at james.busser@unlv.edu or kimm81@unlv.nevada.edu.

For questions regarding the rights of research subjects, any complaints or comments regarding the manner in which they study is being conducted, contact the **UNLV Office of Research Integrity – Human Subjects at 702-895-0020 or via email at IRB@unlv.edu.**

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#### PURPOSE OF THE STUDY

You are invited to participate in a research study. The purpose of this study is to investigate how online reviews influence the online decision-making process.

#### PARTICIPANTS

You are being asked to participate in the study because you fit these criteria: an adult over 18 years old and have made at least one transaction through any online food delivery platform (e.g., DoorDash, UberEats, GrubHub) within the last six months.

#### PROCEDURES

If you volunteer to participate in this study, you will be asked to do the following: evaluate a set of online reviews and answer questions based on the reviews you've read.

#### BENEFITS OF PARTICIPATION

There may not be direct benefits to you as a participant in this study. However, we hope to learn how you evaluate and use online reviews to make purchase decisions for online food delivery. Therefore, your participation will be important to conduct this study.

#### RISKS OF PARTICIPATION

There are risks involved in all research studies. This study may include only minimal risks. You may feel uncomfortable when answering some of the survey questions. You may choose not to answer any question and may also discontinue participation at any time. There will be no negative consequences of doing so.

#### COST/COMPENSATION

There may not be financial cost to you to participate in this study. The study will take 15-20 minutes of your time. Upon completion of the survey, you will receive compensation in the form of credit to your Qualtrics account by Qualtrics directly.

#### CONFIDENTIALITY

All information gathered in this study will be kept as confidential as possible. No reference will be made in written or oral materials that could link you to this study. All records will be stored in

a locked facility at UNLV for 3 years after completion of the study. After the storage time the information gathered will be destroyed.

#### VOLUNTARY PARTICIPATION

Your participation in this study is voluntary. You may refuse to participate in this study or in any part of this study. You may withdraw at any time without prejudice to your relations with UNLV. You are encouraged to ask questions about this study at the beginning or any time during the research study.

#### PARTICIPANT CONSENT

I have read the above information and agree to participate in this study. I have been able to ask questions about the research study. I am at least 18 years of age and have made at least one transaction through online food delivery platforms within the last six months.

- I consent, begin the study.
- I do not consent. I do not wish to participate.

## APPENDIX C

### MAIN STUDY SURVEY QUESTIONNAIRE

Have you used any online food delivery app in the last 6 months?

- Yes
- No (finish the survey)

What is your age?

- Under 18 years old (finish the survey)
- 18-24 years old
- 25-34 years old
- 35-44 years old
- 45-54 years old
- 55-64 years old
- 65 years old or older

#### Screen 1

##### Study 1: Temporal distance

Near condition	Imagine you are using an online food delivery app (e.g., DoorDash, GrubHub) to research different restaurants and order food to be delivered <b>as soon as possible</b> .
Distant condition	Imagine you are using an online food delivery app (e.g., DoorDash, GrubHub) to research different restaurants and order food to be delivered <b>tomorrow</b> .

##### Study 2: Spatial distance

Near condition	Imagine you are using an online food delivery app (e.g., DoorDash, Grubhub) to research different restaurants and order food. After a few minutes of searching, you come across a restaurant that is <b>2 miles</b> away from your home.
Distant condition	Imagine you are using an online food delivery app (e.g., DoorDash, Grubhub) to research different restaurants and order food. After a few minutes of searching, you come across a restaurant that is <b>6 miles</b> away from your home.

#### Screen 2

On the following pages, you will find several different behaviors listed. After each behavior will be two choices of different ways in which the behavior might be identified. Please choose the description that you personally believe is more appropriate in each pair.

<p>1. Making a list</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Getting organized</li> <li><input type="checkbox"/> Writing things down</li> </ul> <p>2. Reading</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Following lines of print</li> <li><input type="checkbox"/> Gaining knowledge</li> </ul> <p>3. Joining the Army</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Helping the Nation's defense</li> <li><input type="checkbox"/> Signing up</li> </ul> <p>4. Washing clothes</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Removing odors from clothes</li> <li><input type="checkbox"/> Putting clothes into the machine</li> </ul> <p>5. Picking an apple</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Getting something to eat</li> <li><input type="checkbox"/> Pulling an apple off a branch</li> </ul> <p>6. Chopping down a tree</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Wielding an axe</li> <li><input type="checkbox"/> Getting firewood</li> </ul> <p>7. Measuring a room for carpeting</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Getting ready to remodel</li> <li><input type="checkbox"/> Using a yardstick</li> </ul> <p>8. Cleaning the house</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Showing one's cleanliness</li> <li><input type="checkbox"/> Vacuuming the floor</li> </ul> <p>9. Painting a room</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Applying brush strokes</li> <li><input type="checkbox"/> Making the room look fresh</li> </ul> <p>10. Paying the rent</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Maintaining a place to live</li> <li><input type="checkbox"/> Writing a check</li> </ul> <p>11. Caring for houseplants</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Watering plants</li> <li><input type="checkbox"/> Making the room look nice</li> </ul> <p>12. Locking a door</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Putting a key in the lock</li> <li><input type="checkbox"/> Securing the house</li> </ul> <p>13. Voting</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Influencing the election</li> <li><input type="checkbox"/> Marking a ballot</li> </ul>	<p>14. Climbing a tree</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Getting a good view</li> <li><input type="checkbox"/> Holding on to branches</li> </ul> <p>15. Filling out a personality test</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Answering questions</li> <li><input type="checkbox"/> Revealing what you're like</li> </ul> <p>16. Toothbrushing</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Preventing tooth decay</li> <li><input type="checkbox"/> Moving a brush around in one's mouth</li> </ul> <p>17. Taking a test</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Answering questions</li> <li><input type="checkbox"/> Showing one's knowledge</li> </ul> <p>18. Greeting someone</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Saying hello</li> <li><input type="checkbox"/> Showing friendliness</li> </ul> <p>19. Resisting temptation</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Saying "no"</li> <li><input type="checkbox"/> Showing moral courage</li> </ul> <p>20. Eating</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Getting nutrition</li> <li><input type="checkbox"/> Chewing and swallowing</li> </ul> <p>21. Growing a garden</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Planting seeds</li> <li><input type="checkbox"/> Getting fresh vegetables</li> </ul> <p>22. Traveling by car</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Following a map</li> <li><input type="checkbox"/> Seeing countryside</li> </ul> <p>23. Having a cavity filled</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Protecting your teeth</li> <li><input type="checkbox"/> Going to the dentist</li> </ul> <p>24. Talking to a child</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Teaching a child something</li> <li><input type="checkbox"/> Using simple words</li> </ul> <p>25. Pushing a doorbell</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Moving a finger</li> <li><input type="checkbox"/> Seeing if someone's home</li> </ul>
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Screen 3

Study 1 Instruction

After a few minutes searching, you come across a restaurant that serves your favorite cuisine at a reasonable price. Since this is your first time ordering from this restaurant, you decide to do a bit more research before making your final decision. You tap on the restaurant to read reviews from previous customers.

Study 2 Instruction

Since this is your first time ordering from this restaurant, you decide to do a bit more research before making your final decision. You tap on the restaurant to read reviews from previous customers.

Screen 4

Feasibility-related, concrete condition	<div data-bbox="565 814 636 886"></div> <p data-bbox="581 890 620 911">Kala</p> <div data-bbox="548 915 646 945">★★★★☆</div> <p data-bbox="685 831 1360 919">For the amount of money I spent, I'd say the food was okay – not bad but not great. The delivery was okay, too – average, not speedy.</p> <div data-bbox="565 957 636 1029"></div> <p data-bbox="581 1033 620 1054">Adley</p> <div data-bbox="548 1058 646 1087">★★★★☆</div> <p data-bbox="685 974 1360 1062"><b>Ordered my food at 12:35. Estimated delivery time was 1:10 pm and then, it jumped to 13:40. I got my food at 14:50, more than 2 hours after ordering it.</b></p> <div data-bbox="565 1108 636 1180"></div> <p data-bbox="581 1184 620 1205">Noah</p> <div data-bbox="548 1209 646 1239">★★★★☆</div> <p data-bbox="685 1125 1360 1213"><b>The delivery man couldn't find my apartment, so he dropped the food off at a different location, marked it delivered, and never responded to customer service calls to him.</b></p> <div data-bbox="565 1255 636 1327"></div> <p data-bbox="581 1331 620 1352">Wyatt</p> <div data-bbox="548 1356 646 1386">★★★★★</div> <p data-bbox="685 1268 1360 1356">The driver was very courteous, and our delivery was early. The food was hot and delicious. I will definitely order again and try other things on the menu.</p>
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<p>Feasibility-related, abstract condition</p>	<div data-bbox="548 226 651 363">         Kala        ★★★★★☆     </div> <p data-bbox="678 247 1360 342">For the amount of money I spent, I'd say the food was okay – not bad but not great. The delivery was okay, too – average, not speedy.</p> <div data-bbox="548 373 651 510">         Adley        ★★★★★☆     </div> <p data-bbox="678 394 1328 489"><b>Has very unreliable and inaccurate track record; completely inconvenient. You may wish to avoid using this delivery app unless you want to wait ages for your food to arrive.</b></p> <div data-bbox="548 527 651 663">         Noah        ★★★★★☆     </div> <p data-bbox="678 548 1360 642"><b>The delivery man was absolutely unacceptable and disturbing. Amazingly disappointing lack of accountability. Please take responsibility for the mistake.</b></p> <div data-bbox="548 674 651 810">         Wyatt        ★★★★★★     </div> <p data-bbox="678 695 1360 789">The driver was very courteous, and our delivery was early. The food was hot and delicious. I will definitely order again and try other things on the menu.</p>
<p>Desirability-related, concrete condition</p>	<div data-bbox="548 877 651 1014">         Kala        ★★★★★☆     </div> <p data-bbox="678 898 1360 993">For the amount of money I spent, I'd say the food was okay – not bad but not great. The delivery was okay, too – average, not speedy.</p> <div data-bbox="548 1024 651 1161">         Adley        ★★★★★☆     </div> <p data-bbox="678 1045 1360 1140"><b>The food was good until my husband found a hair in his food. He tried to call the restaurant to let them know but they never picked up the phone.</b></p> <div data-bbox="548 1178 651 1314">         Noah        ★★★★★☆     </div> <p data-bbox="678 1199 1360 1293"><b>There was no cheese which I paid extra for, no ketchup which I asked for, and no straw for my drink. I ordered a diet coke but my drink was only half filled and was regular coke.</b></p> <div data-bbox="548 1325 651 1461">         Wyatt        ★★★★★★     </div> <p data-bbox="678 1346 1360 1440">The driver was very courteous, and our delivery was early. The food was hot and delicious. I will definitely order again and try other things on the menu.</p>

Desirability-related, abstract condition	 Kala 	For the amount of money I spent, I'd say the food was okay – not bad but not great. The delivery was okay, too – average, not speedy.
	 Adley 	<b>If possible, I would give this place 0 star for its poor hygiene conditions. It's shame on me for waiting this long to have food from such a disgusting and unhygienic place.</b>
	 Noah 	<b>Don't expect to get your order right. They are too busy to even spare a second to read your instructions. Completely careless and in no way attentive.</b>
	 Wyatt 	The driver was very courteous, and our delivery was early. The food was hot and delicious. I will definitely order again and try other things on the menu.

Screen 5

Please indicate the level of agreement regarding the following statement.

	Strongly Disagree	Somewhat Disagree	Slightly Disagree	Neither Disagree nor Agree	Slightly Agree	Somewhat Agree	Strongly Agree
The stated service failure is a process failure							
The state service failure is an outcome failure							

How would you evaluate the language used in negative reviews?

Concrete	1	2	3	4	5	6	7	Abstract
----------	---	---	---	---	---	---	---	----------

How would you describe the service problems presented in negative reviews?

Mild problem	1	2	3	4	5	6	7	Severe problem
Minor problem								Major problem
Insignificant problem								Significant problem

How realistic were the review scenarios?

Not at all realistic	1	2	3	4	5	6	7	Highly realistic
----------------------	---	---	---	---	---	---	---	------------------

How easy was it for you to process the reviews?

Difficult to process	1	2	3	4	5	6	7	Easy to process
----------------------	---	---	---	---	---	---	---	-----------------

How easy was it for you to understand the reviews?

Difficult to understand	1	2	3	4	5	6	7	Easy to understand
-------------------------	---	---	---	---	---	---	---	--------------------

How did you feel when reading the reviews?

Felt wrong	1	2	3	4	5	6	7	Felt right
------------	---	---	---	---	---	---	---	------------

To what extent, if at all, did the reviews make you feel...

Angry	Not at all	1	2	3	4	5	6	7	A great deal
Annoyed	Not at all	1	2	3	4	5	6	7	A great deal
Aggravated	Not at all	1	2	3	4	5	6	7	A great deal
Irritated	Not at all	1	2	3	4	5	6	7	A great deal

Please indicate the level of agreement regarding the following statement.

	Strongly Disagree	Somewhat Disagree	Slightly Disagree	Neither Disagree nor Agree	Slightly Agree	Somewhat Agree	Strongly Agree
I am considering switching to another service provide with better customer reviews							
The likelihood of me switching to another service provider is high							
I am determined to switch to another service provider with better customer reviews							

Please indicate the level of agreement regarding the following statement.

	Strongly Disagree	Somewhat Disagree	Slightly Disagree	Neither Disagree nor Agree	Slightly Agree	Somewhat Agree	Strongly Agree
I'll say negative things about the service provider to other people							
I'll recommend this service provider to someone who seeks my advice							
I'll discourage friends and acquaintances to do business with this service provider							

Screen 6

Please indicate the level of agreement regarding the following statements.

	Strongly Disagree	Somewhat Disagree	Slightly Disagree	Neither Disagree nor Agree	Slightly Agree	Somewhat Agree	Strongly Agree
I often read other consumers' online reviews to know what products/brands make good impressions on others							
To make sure I buy the right product/brand, I often read other consumers' online reviews							
I often consult other consumers' online reviews to help choose the right product/brand							
I frequently gather information from online reviews before I buy a certain product/brand							

How often do you use online line food platforms to order food from restaurants?

- Never
- 1-2 times per month
- 1-2 times per week
- 3-4 times per week
- 5-6 times per week
- Everyday (i.e., 7 times per week)

How would you describe your prior experience of using OFD services?

Dissatisfied	1	2	3	4	5	6	7	Satisfied
Unfavorable								Favorable
Unpleasant								Pleasant
Disgusted								Contented
Terrible								Delighted

Screen 7

What is your gender

- Male
- Female

What is your annual household income?

- Less than \$25,000
- \$25,000-\$49,999
- \$50,000-\$74,999
- \$75,000-\$99,999
- \$100,000-\$149,999
- \$150,000 or more

What is your employment status?

- Employed full time
- Employed part time
- Retired
- Student
- Unemployed
- Other

What is your ethnicity?

- African American or Black
- Asian or Pacific Islanders
- Caucasian or White
- Latino or Hispanic
- Others

## APPENDIX D

### PRETESTED ONLINE REVIEW STIMULI

#### Positive Reviews

PO1	We've ordered from here the past few months, and I've had nothing but great experiences! Always one of my go-to places for food.
PO2	The driver was very courteous and our delivery was early. The food was hot and delicious. I will definitely order again and try other things on the menu.
PO3	Definitely endorse this place. I order from here at least a few times per month. Fresh and tasty, reasonably priced, and always complete orders.
PO4	The food was delivered right on time. Everything was nicely prepared and exactly how I requested. Just wish the portion of desert had been bigger.
PO5	The sauce is perfectly seasoned. The delivery guy was kind and exactly followed the instructions we left. Will order again.

#### Neutral Reviews

NUE1	Maybe this place is better in person, but we weren't impressed with the delivery. The food was tasty and the portion was just right, but cold.
NEU2	Delivery took an hour, which is pretty normal. The food had good toppings but was a bit dry for me. I will ask for extra sauce next time.
NEU3	For the amount of money I spent, I'd say the food was okay – not bad but not great. The delivery was okay, too – average, not speedy.
NEU4	My order was correct and delivered right on time. The food looked great, but the taste lacked flavor. May try other menus later.
NEU5	The food was better than expected but just a bit overpriced – good taste but a very small portion size. I wish there were more accurate order status notifications.

#### Feasibility-related, Concrete Negative Reviews

NE1	Ordered my food at 12:35. Estimated delivery time was 1:10 pm and then, it jumped to 13:40. I got my food at 14:50, more than 2 hours after ordering it.
NE2	Had the order set up the day before. Five minutes before my order was supposed to arrive, I received a text saying that they cancelled my order with no explanation.
NE3	The driver came, set my order on the front porch, and left without ringing the doorbell. The food was cold by the time I finally found it.
NE4	The delivery man couldn't find my apartment, so he dropped the food off at a different location, marked it delivered, and never responded to customer service calls to him.
NE5	The sides were missing, so I called their customer service. After an hour conversation, they offered a partial refund but said it will take 10 business days.

Feasibility-related, Abstract Negative Reviews

NE6	This has got to be the most unreliable service I've ever encountered in my life. It was very frustrating to have my order cancelled at the last minute. Classic case of overpromising.
NE7	Has very unreliable and inaccurate track record; completely inconvenient. You may wish to avoid using this delivery app unless you want to wait ages for your food to arrive.
NE8	The delivery man was absolutely unacceptable and disturbing. Amazingly disappointing lack of accountability. Please take responsibility for the mistake.
NE9	I can't understand why the driver can't follow simple instructions on my orders. Definitely no fun eating cold food that cost \$30+ dollars.
NE10	They don't care about their customers but only themselves. Their customer service is beyond a joke. Not helpful at all. The worst customer support ever.

Desirability-related, Concrete Negative Reviews

NE11	The food was good until my husband found a hair in his food. He tried to call the restaurant to let them know but they never picked up the phone.
NE12	I requested no spices, but the food was spiked with chiles. I had to reorder from a different restaurant and wait for another 30 minutes.
NE13	The sauce spilled all over the bag. When I opened the bag, the sauce container was laying on its side, and its lid was partially opened.
NE14	My food was way overcooked and burnt. The salad was placed on the hot food and got soggy. The accompanying sauce was watery and way too salty.
NE15	There was no cheese which I paid extra for, no ketchup which I asked for, and no straw for my drink. I ordered a diet coke but my drink was only half filled and was regular coke.

Desirability-related, Abstract Negative Reviews

NE16	They can't even be bothered to follow the simple instructions on my order. How hard is it to please a customer when no chiles was all I asked for? Absolutely unsatisfactory.
NE17	If possible, I would give this place 0 star for its poor hygiene conditions. It's shame on me for waiting this long to have food from such a disgusting and unhygienic place.
NE18	Their packaging is just beyond ridiculous. Utterly irresponsible and unprofessional to take delivery orders with the lack of care in their packaging.
NE19	Don't expect to get your order right. They are too busy to even spare a second to read your instructions. Completely careless and in no way attentive.
NE20	Everything I ordered didn't taste right –it was not edible at all. It was very disappointing and totally a waste of money and time.

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## CURRICULUM VITAE

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### EDUCATION

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### REFEREED WORKS PUBLISHED AND ACCEPTED

**Kim, M.**, Kim, E. J., & Busser, J. A. (2022). Food delivery now or later: The match-up effect of purchase timeframe and review recency. *International Journal of Hospitality Management*, 102. <https://doi.org/10.1016/j.ijhm.2022.103143>

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