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The Effects of Availability Heuristic Cues on Restaurant Purchase Decisions

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THE EFFECTS OF AVAILABILITY HEURISTIC CUES ON RESTAURANT PURCHASE
DECISIONS

By

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A dissertation submitted in partial fulfillment
of the requirements for the

Doctor of Philosophy - Hospitality Administration

Hospitality Management
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ABSTRACT

THE EFFECTS OF AVAILABILITY HEURISTIC CUES ON RESTAURANT PURCHASE DECISIONS

by

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This dissertation applied the theory of judgment heuristics to investigate the influence of availability cues on restaurant purchase decisions. Two studies were conducted in which respondents made food choice decisions. In the first study, respondents evaluated menu items in a $2 \times 2 \times 2 \times 2$ experimental design that manipulated scarcity cues, bundling, and price. In the second study, respondents evaluated restaurant appeal and menu choice in a $3 \times 2 \times 2$ experiment that manipulated information vividness, message frequency, and price. The results of Study 1 suggest that respondents' evaluations and purchase intentions can be influenced by scarcity messages communicated by the server but not by scarcity cue that appear on the menu. In the second study, respondents formed favorable expectations of the restaurant and the target menu item when they were exposed to dramatic reviews with storylines. The results of Study 2 demonstrate that the more frequent an item is mentioned in the reviews, the more likely the item is to be purchased. The lack of support for price bundling suggests that in low-price low-risk conditions, it can easily be overpowered by availability cues. The findings of this dissertation provide insights into underlying psychological cues that affect purchase decisions in today's purchasing environment.

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CHAPTER 1

INTRODUCTION

Americans are dining out more than ever before (Smith, Ng, & Popkin, 2013). Americans' expenditures on food away from home doubled from 25% of the total food expenditure in 1954 to 50% in 2013 (USDA Economic Research Service, 2013). U.S. food retailers have been increasing their product offerings to cater to this growth in demand. In the span of 14 years, from 1997 to 2010, fast food retailers have increased their product offerings by 53% (Bauer, Hearst, Earnest, French, Oaks, & Harnack, 2012). The restaurant industry accounts for 4% of the U.S. GDP and is growing, with projected sales of \$783 billion in 2016 (National Restaurant Association, 2015). Therefore, to remain a player in the highly competitive restaurant industry, it is imperative for marketers to understand how food purchase decisions are made and the factors that influence these decisions.

It has been estimated that the average adult makes around 35,000 decisions daily, with more than 200 being food-related judgments (Wansink & Sobal, 2007). In today's global marketplace, manufacturers and service providers are competing for consumers' attention, which makes decisions regarding purchases challenging. One of the major factors that influences consumer decision-making is information and its sources (Bettman, Luce, & Payne, 1998; Williams, 2004). Though tempting, the evaluation of all available information prior to making a decision is impossible due to cognitive limitations (Simon, 1957). Constraints such as time and money can significantly affect decision-making (Böckenholt & Kroeger, 1993; Amirpur & Benlian, 2015) as can situational and environmental stressors. Food-related decisions are deemed less important than other life-changing decisions and are often made in distracting environments that may lead to intuitive or "mindless" processing (Wansink, 2006a). When experiencing

psychological stresses, individuals focus on salient information and rely on mental shortcuts to arrive at an optimal decision (Amirpur & Benlian, 2015; Svenson & Maule, 1993).

In the restaurant setting, food-related information is typically communicated through the server and a silent salesperson: the menu (Pavesic, 1989). Because foods are not served until they are ordered, the menu provides an element of tangibility to the restaurant service (Bowen & Morris, 1995). Just like the server, the menu can influence consumers' selections and purchase decisions (Kershaw, 2009). Research on the effects of menu designs on decision-making suggests conflicting findings (Feldman, Su, Mahadevan, Brusca, & Hartwell, 2014). It was found that the strategies used in menu designs could sometimes have no effect, a partial effect or a significant effect in pushing the sales of a target menu item (Bowen & Morris, 1995; McCall & Lynn, 2008; Reynolds, Meritt, & Pinckney, 2005; Wansink, 2001; Wansink, 2006a).

Academics and practitioners have applied several strategies to promote high-margin menu items that can increase profitability. Some of the widely used strategies include using a descriptive label for menu items, manipulating items' positions on the menu, highlighting or placing symbols next to menu items, placing boxes around certain menu categories, displaying menu items' pictures, and formatting menu items' fonts as well as text sizes (Bowen & Morris, 1995; Dayan & Bar-Hillel, 2011; Drysdale & Galipeau, 2008; Wansink, 2001; Wansink, 2006a). Research found that price presentation (Parsa & Njite, 2004) and nutrition labelling (Brochu & Dovidio, 2014; Feldman et al., 2014; Yepes, 2015) can influence consumer menu item selections.

The menu is not the sole information source for consumers. The proliferation of online reviews has enabled consumers to gain access to information that can assist them during pre-purchase evaluations with very low search costs (Brynjolfsson & Smith, 2000; Zhu & Zhang,

2010). This is particularly true for experiential-intensive products and services due to the limited value assessment that can be done before the actual consumption of experiential products and services (Noone & McGuire, 2014; Papathanassis & Knolle, 2011). Increased smartphone ownership and Internet accessibility have allowed consumers to develop pre-trial beliefs regarding a product or service through user-generated reviews (Gretzel & Yoo, 2008; Sen & Lerman, 2007; Sparks & Browning, 2011). It is not surprising to see that user-generated reviews have become an important source of information for consumers. According to an industry report, consumers perceived online reviews as being the second most trusted source of advertising, after word-of-mouth recommendations from friends and family (Nielsen, 2012).

Although the ease of access to thousands of online reviews reduces consumers' search efforts, increased cognitive effort is needed to filter through useful information (Liu & Park, 2015) because evaluating information is a strenuous activity for the human mind (Taylor, 1982). According to the "bounded rationality" notion, rationality is restricted to cognitive limitations and available information (Simon, 1957). Due to this limitation, not all information can be evaluated during pre-purchase considerations. Humans are seen as "misers," often resorting to mental shortcuts or heuristics that enable them to make judgments as efficiently as possible while optimizing their cognitive effort (Fiske & Taylor, 1991; Tversky & Kahneman, 1974).

Cognitive research suggests the presence of two distinct processing systems in the human mind: System 1, which is fast, autonomous, and intuitive, and System 2, which is slow, analytical, and deliberate. System 1 is known as heuristic or automatic processing while System 2 is known as analytical or systematic processing (Chaiken, 1980; Shiffrin & Schneider, 1977; Kahneman, 2010). Being cognitive misers, people seek to reduce the effort associated with cognitive processes (Fiske & Taylor, 1991; Shah & Oppenheimer, 2008). Faster information

processing with less effort explains why individuals rely on heuristics when they are required to evaluate uncertain values or probabilities (Tversky & Kahneman, 1974). Heuristics are used when individuals face unimportant and low-risk tasks, or when the information source can be trusted. This enables individuals to conserve the mental effort required to perform complex judgments (Schul, Mayo, & Bernstein, 2004).

In contrast to System 2, individuals engaging in System 1 processing exert minimal effort in information evaluation. Instead, they rely heavily on cues that simplify the overall information (Chaiken, 1980; Chaiken, Liberman, & Eagly, 1989). The availability heuristic suggests that individuals are influenced by information that can be easily recalled or that is more readily available in the mind. Some of the factors that can affect information availability are information salience, frequency, vividness, frequency of co-occurrence, and illusory correlation (Tversky & Kahneman, 1973).

Rational decisions are the products of both intuition and information, and can be affected by various aspects (Simmons & Nelson, 2006). For example, consumers are strongly influenced by the price and value perception of a product or service. This explains why marketers are spending millions of dollars on advertisements and product promotions. Both intuitive cues and product promotion have been studied in isolation of one another in consumer behavior research. The integration of the two conditions that co-exist in the purchasing environment provides a more comprehensive understanding of how consumers' purchase decisions are influenced by heuristic cues and promotions in the restaurant setting. By connecting heuristic cues and product promotion, this dissertation examines how different cues interact and influence consumers' value perception.

Problem Statement

Consumers are aware of about half the food decisions they make (Wansink, 2006). One of the key factors of successful marketing is to ascertain what influences the decision-making process (McQuilken, Robertson, Polonsky, & Harrison, 2015). Existing research on restaurant menus has focused on pricing and profitability strategies, including menu engineering (e.g., Daly, 2002; Kasavana & Smith, 1982; Raab & Mayer, 2007; Schmidgall & Ninemeier, 1986; Raab, Mayer, Shoemaker & Ng, 2009). Although a growing body of research is focusing on the psychological aspects of menu design and consumer choice (Bowen & Morris, 1995; Dayan & Bar-Hillel, 2011; Drysdale & Galipeau, 2008; Hou, Sun, Wan, & Yang, 2015; Wansink, 2001, 2006a, 2006b), there is limited research investigating the psychological processes underlying consumer purchase decisions in the restaurant context.

In making decisions, individuals rely on knowledge acquired through product usage and/or from information gathered during the evaluation process (Barber, 2009). The latter is true for service-intensive businesses such as hotels and restaurants. This is because services remain intangible until they are purchased and experienced. Research in restaurant settings focuses primarily on how experiential aspects affect consumer satisfaction, revisit intention, and loyalty (e.g., Han & Ryu, 2009; Hyun, 2010; Shi, Prentice, & He, 2014). Additionally, empirical findings indicate that food quality is one of the antecedents of customer satisfaction and loyalty (Ha & Jang, 2010; Ryu & Han, 2010). However, it remains unclear how consumers' value perceptions can be influenced by internal (from servers and the menu) and external (from user-generated reviews) information.

When exposed to psychological stress, humans tend to focus on salient information (Kerstholt, 1994; Svenson, Edland, & Karlsson, 1985), which causes them to apply mental

shortcuts to decision-making (Svenson & Maule, 1993). “Persuasion claims” is a marketing practice that uses pressure cues to persuade purchase (Jeong & Kwon, 2012). Some pressure cues include product warranty, time pressure, and product availability pressure (e.g., Dhar & Nowlis, 1999; Suri, Kohli, & Monroe, 2007; Suri & Monroe, 2003; Amirpur & Benlian, 2015).

When presented with scarcity cues, consumers are expected to engage in a fast and intuitive cognitive process (Cialdini, 1984). It is suggested that such cues reduce brain sensitivity, thus hindering consumers’ ability to process information analytically and causing them to rely on mental shortcuts or heuristics. Conversely, the liberalized commodity theory suggests that “unavailability has the ability to enhance one’s motivation to process” (Bozzolo & Brock, 1992). The findings of these studies remain inconclusive. Consumers often use the availability and pricing cues inherent in the marketplace as reference points during judgment and evaluation. These cues serve as shortcuts for value perception.

The intersection of availability cues and product bundling serves as an avenue for researchers to examine these two conditions together and develop a comprehensive understanding of how judgments are formed under complex and multifaceted conditions. As technological advancements allow information to be accessed more easily, a comprehensive understanding of how cues in the purchase environment influence consumer selection has implications for academics and practitioners alike.

Purpose of the Study

The purpose of this research is to explore how heuristic cues interact with promotional strategies such as product bundling to affect food purchase decisions. Findings of this research enrich our understanding of whether purchase decisions can be influenced by informational cues

that can be manipulated by service providers, or in this study's context, by restaurateurs. This research has the following objectives:

1. To examine how consumers estimate the value of a menu item in the presence of availability cues such as scarcity, information vividness, frequency of mentions, and bundling offers in the restaurant context.
2. To investigate how availability cues communicated through different mediums (menu, server, and online review platforms) interplay with bundling offers in affecting consumers' evaluation and choice.
3. To identify if availability cues in the restaurant setting can induce systematic cognitive biases that may affect consumers' value estimation.
4. To explore whether consumers place heavier weight on the availability cues or on the promotional cues of a product.

Research Questions

The aforementioned objectives are attained through two separate studies. Conducting two distinct studies permits different variables to be investigated, allowing for greater understanding of how availability cues and product bundling affect evaluations and judgments. Each study answers specific research questions that contribute to the overall objective of this dissertation.

Study 1 focuses on scarcity cues in the restaurant setting. Though it may sound contradictory, the unattainability of a product can act as an available heuristic cue in the minds of consumers. This study examines whether the presence of scarcity cues can cause consumers to overestimate an item's appeal and value. This study answers the research question "how do scarcity cues affect product evaluations and choice in the restaurant context?"

Study 2 focuses on classic availability cues, specifically, information vividness and frequency in online reviews and the restaurant environment. A single encounter with a particular incident can influence a person's familiarity with the incident. Familiarity depends on factors such as frequency and can affect information retrieval. Retrieval is easier for vivid information as compared to dull information. This study answers the research question "how do the frequency and vividness of reviews influence consumers' value perceptions and purchase intentions?"

The results of both studies enhance our understanding of the effects of heuristic cues on consumer purchase behavior. Furthermore, this research provides insights into how these cues create systematic cognitive biases that can skew consumers' judgments. The findings of both studies enable the understanding of which cues are perceived as more available in the minds of consumers and whether they are overpowered by promotional strategies.

Delimitations

The limitations of this research are as follows:

1. This study utilizes scenarios depicting a restaurant setting in which participants evaluated and made hypothetical purchase decisions. As such, the findings of this study may not be generalized beyond this study's context. However, realism checks were conducted to ensure that the stimuli were sufficiently realistic to mimic the actual restaurant setting.
2. Participants made a hypothetical purchase decision without actual monetary tradeoffs. Therefore, their evaluations and intentions may not reflect their true purchase intentions. However, the same is true for the majority of research on consumer decision-making.
3. This research used participants recruited from an online panel, which could expose the study to selection bias. The research was accessible only to those with Internet

connections and those who agreed to be part of the panel; not all who were invited participated (Duffy, Smith, Terhanian, & Bremer, 2005).

Significance of the Study

This research makes significant theoretical and practical contributions to the area of consumer decision-making in the hospitality industry, particularly in the dynamic environment of food purchasing. From a theoretical standpoint, this study investigates how the availability heuristic and bundling promotion can introduce potential cognitive biases that impair consumers' judgments. In the past, the effects of pricing strategy and judgment heuristics on decision-making have been studied in isolation of one another. Though studies have discussed the interplay between bundling strategy and judgment heuristics, they were fixated mainly on the anchoring and adjustment heuristic. This study seeks to address the gap in the decision-making literature by investigating how consumers' purchase decisions are influenced by cues that are available in the restaurant setting and whether or not these cues cause consumers to misjudge a product's value. By examining how strategically imposed availability cues influence purchase behaviors, this study contributes broadly to the literature.

This research investigates the presence of multiple cues that influence consumers' evaluations in the purchase environment. Findings of this study will enhance the understanding of how different cues trigger different levels of cognitive fluency, which explains the different magnitude of influence during purchase decisions regarding a hospitality product or service. The reliance on the heuristic System 1 for trivial and familiar tasks such as purchasing food makes it imperative to understand the potential biases that typically follow the use of mental shortcuts.

An understanding of cues that can affect consumer judgments will benefit marketers and service providers alike. From a practical perspective, given the intense competition in the

restaurant industry, this research presents insights into how restaurateurs can manipulate product availability within their restaurant settings, thus influencing consumers' purchase behavior. The findings of this study will enable businesses to develop strategies that incorporate heuristic cues that can generate favorable evaluations during pre-purchase evaluations rather than relying solely on price promotions. Moreover, as user-generated reviews become increasingly important during pre-purchase evaluations (Ba & Pavlou, 2002), it is critical for academicians and practitioners to understand the elements that affect decision-making and the circumstances that intensify or reduce the influence of reviews on consumers' evaluations. This research investigates the effects of availability cues inherent in online reviews, such as frequency and vividness, and provides insights into how these cues affect judgment and decision-making in the restaurant context. Understanding how certain information is weighted differently will enable restaurateurs to devise social media strategies that incorporate the cues that attract favorable judgments.

Definition of Key Terms

The following are the definitions of the key concepts and terms used throughout the dissertation

Availability Bias: A cognitive bias that causes decision makers to overestimate the likelihood or probability of an incident's occurrence (Tversky & Kahneman, 1974).

Availability Heuristic: A mental shortcut activated by the ease of recalling similar instances. Incidents that are easier to recall are more available in the mind (Tversky & Kahneman, 1973).

Bundling: A marketing practice of selling or offering two or more separate products or services as a package (Adams & Yellen, 1976; Guiltinan, 1987).

Heuristics: Simple mental shortcuts that can yield reasonable judgments or severe systematic errors (Tversky & Kahneman, 1973).

Information Vividness: Information is considered vivid when it is emotionally interesting, concrete and image provoking, and proximate in sensory, temporal, or spatial way (Nisbett & Ross, 1980).

Restaurant Reviews: User-generated text and visuals displayed online pertaining to a restaurant-related product or service.

Scarcity: A product is scarce when its demand exceeds its supply (Kemp & Bolle, 1999). Brock's (1968) principle of scarcity suggests that the desirability of a product is amplified when it is presumed to be scarce.

System 1 and System 2: Kahneman (2011) suggests a metaphor that there are two parts of our minds that operate in different manners. System 1 is fast and intuitive, while System 2 is slow and deliberate.

Summary

Based on the research questions, this dissertation is outlined as follows. In Chapter 2, relevant literature on dual process theory, heuristics and decision-making, scarcity effects, product bundling, menu design, and online reviews is reviewed to develop a theoretical framework that examines how availability cues and bundling strategy affect decision-making. In Chapter 3, the research design, sample, stimuli, procedures, instruments, and data analysis used in the dissertation are discussed. Findings from the two experiments are reported in Chapter 4. Key findings of the dissertation, its theoretical and practical implications, and directions for future research are discussed in Chapter 5.

CHAPTER 2

LITERATURE REVIEW

Introduction

This chapter presents a review of literature in the areas of dual-process theory, judgment heuristics, bundling strategy, the psychology of menu design, and online reviews. Classical and current research in each area, particularly research in the consumer behavior and hospitality domains, is reviewed and included in this chapter. This chapter is structured as follows: First, it introduces the dual-process theory of thinking and reasoning. Second, it highlights how judgment heuristics affect consumers' evaluations and decision-making. This serves as the conceptual foundation for this study. Third, persuasive cues such as scarcity, information vividness, information frequency, and bundling and how they manifest in the purchasing environment are discussed. Fourth, the psychology of menu design and online reviews is included. Finally, a conceptual framework is proposed. Drawing upon existing literature, particularly research on heuristic and systematic cognitive processing and decision-making, a conceptual framework illustrating the operationalization of the dual system in judgment and evaluation is developed and included in this chapter (Figure 1). This framework posits that different types of problems activate different systems that will be used by consumers, particularly during information evaluation. Finally, this chapter includes research hypotheses based on the theoretical support of existing literature.

The Dual-Process Theory

Research in thinking and reasoning has long suggested the presence of two types of minds in one brain. The dual process theory suggests the existence of two distinct systems or processes; one being fast and frugal, the other being slow and deliberate. Although this theory is

prevalent in the philosophy and psychology fields, distinctions between the two systems have been proposed by researchers from various fields, including learning, attention, reasoning, decision-making, and social cognition (e.g., Chaiken & Trope, 1999; Kahneman & Frederick, 2002; Reber, 1993; Schneider & Shiffrin, 1977). The dual process theories have evolved independently in various fields but considerable similarities can be observed. An overarching theme of the dual process theories is that thought processes that are fast, effortless, and almost mechanistic are distinctly different from processes that are slow, effortful, and controlled (Evans, 2003).

Researchers have attempted to develop broad dual system theories that link the expansive properties of the two types of thought process (Epstein, 1994; Evans & Over, 1996; Reber, 1993; Stanovich, 1999; Evans & Stanovich, 2013). Advocates of the dual process theories have proposed various terms to denote the two distinct cognitive systems, suggesting that two different modes of processing exist. Table 1 provides a summary of the labels used by researchers when referring to the two types of cognitive processing. To avoid showing preference for one theory, neutral terms such as System 1 and System 2 have been used (Kahneman & Frederick, 2002; Stanovich, 1999). Although the terms System 1 and System 2 may imply the existence of exactly two systems in the mind, each should be regarded as plural, as each of the systems is comprised of a set of systems that are interdependent of one another (Evans, 2008, 2010; Stanovich, 2004; 2011). Therefore, it is premature to assume that the human brain contains literally two parts. Moreover, Kahneman (2011) made it clear that the terminology used (System 1 and System 2) should be regarded as a metaphor.

Table 1

Alternative Names for System 1 and System 2

System 1	System 2	Authors
Associative System	Rule Based	Sloman (1996)
Heuristic Processing	Systematic Processing	Chaiken (1980)
Heuristic Processing	Analytic Processing	Evans (1984; 1989)
Tacit Thought Process	Explicit Thought Process	Evans & Over (1996)
Implicit Cognition	Explicit Learning	Reber (1993)
Interactional Intelligence	Analytic Intelligence	Levinson (1995)
Experiential System	Rational System	Epstein (1994)
Quick and Flexible Modules	Intellection	Pollock (1989)
Recognition-primed Decisions	Rational Choice Strategy	Klein (1998)
Implicit Inferences	Explicit Inference	Johnson-Laird (1983)
Automatic Processing	Controlled Processing	Shiffrin & Schneider (1977)
Automatic Activation	Conscious Processing System	Posner & Snyder (1975)

Note. Adapted from “Advancing the rationality debate,” by K. E. Stanovich and R. F. West, 2000, *Behavioral and Brain Sciences*, 23(5), p. 659. Copyright 2000 by Cambridge University Press. Adapted with permission.

System 1 is fast and autonomous, and is the system responsible for cognitive biases. This system is not influenced by working memory and individuals’ cognitive ability. In contrast, the low-capacity System 2 is slow, deliberate, and reliant on working memory and individual cognitive ability (Evans, 2008; 2011). The two systems differ mainly in terms of processing speed (Evans & Curtis-Holmes, 2005). One of the recurring themes of the dual process theories suggests that System 1 is evolutionarily old and is shared with other animals, while System 2 is evolutionarily recent and is better developed in humans (Evans, 2003). An extensive review and analysis of research in the dual process theories of cognition suggest four basic clusters of attributes commonly assigned to these two systems: 1) consciousness, 2) evolutionary

development, 3) functions, and 4) individual differences. Table 2 displays the attributes of the two systems.

Table 2

Attributes of System 1 and System 2

Cluster	System 1	System 2
Consciousness	Unconsciously accessible	Consciously accessible
Evolutionary Development	Older and primitive	More recent
Function	Functions in a domain-specific, contextualized manner using associative parallel processing	Functions in an abstract, sequential, and rule-based manner
Individual Differences	Fewer between-individuals variations, independent of working memory and general intelligence	More variation between individuals in terms of capacity and ability

Note. Adapted from “Dual-processing accounts of reasoning, judgment, and social cognition,” by J. S. B. Evans, 2008, *Annual Review of Psychology*, 59, p. 257. Copyright 2008 by Annual Reviews. Adapted with permission.

Although existing literature provides detailed attributes of the two forms of thinking, understanding how these two systems operationalize in judgment and reasoning remains a challenge (Gilbert, 1999; Gray, 2004; Salas, Rosen, & DiazGranados, 2010). A decision is rarely the product of a single system, as the two thought systems function and interact in intricate ways (Hammond, Hamm, Grassia, & Pearson, 1987). System 1 provides quick and intuitive answers, but can be biased and inaccurate. Careful analysis and deliberation through System 2 allow for more accurate decision-making, but limited cognitive resources restrict absolute dependence on this system.

Factors Affecting the Use of System 1 and System 2

Several internal and external factors can affect the operationalization of the two distinct cognitive processing modes. Physiological and emotional state, experience, and working memory capacity are some of the internal factors that can affect the selection of the systems used in forming judgments. Likewise, the type of processing system used can be influenced by external factors such as interruptions, time pressure, noise, and task complexity.

Internal factors

Current mood state. An individual's current mood state can trigger different types of cognitive processing modes. Positive moods lead to heuristic processing while negative emotions tend to activate systematic processing (Schwarz, 1990). A positive state of mind instigates inattentive and less cautious judgments that are susceptible to biases and errors. In comparison, negative moods prompt more effortful and deliberate information processing, resulting in greater judgment accuracy (Sinclair & Mark, 1995). When they are in a positive mood, individuals form judgments using past experiences, while when they are in a negative state of mind, they concentrate on content (Ruder & Bless, 2003). Individuals experiencing negative moods tend to gather more information, while those in a positive state of mind approach tasks with less effort and time (Staal, 2004). As such, positive moods are likely to evoke heuristic processing while negative moods induce systematic processing.

Current physiological state. Mental effort is linked to attention control, explaining why task demands are measured by the amount of effort needed to complete a task. Failure to exert sufficient effort according to task demands will result in cognitive performance reductions (Fairclough, 2001; Kahneman, 1973). Because of its limited availability, attention is regulated based on situations, importance, and task demands. The common stressors used in examining

attention are fatigue and sleep deprivation. Fatigue is described as the “diminished capacity for work and possibly decrements in attention, perception, decision-making, and skill performance” (Cercarelli & Ryan, 1996, p. 298). Experiments that exposed participants to sleep deprivation found inverse relationships between fatigue and the attributes of cognitive performance, such as response time, logical reasoning, visual comparison, math, attention, and multitasking (Baranski, Gil, McLellan, Moroz, Buguet, & Radomski, 2002; Wilkinson, 1964; Williams, Lubin & Goodnow, 1959). Tired and sleep-deprived individuals are likely to limit their processing efforts and rely on System 1.

Experience or familiarity. The level of experience or familiarity with a task can affect the selection of strategies used to form decisions. Those who are familiar with the assigned task are able to draw from a wealth of information to assist in decision-making. Experience enables individuals to compare and contrast current situations with previous outcomes (Klein, 1989). Experience can be increased via exposure and task repetition. The more familiar a person is in facing a particular task, the higher the likelihood that heuristic processing will be engaged.

Working memory. In adapting to varying demands and situations, working memory is used in selecting suitable heuristics to address the task. However, such a strategy is contingent upon an individual’s working memory and cognitive capability (Gigerenzer, Haffrage & Kleinbolting, 1991; Gigerenzer & Selten, 2001). Working memory is strongly associated with resource capacity (Broader, 2003; Gigerenzer et al., 1991). Engaging in a task that requires intensive working memory will compromise subsequent information processing tasks. As such, individuals who are preoccupied with a certain task will rely on heuristic processing for subsequent tasks to manage their finite cognitive resource (Broader, 2003; Staal, 2004).

Multi-tasking, fatigue, and sleep deprivation are proven to reduce the attention and vigilance that are commonly associated with System 2. Other than internal stressors, cognitive processing strategies can be influenced by external factors such as interruptions, external pressures, and task complexity.

External factors

Interruptions or disruptions. Interruptions can improve decision-making, particularly for simple tasks, while the inverse is true for more intricate tasks. Interruptions can reduce available cognitive resources or attention, leading to information overload and time pressure (Speier, Valacich & Vessey, 1999). Cognitive overload and time pressure lead to susceptibility to errors and increased variability (Van Galen & van Hoygevoort, 2000). When interrupted by time pressures, noises, and financial risks, individuals tend to perform poorly on tasks that require attention. However, the aforementioned interruptions do not affect tasks that require factual knowledge (Wickens, Stokes, Barnett & Hyman, 1991).

Time pressure. When pressed for time, individuals use intuition or heuristics to aid their judgments. Time pressure increases dependence on the rapid System 1 due to the restricted amount of time available for slow and deliberate information processing (Lipshitz, Klein, Orasanu & Salas, 2001). A study in the gaming context found that gamblers pressed for time make lower risk choices and spend most of their limited amount of time focusing on the negative outcomes of their decisions (Ben Zur & Breznitz, 1981). Thus, under time pressure, the fast and autonomous System 1 is more likely to be activated than the slow, analytical System 2.

Noise and heat. The presence of noise can improve cognitive performances for complex tasks but diminish reasoning performances for simple tasks (Davies & Tune, 1969). Exposure to more than moderately intense noises can cause distractions and sleep disturbances, decreasing

performance such as reaction time and verbal comprehension (Kjellberg, 1990). Likewise, exposure to heat can result in reduced attention (Pepler, 1958). Because attention decreases in the presence of excessive noise and heat, the less demanding System 1 will be prompted.

Task complexity. The intuition-focused System 1 is effective when dealing with complex situations in which easy-to-process information is preferred (Entin & Serfaty, 1990). Such information enables System 1 to rapidly integrate a complex set of cues. Meanwhile, the attention-demanding System 2 is a low-capacity system that can be easily overwhelmed by information overload (Dane & Pratt, 2007).

The finite amount of mental energy makes it difficult for individuals to allocate equal attention and effort to each task and problem. Therefore, the amount of mental energy spent on situations will vary according to the attention demands, affecting the selection of processing strategies adopted. Because individuals' rationality is bounded by limitations such as information, time, and mental energy, equal attention to all decisions is impossible. Food purchase decisions can be considered unimportant compared to other life-changing decisions such as marriage or changing careers. Therefore, it is expected that individuals will activate their System 1 or heuristic process for food-related decisions.

Judgment Heuristics

The seminal work on heuristics and biases by Tversky and Kahneman (1974) suggests that individuals depend on a limited number of heuristic principles to assist them in both complex cognitive operations and simple judgments and decision-making. This is particularly true when one must make judgments using inadequate information. Evaluating and assessing information in judgment formation are strenuous tasks for the mind (Taylor, 1982). As such, individuals tend to act as "cognitive misers," conserving their cognitive efforts by relying on

mental shortcuts or heuristic processing (Ebenbach & Keltner, 1998; Fiske & Taylor, 1991). When an information source is deemed credible, heuristics are used for unimportant, lower risk tasks as a way to sustain available cognitive resources that may be needed for more important assignments (Schul, Mayo, & Bernstein, 2004). While the use of shortcuts or heuristics eases information processing, they are sometimes accompanied with systematic biases that may lead to erroneous conclusions (Darke, Freedman, & Chaiken, 1995; Kahneman & Tversky, 1974).

Three classical heuristics were introduced by Tversky and Kahneman (1974): anchoring and adjustments, representativeness, and availability. Representativeness acts as a heuristic tool for judging the likelihood that a stimulus belongs to a category based on whether the stimulus has the essential features of the parent population (Kahneman & Tversky, 1972; Tversky & Kahneman, 1973). The representativeness heuristic is judged by the degree of similarity and by the reflection of randomness (Kahneman & Tversky, 1972). The absence of a logical sequence is regarded as random and is more likely to occur. For example, a series of coin tosses that yields TTTTHH or HHHTTT will be seen as too systematic and will not be considered representative of random coin tosses.

The second heuristic, anchoring and adjustment, applies to a wide spectrum of quantitative estimations. Decision makers use an initial anchor at the starting point of the estimation process and adjust it based on further information obtained (Epley & Gilovich, 2005; Tversky & Kahneman, 1974). Although the adjustment process is conducted to increase judgment accuracy, the final judgment will still be biased toward the initial anchor. In one of Tversky and Kahneman's (1974) earliest studies on anchoring and adjustments, participants computed the multiplication of $1 \times 2 \times 3 \times 4 \times 5 \times 6 \times 7 \times 8$ or $8 \times 7 \times 6 \times 5 \times 4 \times 3 \times 2 \times 1$ within five seconds. Due to the time limitations, participants could provide only rough estimates. Interestingly,

participants estimated smaller numbers (a median of 512) for the sequence that started with the smaller number and estimated larger numbers (a median of 2250) for the sequence that started with the larger number.

The Availability Heuristic

This dissertation focuses on the availability heuristic, which is a mental shortcut used in the formation of judgments and evaluations based on information that can be easily retrieved in the mind. The availability heuristic relies on the recollection of examples in an individual's mind when evaluating information used for decision-making (Tversky & Kahneman, 1973). Individuals evaluate information by recalling identical or similar instances from the past. If such instances can be recalled with fluidity and ease, the probability of occurrences will be considered large (Tversky & Kahneman, 1973). In an experiment to evaluate availability, participants were instructed to listen to two sets of lists containing the names of famous men and women. In the first set were 19 names of famous men and 20 names of less famous women, and the second set contained 19 names of famous women and 20 names of less famous men. The findings revealed that participants estimated more men than women in the first set and more women than men in the second set (Tversky & Kahneman, 1973). These findings could be attributed to the fact that famous names are easier to recall and, therefore, more available in the mind than less famous names.

Individuals may establish their initial expectations through the availability heuristic cues and be surprised when their expectations are violated. Meanwhile, System 2 has the ability to reset the expectations of System 1 almost instantaneously, causing unexpected incidents to be seen as acceptable (Kahneman, 2011). For instance, a person can develop high expectations of a restaurant's food quality based on the restaurant's Yelp! star ratings. Should the food quality fall

below expectations and cause negative emotions, System 2 will take over and reset initial expectations using possible reasons derived from System 1.

Factors affecting availability

Various factors, both internal and external, can affect availability. Strength of association is often used in predicting frequencies (Tversky & Kahneman, 1973). For example, if a person experiences horrible service at McDonalds, he/she will associate this bad experience with other fast food restaurants. This is due to the fact that McDonalds is strongly associated with the fast food industry. Empirical research found that ease of recall plays a more important role in frequency estimation than the absolute number of cases a person can remember (Schwarz, 1990; Schwarz, Bless, Strack, Klumpp, Rittenauer-Schatka, & Simons, 1991). In one of the studies, participants were instructed to recall and list six (relatively easy task) or twelve (relatively difficult task) occasions when they had been assertive. Those who were asked to recall fewer items rated themselves as more assertive than those who recalled and listed more items (Schwarz et al., 1991). The findings suggest that ease of recollection is determined by how easy contents were brought to mind, and not by the number of contents remembered.

Vivid information is more likely to be remembered in comparison to regular information. Information is considered vivid when it is emotionally interesting, concrete, image provoking, and proximate in a sensory, temporal, or spatial way (Nisbett & Ross, 1980). Information vividness increases the ease of recall and retrieval from the working memory (Reyes, Thompson, & Bowers, 1980). After several days of the media playing news of a plane crash, individuals will assume that there is a higher likelihood of dying from a plane crash than from the overconsumption of alcohol, even though the latter is much more likely. Because plane crashes are foreign and vivid in the mind, individuals tend to overestimate the likelihood of such

incidents. In experimental research, vividness is manipulated using the presence (vs. absence) of pictures (Ci, 2008; Egger, Smith, Schneider, & Minder, 1997), concrete (vs. abstract) words (Kim et al., 2016), concrete (vs. abstract) pictures (Bell & Loftus, 1985; Kim et al., 2016), narrative evidence (vs. statistical evidence) (Eaton, 2011), and the direct (vs. indirect) transmission of information (Higgins & Thompson, 2002). Mundane information that is unclear and dull is less likely to be noticed than vivid information that is concrete, emotionally evoking, and laden with visuals or images.

Pictorial presentations require less systematic processing, thus explaining the preference for them over verbal descriptions of a product or service (Hollbrook & Moore, 1991; Veryzer & Hutchison, 1998). Images are processed as a whole, while words are processed in a deliberate and fragmented manner. The findings of an eye-tracking experiment by Townsend and Kahn (2014) reveal that visual stimuli aid consumers in scanning product assortments faster than textual descriptions. Pictorial information is processed in the left hemisphere of the brain, while verbal information is processed in the right hemisphere. Therefore, pictorial information is assumed to be abstract and verbal information is assumed to be concrete due to its association with the right side of the brain (Holbrook & Moore, 1981). On the other hand, Amit, Algom, and Trope (2009) suggested that words are based on abstract representations but pictures are based on concrete representations. In an experiment conducted by Kim, Kim, Kim, and Magnini (2016), participants evaluated two hotels based on information that was either concrete or abstract. The researchers manipulated concrete information by describing detailed specifics accompanied by concrete pictures (a hotel room) and manipulated abstract information by describing in general accompanied by abstract pictures (hotel scenery). The findings of this study

indicate that participants with temporal distance in the near future respond favorably to concrete information.

Vivid information is able to draw attention, thus affecting how information is evaluated. In the restaurant setting, menu items that attract the most attention are usually the most popular ones. This is probably because prominent menu items are more available in the minds of the consumer. This dissertation examines how vivid messages manifest in the restaurant setting by manipulating online reviews that are specific, concrete, and uses exciting words as opposed to mundane reviews that are dull, abstract, and regular.

Availability biases

Heuristics allow limited cognitive resources to be used efficiently. Although they are typically effective, they inevitably introduce systematic biases in decision-making. Biases occur when the mind places uneven weights on the heuristic cues (Kahneman & Frederick, 2002). Researchers have proposed several biases inherent in the use of the availability heuristic:

Biases due to the retrievability of instances. When the frequency of events is judged based on the availability of its instances, an event that is easier to recall will seem to occur more frequently than will an event of equal frequency whose instances are less vivid in the mind. Familiar events can be recalled more fluidly, thus leading decision makers to overestimate the frequency of their occurrences. Occurrences that are salient and recent can affect the retrievability of instances (Tversky & Kahneman, 1974). Information is salient if it is colorful, if it is unique, and if it stands out among the rest. Decision makers will place heavier weight on salient information, leading to biased evaluations (Taylor & Thompson, 1982).

Biases of imaginability or the availability of construction. Sometimes the probability of an event is not assessed from actual experience or the experience of surrounding people but

through instances generated in the mind. Frequencies of occurrences are estimated by how easily relevant instances are generated. However, as with retrievability of instances, the ease of generating instances may not accurately reflect actual frequency (Tversky & Kahneman, 1974).

Biases due to the effectiveness of a search set. This bias is similar to the availability of construction. Different tasks activate different search sets. Tasks that are easier to search are assumed to be more frequent than tasks that require additional search effort (Tversky & Kahneman, 1974).

Illusory correlation. In illusory correlation, the frequency of which two events will occur is judged based on the strength of association between the two events. If the events are assumed to be strongly correlated to one another, there is higher chance that decision makers will overestimate the events' co-occurrence. (Chapman & Chapman, 1969, Tversky & Kahneman, 1974).

In the dining environment, many cues can subconsciously influence our choices. This dissertation focuses on how cues such as information vividness and frequency of information exposure can influence consumers' decision-making in the restaurant setting.

Heuristics in consumer behavior and hospitality research

Individuals place heavier weight on information that is readily available and easily retrieved. Understanding how availability cues affect decision makers' judgment and deviations from accuracy can be an important indicator of how purchase decisions are made. Research has manipulated availability cues to understand purchase intention. Chevaliar and Mayzlin (2006) found that decision makers utilize both summarized statistics and descriptive reviews to assist in the decision-making process. This suggests that instead of taking the easy route (shortcuts),

decision makers will sometimes activate both System 1 and System 2 prior to making a purchase decision.

As cognitive misers, individuals prefer easy-to-process information, such as summarized quantitative data, as opposed to more complex descriptive information. In the travel and hospitality context, travelers tend to favor summated ratings because such information reduces processing efforts, thus acting as an efficient heuristic tool (Forman, Ghose, & Wisenfeld, 2008; Park & Nicolau, 2015; Sparks & Browning, 2011). In contrast, Noone and McGuire (2014) found that consumers favor descriptive reviews more than summated ratings during value assessments of a hotel accommodation. Descriptive reviews were seen as more salient and overrode the effects of quantitative ratings (Tsang & Prendergast, 2009).

In recent hospitality research, Book, Tanford, and Chen (2016) found evidence for the anchoring and adjustment heuristic. Their findings indicate that consumers are willing to pay more for resorts that had unanimously positive reviews in the presence of a higher reference price. Consumers prefer information that is easily processed. Sparks and Browning (2011) found that average consumer ratings have a higher influence on consumer purchase decisions as opposed to lengthy textual information. Moreover, summated ratings can serve as a concise form of information indicating a product's value (Tsang & Prendergast, 2009).

Familiarity can influence the availability heuristic. When consumers are less familiar with a particular issue, they are less skeptical of the information provided. Research suggests that the presentation format of green initiative messages and destination type can influence consumers' perception of tourism destinations (Hanks, Zhang, Line, & McGinley, 2016). Because unfamiliar information takes longer to process, consumers form more favorable

evaluations and are less skeptical about the message presented, depending on the type of tourism destination.

These inconsistent findings of existing research call for a more thorough analysis of the effects of heuristic cues in the purchase environment. This dissertation examines how availability cues manifest in the food purchase environment and whether service providers can manipulate these cues as a means to increase profitability and customer satisfaction.

Scarcity as a Heuristic Cue

Economists suggest that scarcity occurs due to a mismatch between limited resources and unlimited human wants. A product is scarce when the demand for the particular product exceeds its supply (Kemp & Bolle, 1999) and it appears more attractive simply because it may soon become unavailable. Because perceptions of loss play a significant role in decision-making, the unavailability of a product, service, or experience can influence an individual's actions or behavior (Cialdini, 1984). Following the price-quality proposition, in which price is an indicator of quality (Rao & Monroe, 1989), an item's unavailability or scarcity can act as a heuristic cue, as the value of a product intensifies as its availability depletes (Lynn, 1992; Pratkanis & Farquhar, 1992).

It is common for individuals to be tempted by a product's "limited edition" appeal, or by the product's "limited time only" discount. This phenomenon can be explained by Brock's (1968) principal premises of the commodity theory, which suggests that the desirability of a product is amplified once it is presumed to be unavailable. Unavailability refers to scarcity and increases the complexity of attaining a product. A product's unavailability can be caused by several factors, such as perception of scarcity, delay, and restrictions. As a product's perceived unavailability intensifies, the product's perceived value increases. However, this is applicable

only if the commodity has a potential benefit to the possessor and if the commodity must be conveyed from one person to another (Brock, 1968; Cialdini, 2009).

Researchers claim that perceived scarcity can increase satisfaction during consumption (Cialdini, 2009). When an item is perceived as scarce (available only in limited quantities or for a limited period of time), participants pay less attention to the amount of quantity consumed and are satiated more slowly. Reduced satiation due to the perception of scarcity can increase consumers' consumption, likelihood to purchase, and willingness to pay (Sevilla, 2013). This explains why products with limited consumer access (e.g., Starbucks' Pumpkin Spice Latte, seasonal fruits) are able to withstand the test of time.

What makes scarce products so desirable? Obtaining a rare or scarce item requires time, effort, and money. Thus, displaying such a possession can serve as an indicator of status and social position (Lynn, 1992). Interestingly, if an individual receives a product or service that is restricted from other interested parties, the item's perceived value increases. The perceived scarcity is more salient if the same information regarding the restricted availability of the product is disclosed to the possessor (Brock, 1968). An example of such commoditization of the hospitality and tourism product can be observed through the limited availability of hotel rooms overlooking the Las Vegas Strip during New Year's Eve. Marketers and hoteliers take advantage of this situation by promoting rooms that they claim have the "Best view in Las Vegas!"

An item's attractiveness increases when the potential possessor is made aware of its limited availability. An experiment conducted on school children found that offering limited (scarce) incentives increases the perceived value of the incentive as opposed to offering the incentive to everyone (Kelman, 1953). Likewise, another experiment found that the restriction of a choice alternative increases its attractiveness to the decision maker provided that the choice is

made available to the decision maker prior to the restrictions (Brehm, Stires, Sensenig, & Shaban, 1966).

Limited quantity vs limited time

In marketing, scarcity can be classified into limited-number tactics and deadline tactics. As the name implies, the limited-number tactic informs potential customers that a certain product is limited in supply and will be sold out in the near future (Aggarwal, 2008; Cialdini, 1984). The deadline tactic places an official time limit on an item's availability, creating time pressure for customers (Aggarwal, Jun & Huh, 2011; Cialdini, 1984). These two scarcity appeals do not have the same magnitude of influence on individuals. When exposed to limited-number scarcity and limited-time scarcity, consumers indicated higher purchase intentions (Aggarwal et al., 2011). This suggests that a distinction must be made between time restrictions on decision-making and time restriction in scarcity appeal.

Huang, Zeng, and Wei (2011) conducted an experiment that manipulated time pressure on a restricted time-based promotion (3 minutes or 30 seconds). After the given limit, the product was still available for purchase at a higher price. The experiment illustrates the scarcity of the time available for decision-making and not for the quantity of the product itself. The limited time scarcity occurs when consumers are told that unless they make a purchase within the time period, they will have to purchase the item at a higher price or not at all (Oruc, 2015).

Temporary unavailability can be referred to as a phantom alternative. A phantom alternative is an option that is available but inaccessible at the time a decision is made (Pratkanis & Farquhar, 1992). Several factors can restrict a potential possessor from obtaining a product alternative, such as budget limitations, time restrictions, legal requirements, or ethical principles. When a restriction is placed on an alternative, its perceived attractiveness increases (Brock,

1968; Pratkanis & Farquhar, 1992). In cases of temporary unavailability, the decision maker usually knows that the product or alternative will be available in the future as opposed to permanent unavailability, in which case the product can no longer be acquired for a period of time or indefinitely (Sloot, 2006).

Scarcity in consumer behavior and hospitality research

Scarcity creates a sense of urgency among potential customers, resulting in shorter information searches, increased purchases, and higher satisfaction (Aggarwal et al., 2011). As such, the understanding of how perceptions of unavailability affect consumers' decision-making can be profitable for businesses. In the fast-moving fashion industry, such as with H&M, Mango, Forever21, Zara, etc., limited supply and short fashion cycles serve as implicit cues that create a perception of scarcity (Gupta, 2013). When scarcity is explicitly communicated, consumers exposed to the scarcity message buy double the product than those who are not exposed to the scarcity message. This indicates that scarcity effects manifest themselves in both implicit and explicit communications. On the other hand, limited-time scarcity accelerates purchases, increases willingness to buy, and decreases further search intentions (Aggarwal & Vaidyanathan, 2003).

In the hospitality and tourism field, scarcity effects have been tested in customers' wine preference (van Herpen, Pieters, & Zeelenberg, 2014). By manipulating product unavailability, the research has found that demand-caused scarcity (the product is perceived as popular) trumps supply-caused scarcity (the product is exclusive) in influencing customer purchase decisions. West (1975) found that respondents report higher food evaluation when they have restricted access to a food source. A study conducted in the restaurant setting found no relation between

perceived scarcity and perceived price fairness or perceived value (Heo, Lee, Mattila, & Hu, 2013).

Sevilla (2013) investigated the effects of perceived scarcity on satiation but not on initial product evaluation. This dissertation explores how perceived scarcity (limited availability) affects consumers' initial evaluation and liking and, ultimately, influences their purchase decisions.

Bundling as Marketing Practice

Bundling is marketing two or more products and/or services for a single price (Guiltinan, 1987). Stremersch and Tellis (2002) proposed that there are two types of bundling: price bundling and product bundling. Product bundling is the sale of two or more products in a package at any price while price bundling is the sale of two or more products in a package at a discount. Bundling strategies allow sellers to sell more at a lower cost (economies of scale), create value, and ensure a surplus of demand. To take advantage of these benefits, hoteliers offer product bundles in various segments, such as travel, lodging, dining, and events (Naylor & Frank, 2001). The two main bundling strategies are pure bundling and mixed bundling. In the pure bundling strategy, buyers are offered only bundled sets, restricting any opportunities to purchase individual items. Sellers utilizing mixed bundling strategies give more freedom to buyers, as both sets and individual items are available for purchase (Adams & Yellen, 1976).

Consumers will purchase bundled sets if they offer better value as compared to purchasing the same items individually. The perceived benefits of purchasing a bundled package include reduced search costs, elimination of the assembly cost, minimal risk of product incompatibility, and volume discounts (Harris & Blair, 2006). Nonetheless, risks are associated

with the purchase of bundled packages, including risks of waste (from not utilizing some of the components), undesirable components, and limited freedom of choice.

According to Krishna, Briesch, Lehmann, and Yuan (2002), consumers evaluate product bundles based on savings they can obtain from purchasing a bundled package and the size of the bundle itself. Building upon prospect theory (Kahneman & Tversky, 1979), the findings of Yadav and Monroe (1993) suggest that consumers planning to purchase a product bundle may be attracted to the savings offered by the bundled package prior to noticing the savings on individual items.

Bundle size can be defined as the number of products and/or services offered in the bundled package (Agarwal, Frambach, & Stremersch, 2000). Therefore, the evaluation of bundle size can be derived from purchase quantity literature (Krishnamurthi & Raj, 1991; Wansink, Kent, & Hoch, 1998). Risk-averse individuals may wish to limit the risks involved in purchasing high volume from the same provider (Kahneman & Tversky, 1979; Stump, 1995). Consumers can try to reduce risks associated with each transaction by purchasing separate products from separate providers instead of buying multiple products from a single provider (Denton & Chan, 1991).

Bundling in Hospitality and Tourism

In hospitality settings, price information plays an important role in influencing consumers' choice in selecting travel packages on the Internet (Tanford, Baloglu, & Erdem, 2012). The authors found that consumers prefer transparent price information that displays itemized components and discounts, as it reduces uncertainty and simplifies their decision-making process. Event attendees report better value and enriched experiences when they have the opportunity to join multiple events instead of one (Xu, Wong, & Tan, 2016). Moreover,

compatibility with themes and service quality among the bundled events is highly desired. In the restaurant context, Myung, Feinstein, and McCool (2008) investigated factors that influence consumers' meal item selections within a prix fixe menu. They found that consumers consider value, familiarity, and the perceived healthiness of the food items as major attributes influencing their menu item selection. Hur and Jang (2015) explored the influence of health claims and menu composition on consumer perceptions of healthiness in a bundled menu context. The findings of their study indicate that the positioning of a healthy menu item in a bundle affects consumers' perception of the perceived healthiness of the menu. However, health claims in promotions alone do not influence consumers' perceptions of menu healthiness.

Price bundling strategies are employed in restaurants more often than we think. "Value meals," "combos," or "lunch specials" offered by restaurants are composed of bundled menu items sold at a discounted total price. Fine dining restaurants offer prix fixe or table d'hôte menus with a selection of appetizers, soup, entrees, and desserts at a single price (Myung et al., 2008). Flexibility in choosing the items from each category may increase consumers' evaluations, as a wide range of needs and wants can potentially be fulfilled. Bundled meal items can increase a restaurant's check average while providing consumers the opportunity to buy a full meal at a reduced price (Pavesic, 1999).

Mental accounting is a set of cognitive operations used by individuals in organizing their financial activities (Thaler, 1999). A person's consumption can be affected by the mental accounting that comes to mind when deciding whether to purchase a product. The price bundling strategy reduces consumers' "pain of paying," as the price information for multiple products is displayed once. Consumers' pain of paying is often associated with the two primary methods of pricing and presenting menu items (a la carte or table d'hôte) (Pavesic, 1989). Although pricing

menu items separately gives consumers more freedom to mix and match their meals, consumers' pain of paying increases in tandem with the increased price points. A higher price is normally charged for table d'hôte or set menus, as it comprises several menu items that constitute a complete menu. Despite the higher price, consumers experience less pain of paying when they buy in bulk rather than separate individual purchases (Kahneman & Tversky, 1979; Pavesic, 1989).

The price bundling strategy reduces consumers' price sensitivity and pain of paying, consequently increasing their likelihood to purchase (Yadav & Monroe, 1993).

Deal characteristics can influence consumers' judgment and choice, making it imperative that marketers understand how each characteristic can affect consumer decision-making. Promotions are costly and can bring both benefit and harm to the organization; therefore, evaluating how each characteristic operationalizes in different contexts allows marketers to develop promotional strategies that enhance consumers' perception of value. This research examines the effects of price bundling and availability cues in the restaurant setting and how these two interplay in influencing consumers' choice.

Promotions

Promotion is an indicator of a price reduction or added value (Inman, McAlister & Hoyer, 1990). This particular heuristic reduces consumers' search costs, as they will no longer consider and evaluate various brands when an alternative is sold at a cheaper price. Promotions help consumers simplify their choice process by restricting their evaluation to promoted brands while conserving mental energy and contributing to decision-making efficiency (Murthi & Rao, 2012). Deals provide psychological excitement to consumers in terms of transaction values (Grewal, Monroe & Krishnan, 1998; Lichtenstein, Netemeyer, & Burton, 1990). Consumers

taking advantage of the deal develop a positive utility independent of the price effects (Murthi & Rao, 2012).

Conversely, promotions can create complications for consumers. Such irritations are associated with increased cognitive efforts, increased physical handling, or both. For example, remembering to use a gift card or discount before it expires or ensuring that the correct product is selected while keeping track of the promotional requirements demands consumers' attention (or cognitive energy). Physical costs include consumers' efforts to print out and cut coupons, store extras or product premiums, and return mail-in rebate forms. Reducing both the cognitive and physical demands that are needed to take advantage of the deals can increase the likelihood of consumers utilizing these deals (Fogel & Thornton, 2008).

Research suggests that information format can influence consumers' cognitive, affective, and behavioral responses in the retail setting (Zeithaml, 1988). Consumers evaluate promotions or deals by obtaining and interpreting the deal characteristics to form their own perception of savings (Krishna et al., 2002). Promotional cues such as advertisements, coupons, rebates, and price discounts can affect consumers' evaluations and purchase intentions (Thaler, 1985; Monroe & Chapman, 1987).

Consumer Evaluation of Bundle

Extensive research has been done on how consumers evaluate marketing offers, including bundled promotions. Yadav (1994) suggests that people scan bundles to identify and evaluate the most attractive product and proceed to evaluate other products in the bundle. With the most attractive product as an anchor, the overall bundle evaluation is adjusted as individuals evaluate the remaining components. The study suggests that discounting the main item is more effective in increasing favorable evaluation of the bundle. Consumers select bundles by averaging the

ratings of individual components in the bundle itself (Gaeth, Levin, Chakraborty, & Levin, 1991).

The way a bundle is presented can influence consumers' evaluation of it. Though equally important, consumers report higher perceptions of value when they see additional savings on the bundle itself rather than savings on individual items in the bundle. When evaluating savings per item, consumers compare the savings on each item against the others. In contrast, when consumers are presented with additional savings on the overall bundle, they compare the savings with zero savings, thus highlighting the potential gain they can receive by purchasing in bulk (Yadav & Monroe, 1993). Consumers' buying objectives and expectations can influence their initial reference point (Puto, 1987). Prior purchase intention can affect consumers' perception of savings on bundle offers (Suri & Monroe, 1999). Marketers can try to change consumers' reference point by manipulating price, quality, and value. In the bundling context, the presence of more than one product gives the consumer an initial reference point (using the focal product as reference), further simplifying the evaluation process (Yadav, 1994).

The inferred bundle savings effect proposes that consumers generally believe that a product bundle will offer some price discounts, leading them to believe that a bundle can be a source of savings and a deal (Estalami, Maxwell, Heeler, Nguyen, & Buff, 2007). Individuals face computational challenges when evaluating product bundles (Agarwal & Chatterjee, 2003). As there are more products in a bundle, individuals must evaluate the value of each additional item in the bundle, resulting in increased computational effort.

Heuristics in Price and Product Bundling

Numerous factors can influence individuals' food preferences and purchase behavior. In reality, individuals are sometimes pressed for time when considering all available factors and

will rely on heuristic cues to make their decisions. The same principles apply to the evaluation of bundled food items. Individuals evaluate the overall utility of a bundle by calculating the sum of the individual components' utilities (Adams & Yellen, 1976). Although price is an important consideration, it may not be the best indicator of bundle evaluation because consumer perception of the bundle items could carry heavier weights (Gaeth et al., 1990). Yadav (1994) suggests that consumers simplify bundle evaluation by utilizing the anchoring and adjustment heuristic and perceive that scarcity is highly correlated with price (Verhallen & Robben, 1994). When the demand for a product exceeds its supply, consumers can expect a higher price for that particular product. In the event of excess demand, increasing the price of a product will help the market achieve equilibrium (Lynn, 1989).

Yadav (1994) proposes three stages of bundling evaluation: the scanning process, in which customers examine individual items without evaluating them, the anchoring process, in which consumers identify the item (anchor) most attractive to them, and the evaluation process, in which consumers use the anchor and evaluate other components against the main item's attractiveness in decreasing order of importance. The overall evaluation of the bundle is adjusted based on the evaluation of the individual components. As with other heuristics, anchoring and adjustment can lead to biases in evaluation. After evaluating the anchor, individuals assess the remaining components to form their overall judgments. When individuals skip the taxing process of evaluating each component, it causes the overall evaluation to be biased in the direction of the initial assessment of the anchor. Therefore, overall bundle evaluation will be positive when consumers perceive the anchor to be favorable. To ensure favorable overall bundle evaluation, managers can highlight the anchor's quality (Yadav, 1994). Once the quality of the anchor is

established, the categorization effect will influence the evaluation of the remaining components (Bodenhausen & Wyer, 1985).

The effect of “partitioned price” can explain how consumers evaluate bundles. Partitioned prices occur when the price of a single product is divided into more than two mandatory components, thus affecting consumers’ price perceptions and repurchase intentions. Research suggests that consumers’ purchase intentions are higher when the price is partitioned than when the price is all-inclusive (Morwitz, Greenleaf, & Johnson, 1998). Although the findings of Morwitz et al. (1998) violate the mental accounting principle, consumers may have used heuristic processing when evaluating partitioned price (Johnson, Hermann, & Bauer, 1999). When a product’s price is partitioned, consumers may have focused on the product’s base price and not on the related surcharges of the product, making the combined price appear to be a more expensive option.

When heuristic processing is extended to include price discounts, it predicts effects that are the opposite of mental accounting principles. When price discount information is itemized according to the individual components of a bundle, heuristic processing suggests that consumers may adjust and evaluate the discounts for each component or ignore some discounts altogether (Johnson et al., 1999; Yadav, 1994), resulting in more favorable evaluations when discount information is bundled rather than itemized. In evaluating vacation packages, consumers prefer packages that do not reveal price information for each component (Tanford et al., 2012).

The mind often groups together similar objects. If a new object shares similar characteristics with existing objects in the memory, it will be clustered into a category with the other objects. Consumers use this categorization heuristic to judge new products and determine their credibility (Cohen & Basu, 1987; Khandeparkar, 2014). An enhancement effect occurs

when a new product is associated with a strong brand, enhancing its quality perception (Loken & Ward, 1990, Sheng & Pan, 2009). Bundling a new item with an existing brand can cause consumers to associate the new item with an existing brand. Consumers perceive bundling as a marginal cue and tend to engage in low elaboration (Sheng & Pan, 2009). As such, a categorization heuristic is used when evaluating a new product, automatically grouping the product with the existing brand (Bodenhausen & Wyer, 1985).

Research exploring the effects of bundling a new product with a strong brand on quality perception found that both monetary and non-monetary information influence consumers' categorization process. When a new product is bundled with a high-priced strong brand, its category classification increases (Khandeparkar, 2014). Marketers can bundle new products with a strong brand that has a higher price point, as this will increase favorable evaluation of the overall bundle.

Literature has explored the role of heuristics in promotion evaluations. So far, researchers have mainly focused on how anchoring and adjustment explain consumer evaluation of bundled products. This dissertation examines how availability cues operationalize during consumer evaluations of bundled products.

Intrinsic and Extrinsic Bundle Cues

Individuals are often assumed to make rational purchase decisions. Various promotional strategies are employed by marketers and retailers to create favorable evaluations that will increase traffic count and sales. Extensive studies on the evaluation of promotions revealed that consumers are affected by their knowledge (Sujan, 1985), purchase plan (Suri & Monroe, 1999), extrinsic product cues (Teas & Agarwal, 2000), pricing, and discounts (Dodds, Monroe & Grewal, 1991; Grewal, Krishnan, Baker, & Borin, 1998), brand name or store name (Grewal et

al., 1998; Simonin & Ruth, 1995), and perception of value (Della Bitta, Monroe, McGinnis, 1982; Dodds et al., 1991; Grewal et al., 1998). On the other hand, consumers' perceptions of product quality are mainly attributed to a product's intrinsic cues (Szybillo & Jacoby, 1974).

Although an abundance of product information assists individuals' purchase decision, limited resources such as mental energy and time prohibit the evaluation of all possible information. Furthermore, conserving mental effort is important as it allows for more important decisions to be made deliberately and carefully. Price promotion strategies such as the price bundling strategy can act as a heuristic cue for the consumers. This is because some items are more available than others in the consumers' mind. When consumers are presented with a bundle, they may use important attributes derived from their own preferences as judgment cues in evaluating the overall bundle. Studies on product bundling suggest that individuals use the most important product in a bundle to anchor their judgment about the bundle as a whole (Epley & Gilovich, 2001; Esch, Schmitt, Redler, & Langner, 2009; Yadav, 1994).

Availability seems to underlie a wide variety of decision-making. Every time individuals evaluate or form judgments based on recollection of information from their working memory, availability is invoked. This research investigates how availability cues interact with bundled promotions in influencing consumer judgment.

Menu Design

The menu plays an integral role in the overall operations of any foodservice establishment. Other than serving as the first impression of the restaurant, a restaurant's menu can affect crucial operations such as purchasing, storing, production, and ultimately service. One of the main functions of a menu is to communicate (Radice & Hess, 1985), provide tangible evidence, and sell (Bowen & Morris, 1995). The menu has been regarded as the silent

salesperson of a restaurant (Pavesic, 1989; 2005) due to its ability to influence consumers' item selection and purchase decisions (Kershaw, 2009).

Menu designing is an intricate process that involves multifaceted constructs such as item positioning (Dayan & Bar-Hillel, 2011; Kincaid & Corsun, 2003; Sobol & Barry, 1980), item descriptions (Liu, Roberto, Liu, & Brownell, 2012; McCall & Lynn, 2008; Pulos & Leng, 2010), item labelling (Guéguen & Jacob, 2012; Lockyer, 2006; Wansink, Van Ittersum, & Painter, 2005), and menu card characteristics (Choi, Lee & Mok, 2010; Guéguen & Jacob, 2012; Reynolds, Merritt, & Pinckney, 2005). Item positioning refers to the location of a menu item on the menu card or menu board, while item descriptions constitute sufficient information about a menu item. The way menu items are suggestively described (homemade, locally sourced, etc.) is referred to as labeling, and menu card characteristics include the menu typography, type of paper, and colors.

The menu design literature often emphasizes menu items' placement, placing items that can yield higher margins in spots where consumers are most likely to pay attention to. A menu can be likened to a map that highlights target items in the hopes that consumers will have the chance to at least consider these items. Item positioning, descriptions, and labeling can influence consumers' choice and perceptions of taste, quality, and value (Ozdemir & Caliskan, 2015). An increase in value perception will lead to an increase in profitability. This is because consumers will opt for high-margin menu items that are perceived to be more valuable. Furthermore, consumers' willingness to pay is higher for items of high quality. Favorable perceptions of value, quality, and taste can encourage repeat purchases and stimulate positive word-of-mouth behaviors, resulting in increased traffic and sales.

Information from the menu can help consumers form expectations. If a consumer's experience meets or exceeds expectations, favorable attitudes will follow, helping the restaurant make profits (Miller & Pavesic, 1996). The menu is a very important marketing tool for the restaurant. As such, it is crucial for restaurateurs to strategize which menu items they should retain, re-price, or remove from the menu (McCall & Lynn, 2008).

The influence of menu design and price on menu item selection has been studied in isolation of other external variables. Literature suggests that external factors such as familiarity, culture, convenience, advertisements, and perceived body image affect food choice decisions (O'Mahony & Hall, 2007; Prescott, Young, O'Neill, Yau, & Stevens, 2002). An abundance of menu design literature focuses mainly on how to analyze the performance of a menu item (Raab & Mayer, 2007; Reynolds & Taylor, 2011). In the highly competitive restaurant setting, understanding what influences consumers' attitudes and choices is essential to ensure the profitability and sustainability of the operation. This dissertation addresses this issue by exploring how availability and unavailability cues that are present on the menu and in the restaurant setting affect judgment and reasoning.

Online Reviews and Consumers' Purchase Decisions

As technology continues to grow, consumers are no longer bound by one-way communication, typically from sellers to buyers (Moe & Trusov, 2011). Instead, consumers are becoming more active and more willing to share their experiences with strangers in the online environment (Zhang, Wu, & Matilla, 2016). Online reviews are ubiquitous in their influence on consumers' purchase decisions. They are regarded as one of the most persuasive sources of information assisting with the consumer decision-making process (Jiménez & Mendoza, 2013; Pan & Chiou, 2011). Research suggests that consumers regard reviews from online platforms as

highly trustworthy (Dickinger, 2011) and that the reviews have direct effects on product sales (Chevalier & Mayzlin, 2006; Duan, Gu, & Whinston, 2008). In hospitality research, online reviews have been found to affect hotel room sales (Ye, Law, & Gu, 2009), resort selection (Book, Tanford, Montgomery, & Love, 2015; Tanford & Montgomery, 2015), and willingness to pay (Book et al., 2016).

Online reviews enable consumers to conveniently retrieve information that can assist in their pre-purchase evaluations. This is particularly true for experiential products such as restaurant service, hotel stays, and tourism destinations. Experience-intensive products allow for limited value assessment prior to consumption, forcing consumers to rely on the experiences of others as they gauge the probable value of such products (Noone & McGuire, 2014). Although online reviews can be a valuable source of information, the abundance of reviews posted online are not always useful (Park & Lee, 2009). Often, mixed reviews posted online create confusion among consumers (Pan & Chiou, 2011)

Reviews often vary in terms of content, length, and valence (Sparks & Browning, 2011). Positive reviews are pleasant descriptions of experiences, while negative reviews may include complaints and unpleasant descriptions of experiences (Anderson, 1998). Psychology literature suggests that positive and negative valence may not be weighted equally. More often than not, negative information is seen as more influential than positive information (e.g., Rozin & Royzman, 2001; Taylor, 1991). Because online reviewers are not compensated by the company they are reviewing, their opinions are seen as more honest compared to paid advertising (Rozin & Royzman, 2001).

Consumers are challenged to process large amounts of information presented in numerous reviews. The ease of access to online information decreases consumers' information-

seeking effort at the expense of an increase in the cognitive effort required to filter useful information (Liu & Park, 2015). Limited cognitive processing capacity makes it impossible to evaluate all available information prior to making a purchase decision. In the context of online reviews, numerical data or summarized ratings can assist in reducing the mental effort used in purchase decisions (Sparks & Browning, 2011). Noone and McGuire (2014) argue that review content has a stronger influence on quality and value assessments than do summated ratings.

The hospitality industry can benefit from the research on online reviews in the modern purchasing environment. Although price has always been one of the major factors that influences purchase behavior, the findings of Book et al. (2015a) suggest otherwise. The researchers found that social influence in the form of online reviews overpowers price in participants' product evaluations and judgments. Moreover, in a separate study, Book et al. (2016) found that price reductions are unable to offset the effect of negative reviews on the perception of quality and value, as well as willingness to pay. Tanford and Montgomery (2015) found that even minute social influence (in the form of online reviews) is powerful enough to make participants go against their preconceived attitudes.

Therefore, it is imperative that restaurateurs and hoteliers understand that in today's purchasing environment, consumers develop expectations not only from prior experience but through a multitude of information easily accessible through various marketing channels (Johnson, Anderson, & Fornell, 1995; Kim & Mattila, 2013; Yi & La, 2004). Technological advancement and increased Internet accessibility have allowed prospective consumers to access information and foster pre-trial beliefs on a product or service through customer reviews (Gretzel & Yoo, 2008; Sen & Lerman, 2007; Sparks & Browning, 2011), as these reviews reduce uncertainties and the degree of information needed to make a purchase decision. As user-

generated reviews become increasingly important in pre-purchase evaluations (Sparks, Perkins, & Buckley, 2013; Sparks, So, & Bradley, 2016), it is critical for academicians and practitioners to understand the elements that affect decision-making and the circumstances that intensify or reduce the influence of reviews on consumers' evaluations.

Conceptual Framework and Hypotheses Development

In recent years, restaurants' profitability has been analyzed using price structures and the performance of menu items. Menu design literature suggests ways to increase the sales of menu items with high profit margins by strategically highlighting them or manipulating their position on the menu. However, the question of how psychological cues affect consumer food choice in the restaurant environment remains unanswered. This dissertation examines how heuristic cues present in the food purchase environment influence consumers' choices. To understand how decisions are made, it is essential to understand the concept of dual processing and the factors that can invoke one cognitive system over the other. Drawing upon existing literature, this research proposes a conceptual framework that integrates the two systems of reasoning with different purchasing stages. This dissertation proposes that the process starts with problem recognition, progresses to information search and product evaluation, and ultimately ends at buying/purchase behavior. Research suggests that the heuristic system is activated when the problem is familiar and less important. This is particularly true in restaurant or food purchase settings where less important, non-life-threatening decisions are made daily.

A number of factors, such as ease of retrieval, information vividness, and ease of construction, can activate the availability heuristic, in which individuals will pay more attention to instances that are easier to recall. Vivid information increases information fluency and is more easily remembered than boring, pallid information. The same can be said for information that is

familiar. Moreover, familiarity can be influenced by the amount of exposure an individual receives to that particular information.

Information appears more attractive when it is associated with restrictions. This explains why age-restricted materials seem more appealing to those who are constrained by such restrictions. Based on this premise, items that are difficult to attain are more alluring than items without restrictions. Because consumers perceive scarce items to be more valuable than non-scarce items, they would be willing to spend resources such as time and money to acquire the scarce item. Perceived scarcity can create a sense of urgency and increase the likelihood of purchase.

The price bundling strategy is widely used in the restaurant industry. Restaurateurs have traditionally offered table d'hôte or prix fixe menus as ways to create value and increase sales. Due to the popularity of the price bundling strategy, consumers expect inherent savings from the purchase of a meal bundle or set. Bundled packages are seen as more valuable than the practice of purchasing individual items separately. However, will this value perception remain the same in the presence of other heuristic cues?

Due to the proliferation of online reviews, consumers are free to gain supplemental information prior to purchase. Though the experiences of others can reduce the uncertainties associated with purchasing experiential products and services, it can cause consumers to develop false expectations. Because online reviews have become a part of the consumer decision-making process, it is interesting to understand how different sources of information, such as online reviews, menus, and restaurant servers, are weighed differently in the restaurant setting.

Moving the availability heuristic forward, this dissertation investigates how availability cues and price bundling promotions fare against each other in influencing consumers'

evaluations and choices in the food purchase environment. Heuristics reduce mental effort, often at the expense of judgment accuracy. This research is expected to instigate the effects of availability cues in reducing judgment accuracy, thereby uncovering ways for service providers to increase profit and improve consumers' satisfaction. The conceptual framework is illustrated in Figure 1.

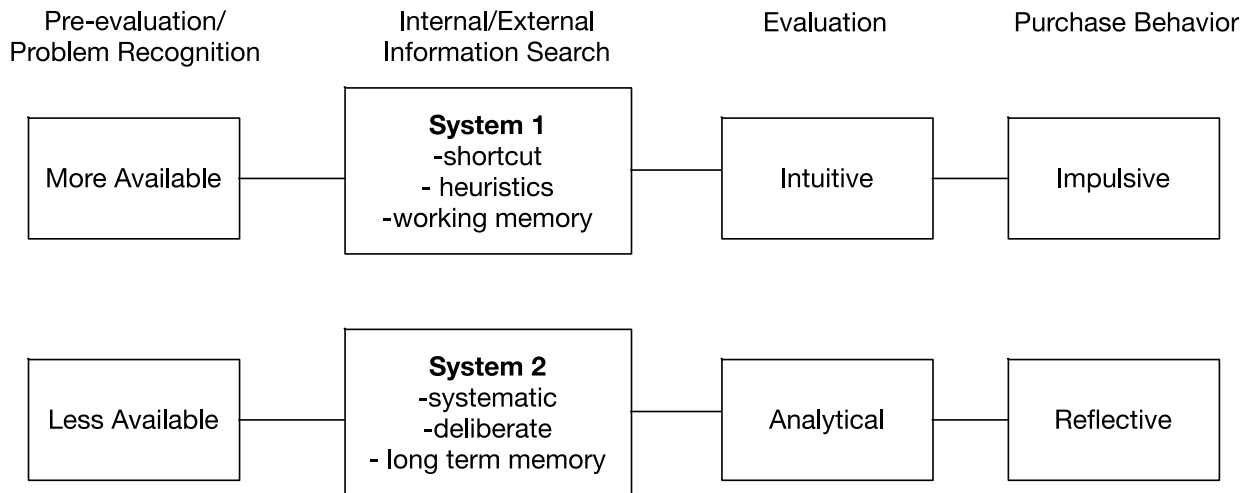


Figure 1. Conceptual framework.

Research Hypotheses

This dissertation proposes that availability cues and product bundling influence consumers' purchase decisions. Specifically, this dissertation examines how different types of availability heuristic cues (frequency, vividness, scarcity) influence purchase decisions. It is expected that different availability cues will have a varying magnitude of influence on consumer decision-making. Two experiments were conducted to isolate the variables of interest.

The independent variables used in Study 1 are scarcity, product bundling, and value. Limited availability of a target item on a hypothetical menu was used to manipulate scarcity. In one of the conditions, the limited availability of the target item was signaled twice, once through the menu and again through the server. This enables the researcher to identify which medium has

the highest influence on the consumer's judgment. Because deals and promotions can affect product selection, promotion was manipulated using product bundling. Product bundling was chosen because it is a common marketing technique used in restaurants. The target menu item was offered either a la carte or packaged in a bundle that comprised a beverage and a side. Consumer decisions are strongly influenced by price. To examine whether consumers perceive scarce items to be more valuable, the target item's price was manipulated. The target item's price was manipulated to be either higher than or similar to other items on the menu.

The independent variables used in Study 2 are information vividness, information frequency, and value. Exposure frequency of the target item was manipulated through the number of reviews mentioning the target item. In the frequent condition, the target item was mentioned in four out of five reviews, while in the non-frequent condition, the target item was mentioned in only one out of five reviews. Familiarity is one of the main attributes that can influence food item selection (Myung et al., 2008) and familiar incidents are easier to recall than non-familiar ones (Tversky & Kahneman, 1979). Information vividness was manipulated using three types of review descriptions: dramatic, descriptive, or mundane. In the dramatic condition, the reviews provided concrete, dramatic, and emotionally evoking descriptions of the target item and the reviewer's experience. In the descriptive condition, the reviews were similar to the reviews in the dramatic condition minus the reviewer's experience. In the mundane condition, the reviews were ordinary and common. Dramatic and atypical experience increases availability, thus affecting evaluations of choice (Folkes, 1988). Similar to Study 1, the target item's price was manipulated to examine whether reviews increase consumers' perceived value of the target item.

Study 1

Individuals are affected when freedom of choice is taken away from them (Brock, 1968). As such, the limited availability of a product can increase the subjective desirability of that product and increase purchase intention. Because scarce items are hard to obtain, a higher price is often expected (Lynn, 1992). Because price is often associated with quality, a higher price can be an indicator of a product's quality. Therefore, it is postulated that an increased perception of unavailability can lead to potentially biased estimates of product quality.

H1: When a menu item is perceived as scarce, participants will perceive the item to be more appealing than when it is not scarce.

H2: When a menu item is perceived as scarce, participants will perceive the item to have higher quality than when it is not scarce.

Promotions can influence purchase decisions. This is because consumers anticipate some form of savings or added value when they purchase the promotional item. Product bundling is commonly practiced in restaurants. Rather than a la carte items, offering value meals can increase sales and, ultimately, profitability. Most restaurants offer value meals or bundled menu items as a marketing strategy. For this study, it is expected that scarcity and product bundling will influence consumers' value perceptions and purchase decisions. Scarcity creates a sense of urgency, so it is anticipated that the perceived product scarcity will overpower bundling in influencing consumers' value perceptions.

H3: When a menu item is perceived as scarce, participants will estimate higher value for the item than when it is not scarce.

Research has shown that increased value perception can increase willingness to pay (Li, Li & Kambele, 2012; Ligas & Chauduri, 2012). Consumers' consumption, likelihood to

purchase, and willingness to pay are heightened when a product is presumed to be scarce (Sevilla, 2013). Hypothesis 4 postulates that:

H4: When a menu item is perceived as scarce, participants will have a higher willingness to pay for the item than when it is not scarce.

Because perceptions of scarcity can increase purchase probability (Aggarwal & Vaidyanathan, 2003), it is postulated that perceptions of scarcity will ultimately influence consumers' choice:

H5: There will be a higher likelihood for participants to choose the menu item that is perceived as scarce than menu items that are perceived as not scarce.

Scarcity cues can manifest themselves in many ways. In this study, the effects of scarcity are manipulated twice via different sources. Because the way information is presented can affect its magnitude of influence on consumer decision-making, it is anticipated that one source of communicating the scarcity message will have a higher influence than the other. Restaurateurs communicate their product offerings through their menus and servers, both of which can influence consumers' decision-making. One-to-one interaction with the server will be more vivid than the textual information displayed on the menu. Vivid information can be recalled more easily than dull, pallid information (Holbrook & Moore, 1991; Veryzer & Hutchison, 1998). As such, the following hypothesis is formulated:

H6: The effects of scarcity on item evaluation will be greater for scarcity messages communicated through the server than the message communicated on the menu.

Price bundling provides consumers with monetary and non-monetary benefits such as price discounts (Kim, Bojanic, & Warnick, 2009) and reduced search and assembly cost (Harris & Blair, 2006), and lowers the risk of product incompatibility. Therefore, it is postulated that:

H7: Participants will perceive the target item in the bundled menu to be more appealing than when it is unbundled (a la carte).

H8: Participants will perceive the target item to have higher quality when it is bundled than when it is unbundled.

H9: Participants will perceive the target item to have a higher value when it is bundled than when it is unbundled.

Though bundled packages are priced higher than individual items, they offer more value for the consumers, as more items can be purchased at a discounted price. In the restaurant setting, meal packages comprise several complementary items at a cheaper price than if one were to pay for them separately. Because more items are included in a meal bundle, hypothesis 10 posits:

H10: Participants will be willing to pay more when the target item is bundled than when it is unbundled.

Because set meals offer better value to customers, hypothesis 11 postulates:

H11: Participants are more likely to choose the target item when it is bundled than when it is unbundled.

Research suggests a relationship between price and perceptions of quality. In the presence of scarcity, consumers perceive scarce items to be more desirable and preferred than items that are readily available (Lynn, 1987; Verhallen & Robben, 1994). Therefore, when a menu item is perceived to be scarce, it is hypothesized that:

H12: Participants will perceive the target item to be more appealing when it is priced higher than the rest of the items on the menu.

The prestige pricing of a product or service is supported by the effects of scarcity (Cialdini, 1987; Lynn, 1991). The price quality heuristic, in which price is seen as an indicator of product quality, can influence consumer decisions. Based on this heuristic, consumers assume that the higher the price, the better the quality of a product (Monroe, 2003). Hypothesis 13 postulates:

H13: Participants will perceive the target item to have higher quality when it is priced higher than the rest of the items on the menu.

As the target item is perceived favorably due to the effects of scarcity, participants will perceive that they are receiving more value by purchasing a highly favorable item at the same price as other items on the menu.

H14: Participants will perceive the target item to have more value when it is equally priced with the rest of the items on the menu.

Instead of being a heuristic cue, scarcity can induce deliberate information processing. Findings indicate that individuals are motivated to process information that contains scarcity messages (Inman, Peter & Raghurir, 1997; Suri et al., 2007). Studies have shown that scarcity influences consumers' selections as well as willingness to pay (Mittone & Savadori, 2009). Therefore, it is anticipated that:

H15: Participants will have higher willingness to pay for the target item when it is priced higher than the rest of the items on the menu.

H16: Participants' likelihood to purchase is higher when the target item is priced the same as the rest of the items on the menu.

Study 2

The availability of information can be associated with the magnitude of its vividness. Individuals are more likely to recall information that is salient in their minds. Information that is emotionally interesting, concrete, and provoking increases individuals' ease of recall (Nisbett & Ross, 1980, Reyes et al., 1980). Based on the vividness effects, it is posited:

H17: The effects of reviews on the target item's appeal will be higher for dramatic reviews, followed by descriptive reviews, followed by mundane reviews.

H18: The effects of reviews on the target item's quality will be higher for dramatic reviews, followed by descriptive reviews, followed by mundane reviews.

H19: The effects of reviews on the target item's value will be higher for dramatic reviews, followed by descriptive reviews, followed by mundane reviews.

Boring information that is unclear and uninteresting will be less likely to be noticed than emotionally evoking information. Individuals will pay more attention to items that are vividly described, thus influencing their purchase decisions.

H20: The effects of reviews on willingness to pay for the target item will be highest for dramatic reviews, followed by descriptive reviews, followed by mundane reviews.

H21: The effects of reviews on likelihood to purchase the target item will be highest for dramatic reviews, followed by descriptive reviews, followed by mundane reviews.

The availability of an event is associated with its frequency. Consumers tend to overestimate the likelihood or frequency of an event based on their familiarity with the event itself (Tversky & Kahneman, 1974). When information is frequently exposed to individuals, it becomes increasingly familiar and can be recalled easier than unfamiliar information. Therefore, the following hypotheses are formulated:

H22: When a menu item is frequently mentioned in the reviews, participants will perceive the menu item to be more appealing than when it is less frequently mentioned.

H23: When a menu item is frequently mentioned in the reviews, participants will perceive the menu item to have higher quality than when it is not frequently mentioned.

Research has found that consumers rely on online reviews as supplemental information that assists their decision-making under conditions of uncertainty. Though cues such as reviewer ranking and number of reviews can influence consumers' pre-purchase evaluations, consumers are more likely to purchase items that have a larger number of reviews (Zhang, Zhao, Cheung & Lee, 2014). As such, the following hypotheses are formulated:

H24: When a menu item is frequently mentioned in the reviews, participants will estimate higher value for the menu item than when it is not frequently mentioned.

H25: When a menu item is frequently mentioned in the reviews, participants will have a higher willingness to pay for the menu item than when it is not frequently mentioned.

H26: When a menu item is frequently mentioned in the reviews, participants will have a higher likelihood to choose the menu item than when it is not frequently mentioned.

It has long been suggested that price influences consumers' perceptions of product quality (Scitovszky, 1944). Product quality is evaluated on a myriad of extrinsic and intrinsic factors, with price being one of the extrinsic factors (Olsen, 1973). Products of high quality will appear to be more appealing to the customers. Therefore, it is hypothesized that:

H27: Participants will perceive the target item to be more appealing when it is priced higher than the rest of the items on the menu.

H28: Participants will perceive the target item to have higher quality when it is priced higher than the rest of the items on the menu.

As the target item is being perceived favorably due to the effects of information vividness and frequency, participants will perceive that they are receiving more value by purchasing a highly favorable item at the same price as the other items on the menu. It is hypothesized that:

H29: Participants will perceive the target item to have more value when it is priced equivalent to the rest of the items on the menu.

The anchoring effect influences consumers' willingness to pay for the target item. According to Tversky and Kahneman (1974), individuals will develop their final price estimate based on the initial price shown to them. It is anticipated that when consumers are shown a higher price for the target item, their willingness to pay will be higher than when the target item is priced the same as other items on the menu. It is hypothesized:

H30: Participants will have higher willingness to pay for the target item when it is priced higher than the rest of the items on the menu.

H31: Participants' likelihood to purchase is higher when the target item is priced the same as the rest of the items on the menu.

CHAPTER 3

RESEARCH METHODS

This chapter describes the research design, data collection, and data analysis that were used to answer the research questions postulated for this dissertation. Two experiments were performed to test the hypotheses. A controlled experiment allows for the observation of causal relationships among variables of interest, with internal validity prioritized over external validity (Campbell & Stanley, 1973). The following sections in this chapter describe the participants, design, stimuli, procedures, and measures used for each experiment, followed by an overview of the data analysis.

Study 1

The purpose of Study 1 was to examine how availability cues interact with other cognitive shortcuts to affect product evaluation and purchase decisions. Scarcity cues, product bundling, and price-value perception were used to answer this research question.

Participants

The general consumer population was recruited through Qualtrics, an online market research firm. To participate in the study, participants had to be at least 21 years of age and to have dined out at a restaurant in the past six months. A total of 592 participants were used in this study, ensuring a minimum of 37 participants per cell. This minimum number of participants is necessary for the detection of medium-sized differences with a minimum power of .80 at the .05 significance level (Cohen, 1992). This study obtained approval from University of Nevada's Institutional Review Board, as attached in Appendix A.

Design

Study 1 investigated the influence of scarcity cues on consumers' value perception and choice in the restaurant setting. This study examined the interplay of scarcity cues and bundling promotions in the food purchase environment and how they affect consumers' evaluations of menu items. This study was designed to test hypotheses 1 to 16 using a 2 (scarcity cue on menu: present/absent) \times 2 (scarcity cue from server: yes/no) \times 2 (product bundling: bundled/unbundled) \times (price: equivalent/higher) experiment. Participants were randomly assigned to one of the 16 conditions. Table 3 depicts the experimental design.

Table 3

Study 1 Experimental Design

		Price Level	Product bundling			
			Lunch Specials		À la Carte	
			Equivalent	Higher	Equivalent	Higher
Scarcity 1	Present	Scarcity 2				
		Exposed				
	Absent	Unexposed				
		Exposed				
		Unexposed				

Note. An equal sample size of $n = 37$ is in each cell, $N = 592$.

A hypothetical menu containing six chicken sandwiches was used for this study. Scarcity occurs when the supply for a product is less than its demand, creating demand surplus. In this study, scarcity cues were manipulated in two distinct formats: scarcity cue on the menu (scarcity 1) and scarcity message from the server (scarcity 2). Scarcity cue 1 was manipulated at two levels: present and absent. The presence of a scarcity cue was depicted through a simple "limited quantities available daily" text in red uppercase font. The text was displayed underneath the target item's description. The target item used in this study (Chicken Caesar Ciabatta) was determined through a pretest. In the absent condition, no scarcity message was displayed below

the target item on the menu. The second scarcity cue was manipulated through two levels of hypothetical dining scenarios.

Price bundling is a marketing strategy commonly used by restaurateurs to create value meals or combinations and, therefore, push more products to the consumer. The menu used in this study was presented to the participants in either a bundled or unbundled format. Participants in the bundled condition were presented with a “lunch specials” menu that featured a selection of six sandwiches with a side and a drink. Participants exposed to the unbundled condition were presented with an à la carte menu that featured the same six sandwiches without any sides or drinks.

Price is one of the major influencers of purchase decisions. Consumers are known to be willing to pay more if the item is perceived to be scarce or limited. Furthermore, product and price bundling strategies have long been adopted by restaurateurs by offering “value meals.” Restaurants integrate items normally consumed together to create value for consumers. Depending on the condition, the target item’s price was manipulated at two levels (equivalent/higher). In the price equivalent condition, the target item was priced at \$8.50, similar to other sandwiches’ price range, from \$8.25 to \$8.75. In the higher priced condition, the target item was priced at \$10.50. The appropriate prices were determined through a pretest.

Stimuli

The stimulus consisted of a graphic menu of a hypothetical sandwich restaurant. The menu contained only chicken sandwiches so that food preferences would not confound the results. The menu contained six chicken sandwiches with brief descriptions and prices. A scenario depicting an interaction with the restaurant server was used as a second stimulus. The menu was designed to mimic a typical sandwich menu. Graphics used for this study are included

in Appendix B. A fictitious restaurant name was placed at the top of the menu. The statement “all specials are served with a side of fries and a large fountain drink” came after the restaurant name depending on the condition. This was followed by a list of six sandwiches with prices and descriptions. The chicken sandwiches chosen were equally favorable and equally likely to be purchased, averaging $M = 4.92$ and $M = 4.51$ on a 7-point scale. Table 4 displays the chicken sandwiches with their corresponding pretest mean scores.

Table 4

Lunch Menu Items with Pretest Scores

Menu Items	Appeal (M^1)	Likelihood to Purchase (M^2)
Chicken Parmesan Sliders	5.08	4.76
Chicken Stuffed French Bread	4.95	4.37
Chicken Caesar Ciabatta Sandwich	4.76	4.47
Chicken Salad Croissant	5.03	4.61
Honey Mustard Chicken Sandwich	4.89	4.42
California Club Wrap	4.63	4.26

Note. Menu items were rated on a 7-point scale, M^1 (1 = very unappealing, 7 = very appealing); M^2 (1 = highly unlikely, 7 = highly likely).

The target item (Chicken Caesar Ciabatta) was placed in the middle of the menu. The sandwiches, as well as their sequence on the menu, remained the same across all 16 conditions. The scarcity message “limited quantities available daily” was displayed underneath the target item’s description depending on the condition. In the second stimulus, participants were exposed to a scenario depicting an interaction with the restaurant’s server. The interaction consisted of a typical ordering process in a restaurant in which the participant asked for the server’s recommendation prior to ordering. The participants randomly received a scenario in which the server either mentioned the limited availability of the target item or did not mention that the target item had limited availability, depending on the condition. In the scarcity condition, the scenario was as follows:

After looking through the menu for a few minutes, your server comes back with glasses of water for your table. Since this is your first time at the sandwich place, you ask for the server's recommendations. Your server lists a couple of her personal favorites and mentions that the Chicken Caesar Ciabatta is only available in limited quantities as the Ciabatta bread is made fresh in limited batches daily. Your server suggests that if you are interested in the Chicken Caesar Ciabatta, you should order it quickly before it runs out. You then decide that you are ready to order.

Participants unexposed to the scarcity message read the following scenario:

After looking through the menu for a few minutes, your server comes back with glasses of water for your table. Since this is your first time at the sandwich place, you ask for the server's recommendations. Your server lists a couple of her personal favorites. You then decide that you are ready to order.

Procedure

Data for Study 1 were collected via Qualtrics. An email with the survey link was administered by Qualtrics to its panels. At the beginning of the survey, participants were presented with an online consent form and two screener questions regarding their age and the number of times they had dined out in the past six months. Those over 21 years of age and who had dined out at least once in the past six months were recruited. Qualified participants were presented with the following instructions:

You are going out for lunch with your colleagues to a newly opened sit-down sandwich shop. As you arrive at the sandwich shop, you are greeted by your server as she hands you the menu. You go through each menu item before making your purchase decision.

After reading the instructions, participants were exposed to the first stimulus (menu) and answered three questions pertaining to the appeal, their likelihood to purchase, and the perceived expensiveness of each sandwich on the menu.

On the following screen, participants were exposed to the second stimulus (scenario) and answered questions measuring perceptions of quality, value, price fairness, and their willingness to pay for each sandwich on the menu. Specific measures used in Study 1 are detailed in the instrument section of this chapter. On the next screen, participants indicated their choice of sandwich and their confidence in the choice. Participants rated the importance of the price, recommendation, food preference, familiarity, and popularity of the menu item in influencing their choice. The survey concluded with manipulation checks and demographic questions. Figure 1 outlines the procedures completed by the participants for this study.

Preliminary Steps	Consent Form Screener Questions (Appendix A)
Step 1	Instructions Menu (Appendix B) Rate: appeal, likelihood to purchase, expensiveness
Step 2	Scenario: Interaction with server (Appendix C) Rate: quality, value, price fairness and willingness to pay
Step 3	Ordering (purchase decision) Rate: choice and confidence Rate: Factors that may influence choice
Step 4	Manipulation Checks and Demographics

Figure 2. Procedures for Study 1.

Instrument

After reading the menu, participants rated each sandwich’s appeal using a 7-point scale ranging from 1 (very unappealing) to 7 (very appealing) to answer the question “How appealing

is this sandwich (sandwich 1 – 6)?” Likelihood to purchase was rated on a 7-point scale from 1 (highly unlikely) to 7 (highly likely) for the question “How likely are you to purchase this sandwich (sandwich 1 to 6)?” Perceived expensiveness was rated on a 7-point scale from 1 (very inexpensive) to 7 (very expensive) for the question “How expensive or inexpensive is this item?”

After being exposed to the scenario depicting an interaction with the server, participants’ expectations of the sandwiches’ quality were rated on a 7-point semantic differential scale with 1 being low quality and 7 being high quality for the question “What is the quality level expected of this sandwich (sandwich 1 – 6)?” Using a 7-point scale from 1 (strongly disagree) to 7 (strongly agree), participants rated the sandwiches’ value for these questions: “This sandwich is a good value (sandwich 1 – 6)” and “Based on its quality, this sandwich is fairly priced (sandwich 1 – 6)”. Participants’ willingness to pay for each sandwich was measured using a sliding scale from 0 to 30 dollars. Having rated all sandwiches, participants chose one sandwich out of the six presented on the menu. Participants’ confidence in their choice was assessed using the question “How confident are you with your choice?” measured on a 7-point scale from 1 (not at all confident) to 7 (very confident). Participants’ perceptions of the important factors that may have influenced their choice were measured on a 7-point scale from 1 (extremely unimportant) to 7 (extremely important) for the question “How important were these items in influencing your choice?” – “price”, “server’s recommendation”, “food preference/ingredients”, “familiarity”, and “popularity”. The survey concluded with manipulation checks and demographic questions. Participants rated the menu’s realism on a 7-point scale from 1 (completely unrealistic) to 7 (completely realistic). To ensure the manipulations did what they were intended to do, participants rated the likelihood of the target item being sold out on a 7-point scale ranging from 1 (highly unlikely) to 7 (highly likely). Demographic questions included age, gender, marital

status, ethnicity, education level, employment status, and annual household income. Table 5 summarizes the measures and scales used in Study 1.

Table 5

Measures Used in Study 1

Screen	Dependent Variable	Measurement
2	Appeal	How appealing is this sandwich (sandwich 1 – 6)? Very unappealing 1 2 3 4 5 6 7 very appealing
	Likelihood to Purchase	How likely are you to purchase this sandwich (sandwich 1 – 6)? Highly unlikely 1 2 3 4 5 6 7 highly likely
	Perceived expensiveness	How expensive or inexpensive is this item (sandwich 1 – 6)?
3	Perceived Quality	What is the quality level expected of this sandwich (sandwich 1 – 6)? Low quality 1 2 3 4 5 6 7 high quality
	Perceived Value	The sandwich is a good value (sandwich 1 – 6). Based on its quality, this sandwich is fairly priced (sandwich 1 – 6). Strongly disagree 1 2 3 4 5 6 7 strongly agree
	Willingness to Pay	Regardless of the price shown, how much (in dollars) will you be willing to pay for this meal (sandwich 1 – 6) Slider scale \$0 - \$30
4	Choice	Your server will now be taking your orders. Which of these sandwiches will you choose? Multiple choice: Sandwich 1 – 6
	Confidence	How confident are you with your choice? Not at all confident 1 2 3 4 5 6 7 very confident
5	Potential Influencing Factors	How important were these items in influencing your choice? <ul style="list-style-type: none"> • Price • Server’s Recommendation • Food preference/Ingredients • Familiarity • Popularity extremely unimportant 1 2 3 4 5 6 7 extremely important
6	Realism Checks	How realistic was the menu? Completely unrealistic 1 2 3 4 5 6 7 completely realistic
	Manipulation Check	How likely will the Chicken Caesar Ciabatta be sold out? Highly unlikely 1 2 3 4 5 6 7 highly likely

Pretest

Materials used in Study 1 were pretested to ensure proper manipulations were used in the study. To select menu items for Study 1, a pretest was conducted to assess each item's appeal and purchase likelihood. Participants for the pretest were recruited through Qualtrics. Members of the general population who were at least 21 years of age and who had dined out in the past six months were recruited. A total of 38 participants evaluated appeal, purchase likelihood, and acceptable price points for 10 chicken sandwiches and their descriptions. Appeal was measured on a 7-point scale from 1 (very unappealing) to 7 (very appealing) using the question "How appealing is this sandwich?" Likelihood to purchase was measured using a 7-point scale ranging from 1 (highly unlikely) to 7 (highly likely). Item price point was measured using the question "How likely will you purchase this item under the following price (\$8.25, \$9.99, \$12.00, \$14.50, \$17.25)?" and was rated on a 7-point scale from 1 (highly unlikely) to 7 (highly likely). The six chicken sandwiches chosen for Study 1 were equally favorable, with mean scores between $M=4.76$ and $M=5.08$ for appeal and between $M=4.37$ and $M=4.76$ for purchase likelihood. Chicken sandwiches with particularly high mean scores were not selected so as to avoid favorability becoming a potential confounding factor in the main study. Participants indicated that the price range of \$8.25 to \$9.99 was considered an acceptable price point for the chicken sandwiches, with mean scores ranging from $M=3.89$ to $M=4.5$ for \$8.25 and $M=3.05$ to $M=3.68$ for \$9.99. The results of a manipulation check question demonstrated that 74 percent of participants believed that a sandwich containing locally sourced produce was likely to run out.

Study 2

The purpose of Study 2 was to examine how availability cues such as information vividness and frequency interact with price perception in affecting purchase decisions in the

restaurant setting. Information vividness, frequency, and price perception were manipulated to answer this research question.

Participants

Participants in Study 2 were recruited through Qualtrics. Members of the general population over 21 years of age who had used online review platforms in the past six months were eligible to participate. Data from 444 participants were collected for Study 2, ensuring a minimum of 37 participants per cell. This minimum number of participants is more than adequate for detecting medium-sized differences with a minimum power of .80 at the .05 significance level (Cohen, 1992). This study obtained approval from University of Nevada's Institutional Review Board, as attached in Appendix A.

Design

Study 2 examined how information vividness and frequency interact with price perception in affecting decision-making. This study tested hypotheses 17 to 31 using a 3 (information vividness: dramatic/descriptive/mundane) \times 2 (frequency: frequent/infrequent) \times 2 (price level: same/higher) experimental design. Participants were randomly assigned to one of the 12 conditions. Table 6 depicts the experimental design.

Two availability cues were used for this study: information vividness and frequency. Verbal information is considered vivid when the information provided is concrete and emotionally interesting. In this study, information vividness was manipulated at three levels (dramatic, descriptive, and mundane) using five online reviews that included entrée descriptions and the reviewer's experience (depending on conditions). The entrées and the target item used in Study 2 were determined through a pretest.

Table 6

Study 2 Experimental Design

		Frequency					
		Frequent			Infrequent		
	Information Vividness	Dramatic	Descriptive	Mundane	Dramatic	Descriptive	Mundane
Price Level	Same						
	Higher						

Note. There is an equal sample size of $n = 37$ in each cell, $N = 444$.

Frequency is one of many factors that can influence availability. Information frequency was manipulated at two levels: frequent and infrequent. In the high-frequency (frequent) condition, participants were presented with four reviews mentioning the target item. In the infrequent condition, only one out of five reviews mentioned the target item. Research has suggested that price is one of the major determinants of consumer purchase behavior. In Study 2, the target item's price was manipulated at two levels: same and higher. In the same pricing condition, the target item's price was the same as that of other entrées. In the higher priced condition, a message stating that the consumers will have to pay more for the target item was strategically placed beside the target item.

Stimuli

The stimulus used for Study 2 mimicked the first page of a popular online review platform. The graphic contained brief information about a hypothetical restaurant. Information provided on the graphic included the restaurant's name, a brief description, and photos. The graphic used as the first stimulus is included in Appendix C. Brief information about the restaurant was followed by five reviews. The reviews were taken from an existing online review platform. The reviews were edited to ensure suitability to the study's context. A pretest was conducted to ensure that the reviews were equally favorable and that the dramatic reviews were

perceived as significantly different from the descriptive and mundane reviews. Depending on the condition, the reviews were either dramatic, descriptive, or mundane. Dramatic reviews contained concrete descriptions about menu items and the reviewer's experience. Dramatic reviews were written using vivid language that could be emotionally evoking. The descriptive reviews contained concrete descriptions about menu items without reviewers' experiences. Mundane reviews contained abstract information about the menu using plain language. Filler reviews were pretested to ensure favorability. Table 7, Table 8, and Table 9 display the reviews used with their corresponding pretest scores. Respondents rated the reviews on measures of how interesting they thought the reviews were, rated from 1 (boring) to 7 (interesting), and how stimulating they thought the reviews were on a 7-point scale from 1 (not stimulating) to 7 (stimulating). The reviews were equally favorable ($p = .127$) but significantly different on the measures of dramatic ($p = <.05$), indicating that the review manipulations worked.

Depending on the condition, mentions of the target item could have been either frequent (high) or infrequent (low). In the frequent condition, four reviews mentioned the target item with one filler review. In the infrequent condition, the target item was mentioned only once with four filler reviews. Table 10 displays the filler reviews. A "specials" menu graphic that mimicked the typical restaurant specials menu was used as a second stimulus for this study. A fictitious restaurant name was placed on the top part of the menu, followed by brief information about the meal and its price: "\$18* per order. Served with vegetables of the day, a choice of soup or salad and a beverage. Taxes and gratuities are not included." This was followed by a list of five entrées, with Wood Fired Rotisserie Chicken as the target item. All of the entrées used were pretested to ensure equal favorability. The menu items and their sequence remained the same across all 12 conditions. The entrées used for this study were determined through a pretest. Table

11 displays the menu items used in this study with their corresponding mean scores. Depending on the condition, menu item prices were manipulated at two levels. In the same pricing conditions, all five dinner entrées were priced at \$18.00, including vegetables of the day, a choice of soup or salad, and a beverage. In the higher price conditions, a red-colored text stating “add \$5 per order” was strategically placed next to the target item, indicating that customers needed to pay five dollars more for the target item.

Table 7

Dramatic Reviews with Pretest Scores

Dramatic Reviews	Favorable (M ¹)	Dramatic (M ²)
<p>“Thanks to helpful Yelpers I called in advanced and reserved the complimentary limo pickup service. Promptly at 7.30 they were in front of our hotel ready to pick my husband and I up. When we arrived at the restaurant, we entered through a back entrance where a beautifully dressed hostess was waiting for us. She escorted us all the way into the actual restaurant and our table. Now, that’s an entrance. The restaurant is not very large yet does not feel crowded in any way, instead it has a very intimate feeling. There are beautiful chandeliers and rich fabrics everywhere. The food was delicious! I ordered the Rotisserie Chicken (stuffed with ricotta, sundried tomatoes, and spinach). The chicken had a nice crispy skin and was fall off the bone moist. It was paired with this amazing gravy that just added another layer of flavor to the already decadent chicken. The charming chef greeted us and we were able to fawn over his skills. Before we left we were presented with gift bags with tea cake. Everything and anything you could possibly think of. Almost three hours later, we made our way, winding through the back entrance. There was a tray, with more champagne, while we waited for our car. The limo dropped us off at our hotel where we proceeded to begin our food coma for the night. Such a memorable experience!”</p>	6.47	6.37
<p>“My husband wished me a happy 10th Anniversary and rattled off “Oh, by the way, we have a dinner reservation tonight at 9:30.” Huh? What? Upon arriving to the restaurant, the hostess asked that we wait in the lounge while they prepare our table. A gentleman came by and asked if we’d like Champagne while we wait. Why not? Ten years of marriage deserves a toast. Our table was in the garden, flowers and vines were all around. The tables had teal runners, white napkins tied with teal ribbon. This shade was nearly identical to the colors I used for my wedding. Pure coincidence, but it was a lovely nod to our memorable day. I was so looking forward to this meal and knew after we got here, nothing would compare. And we were right. We were sitting next to a lovely couple who highly recommended the rotisserie chicken. The roasted chicken was superbly moist. The accompanying gravy was very flavorful and chock full of mushroom and meat bits. My husband had braised beef cheeks in eggplant and the most delicious mashed potatoes in existence. In addition to dessert, you’re given the opportunity to select treats from the Mignardises trolley. I refer to this as the Willy Wonka experience. There must have been a hundred different items to choose from, we only chose a handful because we were beyond stuffed. It was a fantastic experience and this restaurant is definitely the upper echelon of dining”</p>	6.26	6.32

Table 7 (continued)

Dramatic Reviews	Favorable (M ¹)	Dramatic (M ²)
<p>“On my last night in town, my friends and I decided to dine out for my 40th birthday. As soon as I opened those shiny glass paned double doors, I knew I was in for a treat! As I walked into the main dining room, I was instantly transported into a luxurious 1930’s style French bistro with a huge crystal chandelier cascading above me. Honestly, this place was dripping with opulence! The servers were warm, friendly and present without being overbearing. I was feeling like a king! A hungry one at that! Because we were in a festive mood, we decided on a bottle of bubbly!</p> <p>I went with their signature rotisserie chicken which turned out to be very good. The chicken breast was tender and moist. The skin had a great flavor and was nicely crisp. The thigh and leg had more flavorful meat, not too greasy nor fatty. The sauce was a great accompaniment. It was similar to a brown gravy, had a good wine taste and had chunks of good veggies in it.</p> <p>As the evening came to a close, the staff came out with a cart embellished with lavish decorative baubles and a small sign that read “Happy Birthday” The accompanying birthday cake was extraordinary! Perched on a large black pedestal, it was absolutely majestic but all I could think of was digging into it! To my surprise, it was a mango meringue ice cream cake and although we couldn’t take it home with us, we did indulge in two large decadent slices and it was fantastic! Bravo to the dessert chef! If that wasn’t enough we were given free reign of the mignardises (dessert cart) that had a vast selection of petit fours, small cookies and yes...macarons! They boxed up the cookies and gave us an additional box of marshmallow treats to take home with a copy of the menu and a nicely bound colored brochure documenting the magical evening. I’d have to say this was by far the most amazing dining experience of my life.”</p>	6.63	6.34
<p>“I made a reservation on OpenTable and we were extremely lucky to secure a spot before all tables were completely sold out for the day. Phew! The staffs were kind enough to reserve us a booth with an excellent view. I am really grateful! The restaurant is very modern and classy with great ambiance. For main course, I got the rotisserie chicken – basically the restaurant elevates this dish like no other. The chicken is roasted to perfect consistency with crisp buttery skin. They offer some roasted potatoes and Brussels sprouts too. The chicken meat is perfectly cooked and the sauce is amazing too. Did I mentioned that we went on Valentine’s Day (which meant it was crazy busy) but we could barely tell because our waiter gave us the right amount of attention. They even took a cute polaroid pictures of us as a souvenir”</p>	6.40	5.74

Note. Reviews were rated on a 7-point scale, M¹ (1 = unfavorable, 7 = favorable), $p = .127$; M² (1 = dull, 7 = dramatic), $p < .05$.

Table 8

Descriptive Reviews with Pretest Scores

Descriptive Reviews	Favorable (M ¹)	Dramatic (M ²)
“The food was delicious! I ordered the Rotisserie Chicken (stuffed with ricotta, sundries tomatoes, and spinach). The chicken had a nice crispy skin and was fall off the bone moist. It was paired with this amazing gravy that just added another another layer of flavor to the already decadent chicken. My friend ordered the filet with a side of asparagus and loved everything about his meal. Service throughout the meal were just as good!”	6.24	5.55
“We were served with warm, crunchy epi bread before our main course. I ordered the rotisserie chicken as my entrée. The chicken was moist and tender. The accompanying gravy was very flavorful and chock full of mushroom and meat bits. Like, are you kidding?! It was perfect. The side of fries were exceptional. Everything was amazing. Between service, food, and value this place is not to be missed.”	6.08	5.53
“We started with a complimentary baguette with butter and smooth cherry jam. The bread’s crust was good and distinct. I went with their signature rotisserie chicken which turned out to be very good. The chicken breast was tender and moist. The skin had a great flavor and was nicely crisp. The thigh and leg had more flavorful meat, not too greasy nor fatty. The sauce was a great accompaniment. It was similar to a brown gravy, had a good wine taste and had chunks of good veggies in it.”	6.00	5.32
“I always get the rotisserie chicken whenever I come here- basically the restaurant elevates this dish like no other. The chicken is roasted to perfect consistency with crisp buttery skin. They offer some roasted potatoes and Brussels sprouts too. The chicken meat is perfectly cooked and the sauce is amazing too.”	6.18	5.11

Note. Reviews were rated on a 7-point scale, M¹ (1 = unfavorable, 7 = favorable), $p = .127$; M² (1 = dull, 7 = dramatic), $p < .05$.

Table 9

Mundane Reviews with Pretest Scores

Mundane Reviews	Favorable (M ¹)	Dramatic (M ²)
“Delicious! By far the best rotisserie chicken dish that I’ve had by-far. Went in April a few years back and also just last year and the food quality has not changed. Ambiance and staff are excellent. This was a wonderful dining experience all together. Service was fast and polite. The food was great! Too bad I can’t be a regular here since it’s a bit far for me, but I will definitely be back.”	5.97	5.50
“There was really no part of this meal that was anything but spectacular. If I came back again, I wouldn’t do it any differently: start with a couple of cocktails and steamed mussels, move on to the soup of the day and finish with the rotisserie chicken. The chicken was perfect and was served with potatoes and some vegetables. It was all amazing. I’d definitely come back for the food.”	6.00	5.34
Came here for dinner. Service was good. Food, excellent. I had the pot roast and my husband had the rotisserie chicken. Both entrees came with mashed potatoes and some veggies. The seasoned veggies were pretty good. The pot roast was tasty and my husband’s chicken were simply out of this world. He finished everything on his plate. Service was very attentive and they promptly refilled glasses as soon as they got about half full.	6.03	5.21
“The portions were large as well and well-priced. I ordered the spaghetti, which was delicious. Very simple, but done the from-scratch way, therefore perfection. My boyfriend ordered the half roasted chicken on mashed potatoes. His was very simple but also delicious. There are other things on the menu I’d like to try, so I suppose we’ll be stopping in again.”	6.08	4.92

Note. Reviews were rated on a 7-point scale, M¹ (1 = unfavorable, 7 = favorable), $p = .127$; M² (1 = dull, 7 = dramatic), $p < .05$.

Table 10

Filler Reviews with Pretest Scores

Filler Reviews	Favorable (M)
<p>“I have always love this place. Ken was our server and he delivered amazing service. He made the evening enjoyable. I started with the escargot and love it! Great flavor and paired with the warm bread make it perfect! The beef wellington is one of my favorites and is was perfectly cooked medium rare, with just the right amount of sauce. I paired it with the asparagus, which was cooked to perfection.”</p>	6.08
<p>“Immediately greeted when we walked up to the counter! Our waiter was so attentive and professional, with a calm and kind demeanor. I ordered the calamari for a starter and it was tasty. I’m sure it tasted great because I was already hungry from leaving another food establishment that had horrible service. My guests were raving about the beef skewers and chicken salad. So far, this place is awesome!”</p>	5.95
<p>This. Place. Is. Absolutely. Amazing! I honestly don’t think there’s a better word to describe it. From the hostesses, to the wait staff, everyone was friendly and welcoming. But honestly, you probably want to hear about the food, right? Here goes...I got the spaghettini plate and my wife ordered the fettuccine. Our entrees were cooked to perfection and loaded with flavor. Everything was perfect. I highly recommend this place.</p>	5.63
<p>We loved it here!! Our waitress, Holly was so sweet. The service was fast and attentive. The food was delicious!! Even the complementary French baguette was so fresh and good. It was Sunday but the rainbow trout tasted fresh, the shrimp cocktail was very fresh!! The cobb salad with smoked bacon and grilled corn was amazing, too!! We had a very good experience here.</p>	6.34

Note. Reviews were rated on a 7-point scale (1 = unfavorable, 7 = favorable).

Table 11

Dinner Entrées with Pretest Scores

Menu Items	Appeal (M ¹)	Likelihood to Purchase (M ²)
Veal Parmesan	4.84	4.37
Shrimp Scampi	5.05	4.84
Wood Fired Rotisserie Chicken	4.97	4.63
Pulled Pork	4.82	4.63
Vegetarian Lasagna	4.71	4.63

Note. Menu items were rated on a 7-point scale, M¹ (1 = very unappealing, 7 = very appealing); M² (1 = highly unlikely, 7 = highly likely).

Procedure

Data for this study was collected via Qualtrics. An email with the study's survey link was administered by Qualtrics to its panels. At the beginning of the survey, participants were presented with an online consent form and two screener questions regarding their age and the number of times they had used online review platforms in the past six months. Those who were over 21 years of age and who had used any online review platform at least once in the past six months were eligible. Qualified participants were presented with the following instructions:

It's Friday night and you plan to go out for dinner with your friend at a new restaurant in town. Since neither of you has been to that restaurant before, you decide to check what others have to say about the restaurant via a popular online review website.

Participants answered two questions pertaining to the restaurant's appeal and their intention to visit the restaurant. On the next screen, participants were presented with the following instructions, followed by the second stimulus (menu):

After reading the reviews, you and your friend decide to have dinner at the restaurant. As you are seated, your server hands you the menu and recommends the Chef's specials.

You go over the specials menu before making your entrée selection.

After going through the menu, participants answered questions that measured the dependent variables used in Study 2. The questions measured participants' likelihood to choose, quality level expected, value, price fairness, expensiveness, and willingness to pay. Specific measures used in this study are presented in the instrument section.

On the next screen, participants made their choices. Participants indicated how confident they were in their choices. Participants rated the extent to which price, reviews, the server's recommendation, food preference/ingredients, familiarity, and popularity influenced their

choices. The survey concluded with manipulation checks and demographic questions. Figure 3 outlines the procedures completed by the participants of Study 2.

Preliminary Steps	Consent Form Screener Questions (Appendix D)
Step 1	Instructions Reviews (Appendix E) Rate: appeal & likelihood to visit
Step 2	Instructions Menu (Appendix F) Rate: likelihood to purchase, quality, value, price fairness, expensiveness, and willingness to pay
Step 3	Choice Rate: confidence Rate: factors that may influence choice
Step 4	Manipulation Checks & Demographics

Figure 3. Procedures for Study 2.

Instrument

After reading the reviews, participants rated the restaurant’s appeal using a 7-point scale with 1 being “very unappealing” to 7 being “very appealing” for the question “How appealing is this restaurant?” Participants’ intentions to visit the restaurant were measured on a 7-point scale from 1 (highly unlikely) to 7 (highly likely) using the question “How likely are you to visit this restaurant?”

After being exposed to the menu, participants’ likelihood to purchase was measured on a 7-point scale from 1 (highly unlikely) to 7 (highly likely) using the question “How likely are you to purchase this entrée?” Participants’ quality expectations were rated on a 7-point semantic differential scale with 1 being “low quality” and 7 being “high quality” using the following

question, “What is the quality level expected of this entrée?” Using a 7-point scale from 1 (strongly disagree) to 7 (strongly agree), participants rated the entrée’s value by responding to the statement “This entrée is a good value.” Price fairness was measured using a 7-point scale from 1 (strongly disagree) to 7 (strongly agree) for the statement “Based on its quality, this entrée is fairly priced.” Participants’ perception of the entrees’ expensiveness was measured using a 7-point scale from 1 (very inexpensive) to 7 (very expensive) for the question “How expensive or inexpensive is this item?”

Participants’ willingness to pay for the entrées was measured using a sliding scale from 0 to 60 dollars. Having rated all entrées, participants were then asked to make a choice of only one entrée from the menu list. Their confidence with their choice was assessed using the question “How confident are you with your choice?” measured on a 7-point scale from 1 (very unconfident) to 7 (very confident). Participants rated the importance of price, reviews, the server’s recommendation, food preference/ingredients, familiarity, and popularity using a 7-point scale ranging from 1 (extremely unimportant) to 7 (extremely important) for the question “How important were the following in influencing your choice?”

The survey concluded with manipulation checks and demographic question on the final screen. Manipulation checks were conducted to ensure that the manipulation worked as intended. Participants rated the reviews on the following semantic differential scales ranging from unfavorable – favorable, boring – interesting, dull – dramatic, and non-stimulating – stimulating.

Table 12

Measures Used in Study 2

Screen	Dependent Variable	Measurement
2	Appeal	How appealing is this restaurant? Very unappealing 1 2 3 4 5 6 7 very appealing
	Likelihood to Visit	How likely are you to visit this restaurant? Highly unlikely 1 2 3 4 5 6 7 highly likely
3	Perceived Quality	How likely are you to purchase this entrée (entrée 1 – 5)? Highly unlikely 1 2 3 4 5 6 7 highly likely What is the quality level expected of this entrée (entrée 1 – 5)? Very low 1 2 3 4 5 6 7 very high
	Perceived Value	This entrée is a good value (entrée 1 – 5). Based on its quality, this entrée is fairly priced (entrée 1 – 5). Strongly disagree 1 2 3 4 5 6 7 strongly agree
	Expensiveness	How likely are you to purchase this item? How expensive or inexpensive is this item? Very inexpensive 1 2 3 4 5 6 7 very expensive
	Willingness to Pay	Regardless of the price shown, how much (in dollars) will you be willing to pay for this meal? Assume that you are paying for your own meal. Slider scale \$0 - \$60
4	Choice	Which of these entrées will you order? Multiple choice: Entrée 1 – 5
	Confidence	How confident are you with your choice? Not at all confident 1 2 3 4 5 6 7 very confident
5	Potential Influencing Factors	How important were the following in influencing your choice? <ul style="list-style-type: none"> • Price • Reviews • Server’s Recommendation • Food preference/Ingredients • Familiarity • Popularity very unimportant 1 2 3 4 5 6 7 very important
6	Manipulation Checks	Rate the reviews on the following scale <ul style="list-style-type: none"> • unfavorable 1 2 3 4 5 6 7 favorable • boring 1 2 3 4 5 6 7 interesting • dull 1 2 3 4 5 6 7 dramatic • not stimulating 1 2 3 4 5 6 7 stimulating How many reviews mentioned the Wood Fired Rotisserie Chicken? Multiple choice: 0 – 5
	Realism Checks	How realistic were the reviews? How realistic was the menu? Very unrealistic 1 2 3 4 5 6 7 very realistic

Participants indicated how many reviews mentioned the target item. Realism checks were conducted to ensure that the stimulus mimicked a real-world context. Participants answered the questions “How realistic were the reviews?” and “How realistic was the menu?” Demographic questions included age, gender, marital status, ethnicity, education level, employment status, and annual household income. Table 12 displays the measures and scale used in Study 2.

Pretest

Several pretests were conducted to ensure that proper manipulations were used in Study 2. Participants for the pretest were recruited through Qualtrics. Members of the general population, aged at least 21 years old and have dined out at least once in the past six months, were recruited for the first pretest. Two separate samples of 76 participants ($n = 38$) evaluated the appeal, purchase likelihood, and acceptable price points for 2 sets of menu items containing 12 entrées to a set (a total of 5 for each category; chicken, seafood, beef, pork, and vegetarian). Appeal was measured on a 7-point scale from 1 (very unappealing) to 7 (very appealing) using the question “How appealing is this entrée?” Likelihood to purchase was measured using a 7-point scale ranging from 1 (highly unlikely) to 7 (highly likely). Menu items’ prices were measured using the question “How likely will you purchase this item under the following price (\$11.00, \$13.80, \$17.25, \$21.50, \$26.85, \$33.60, \$42.95)?” rated on a 7-point scale from 1 (highly unlikely) to 7 (highly likely).

The five entrées chosen for Study 2 were equally favorable, with mean scores between $M = 4.71$ and $M = 5.05$ for appeal and $M = 4.37$ and $M = 4.63$ for purchase likelihood. Entrées with particularly high mean scores were not selected so as to avoid favorability becoming a potential confounding factor in the main study. Participants indicated that the price range of between \$13.80 and \$17.25 was considered an acceptable price point for the entrées with mean scores

ranging from $M = 4.11$ to $M = 5.21$. Because the menu items were bundled with a side and a drink, the price was increased from \$13.80 to \$18.00.

Reviews used in Study 2 were pretested using a different sample. Participants in the pretest were recruited through Qualtrics. Members of the general population who were at least 21 years of age and who had read online reviews related to a hospitality product (hotel, restaurant, tourism, etc.) in the past six months were recruited for the pretest. A separate sample of 114 participants ($n = 38$ to a set) evaluated 3 review sets containing approximately 13 reviews of varying vividness (dramatic, descriptive, mundane, filler) to a set. Participants evaluated a set of reviews and rated the reviews on the following scales: “1 (unfavorable) to 7 (favorable), 1 (dull) to 7 (dramatic), 1 (boring) to 7 (interesting), and 1 (not stimulating) to 7 (stimulating)”. Based on the pretest results, reviews that were equally favorable were selected. The mean scores for the selected reviews are displayed in Tables 4, 5, and 6. Favorable reviews that were perceived as vividly different were chosen for the study. Review numbers 1, 3, 5, and 9 were significantly different on the dramatic ($F_{2, 111} = 6.03, p < .005$), stimulating ($F_{2, 111} = 4.94, p < .005$), and purchase likelihood ($F_{2, 111} = 3.85, p < .005$). There was no significant difference with respect to interesting ($F_{2, 111} = 0.91, p = .407$), but the means were in the right directions. The results suggested that participants rated the dramatic conditions as being more preferable than the other two vividness conditions. Participants then answered the question “How likely will you order the menu item mentioned in this review?” using a 7-point scale from 1 (highly unlikely) to 7 (highly likely). Results suggested that review vividness influenced participants’ purchase intentions ($F_{2, 111} = 3.85, p < .005$). Participants exposed to the dramatic reviews ($M = 6.234$) were more likely to purchase the items mentioned in the reviews than were those exposed to descriptive ($M = 5.67$) and mundane ($M = 5.37$) reviews.

Overview of Analysis

Study 1

SPSS version 22 was used to analyze the data. A series of 2 (scarcity 1) \times 2 (scarcity 2) \times 2 (bundling) \times 2 (price) analysis of variance (ANOVA) were conducted on dependent variables to identify between-group differences. Null hypotheses were rejected at $p < .005$.

Simple effects were conducted as a follow-up to significant interaction effects. This was to identify the effects of one independent variable at a fixed level of another independent variable. Choice was analyzed using descriptive statistics with choice percentages displayed. A multivariate analysis of variance was conducted on the dependent variable of influencing factors.

Study 2

A series of 2 (vividness) \times 2 (frequency) \times 3 (price) analyses of variance (ANOVA) were conducted on all the dependent variables of interest. Null hypotheses were rejected at $p < .05$. Simple effects were conducted as a follow-up of significant interaction effects. Tukey HSD post hoc test was conducted on significant main or interaction effects on review vividness. Similar to Study 1, choice was analyzed using descriptive statistics with choice percentages displayed.

Limitations and Potential Errors

The two studies used scenarios depicting hypothetical restaurants and menus for which participants were asked to evaluate and make purchase decisions. Although the stimuli emulated the real world as closely as possible, the findings of this study may not be generalized beyond this study's context. However, the goal of this study was to explore and test relationships between variables of interest. As such, internal validity was prioritized over external validity (Campbell & Stanley, 1973).

Participants made a hypothetical purchase decision without actual monetary tradeoffs. Therefore, their evaluations and intentions may not reflect their true purchase intentions. However, the same is true for most research on consumer decision-making.

Inadequate manipulations could pose a threat to internal validity. However, extensive pretesting and manipulation checks were conducted to ensure that each manipulation possessed adequate strength. The results of this study may not be generalized to other contexts or settings. Future research can replicate this study using other populations and business segments beyond the hospitality industry.

Summary

This chapter discussed the research designs and methods used for this dissertation. Each study's objectives and questions, hypotheses, design, sample, stimuli, procedures, instrumentation, pretesting, and analysis were explained. Findings based on the methods and procedures discussed in this chapter are presented in the next chapter.

CHAPTER 4

RESULTS

This chapter presents the findings of two experiments conducted according to the methods described in the previous chapter. This dissertation proposes that scarcity messages (Study 1), information vividness, and frequency (Study 2) will act as heuristic cues that may influence consumer judgments. The chapter is organized according to the studies conducted, with a comprehensive review of the results of the analyses of each of the dependent variables.

Demographics

Table 13 displays participants' demographic profiles. Study 1 recruited 592 participants, with a majority of them being female (74.7%). This pattern is consistent with Study 2, for which the majority of the participants (362 out of 444) are females. Participants for the two studies are distributed almost evenly across the age groups, except for those above 70 years of age. Only 44 participants are above 70 years of age in Study 1, with 2 in Study 2. More than half of the participants are married (Study 1 = 58.6%; Study 2 = 60.4%). The participants are mainly Caucasian, representing more than 80% of the total participants for both Study 1 and Study 2. The highest education level for participants in Study 1 is high school diploma (26.9%) followed by 25.6% with some college education. Of the 592 participants in Study 1, 26.9% are high school diploma holders, while 25.6% have some college education. As for Study 2, 24.1% of the 444 participants are high school educated, while another 24.1% of the sample are associate's degree holders. Almost half of the participants in both studies are employed full-time (Study 1 = 37.7; Study 2 = 43.9). More than 50% of the participants in both Study 1 and Study 2 have an income of between \$25,001 and \$75,000.

Table 13

Participants' Demographics for Study 1 and Study 2

Characteristic	Study 1 (n = 592)		Study 2 (n = 444)	
	Frequency	%	Frequency	%
Gender				
Male	146	24.7	75	16.9
Female	442	74.7	362	81.5
Age				
21 – 30	103	17.4	119	26.8
31 – 40	129	21.8	133	30.0
41 – 50	109	18.4	85	19.1
51 – 60	117	19.8	60	13.5
61 – 70	90	15.2	45	10.1
Above 70	44	7.4	2	0.5
Marital Status				
Married	347	58.6	268	60.4
Widowed	27	4.6	15	3.4
Divorced	78	13.2	42	9.5
Separated	15	2.5	6	1.4
Never Married	125	21.1	113	25.5
Ethnicity				
African American	43	7.3	26	5.9
Caucasian	485	81.9	366	83.2
Hispanic	31	5.2	23	5.2
Asian	22	3.7	20	4.5
Other	9	1.5	5	1.1
Education Level				
Less than High School	9	1.5	6	1.4
High School Diploma (or GED)	159	26.9	107	24.1
Some College	151	25.6	59	13.3
Associate's Degree	80	13.6	107	24.1
Bachelor's Degree	127	21.5	39	8.8
Graduate Degree	64	10.8	126	28.4
Employment Status				
Student	15	2.5	15	3.4
Retired	131	22.1	51	11.5
Full Time	223	37.7	195	43.9
Part Time	60	10.1	57	12.8
Unemployed	157	26.5	123	27.7
Household Income				
Less than \$25,000	107	18.1	60	13.5
Between \$25,001 - \$50,000	186	31.4	163	36.7
Between \$50,001 - \$75,000	133	22.5	104	23.4
Between \$75,001 - \$100,000	76	12.8	73	16.4
More than \$100,001	90	15.3	42	9.5

Validity and Reliability

Measurements used in this dissertation are single item measures, preempting the need to test for inter-item reliability. Random assignment of samples to experimental conditions and treatment variations enabled this study to elude potential threats to internal reliability such as maturity, historical effects, mortality, confounding variables, and selection bias. As such, conclusions derived from the findings of this study can be attributed to the causal effects of the study's stimuli (Albright & Malloy, 2000; Campbell, 1957).

Study 1: Scarcity, Bundling, and Price

The first study explored the effects of scarcity, bundling, and price on purchase likelihood, evaluation of the target item, and choice. The effects of scarcity were investigated using two different forms. Scarcity 1 was communicated through simple text on the menu stating that the target sandwich was available in limited quantities daily. Scarcity 2 was communicated through a scenario in which a restaurant server specifically mentioned the limited availability of the target sandwich. The following sections are organized according to the dependent variables of interest.

Likelihood and Ratings

Ratings of appeal were analyzed using a 2 (scarcity 1) \times 2 (scarcity 2) \times 2 (bundling) \times 2 (price) ANOVA. The analysis revealed no significant main effects of scarcity 1 ($F_{1, 576} = .127$, $p = .721$), scarcity 2 ($F_{1, 576} = .161$, $p = .688$), bundling ($F_{1, 576} = .286$, $p = .593$), or price ($F_{1, 576} = .072$, $p = .789$). Therefore, hypothesis 1, hypothesis 7, and hypothesis 12 were rejected. A 2 (scarcity 1) \times 2 (scarcity 2) \times 2 (bundling) \times 2 (price) ANOVA was performed on ratings of likelihood to purchase the target sandwich. The effect of scarcity 1 was not significant ($F_{1, 576} = .007$, $p = .934$). The effect of scarcity 2 was not significant ($F_{1, 576} = .027$, $p = .869$). The effect of bundling was

not significant ($F_{1, 576} = .007$, $p = .934$) and the effect of price was not significant ($F_{1, 576} = .288$, $p = .592$), rejecting hypotheses 11 and 16. A significant interaction was observed between scarcity 2 and bundling on participants' likelihood to purchase the target item ($F_{1, 576} = 3.93$, $p = .048$, $\eta^2 = .007$). To test the effects of scarcity 2 at each level of bundling, simple effects tests were conducted. The results of the simple effects tests indicated that the effects of scarcity 2 were not significant for the a la carte menu ($F_{1, 294} = 2.259$, $p = .134$) or lunch specials menu ($F_{1, 294} = 1.681$, $p = .196$). The mean ratings and significance tests are presented in Table 14.

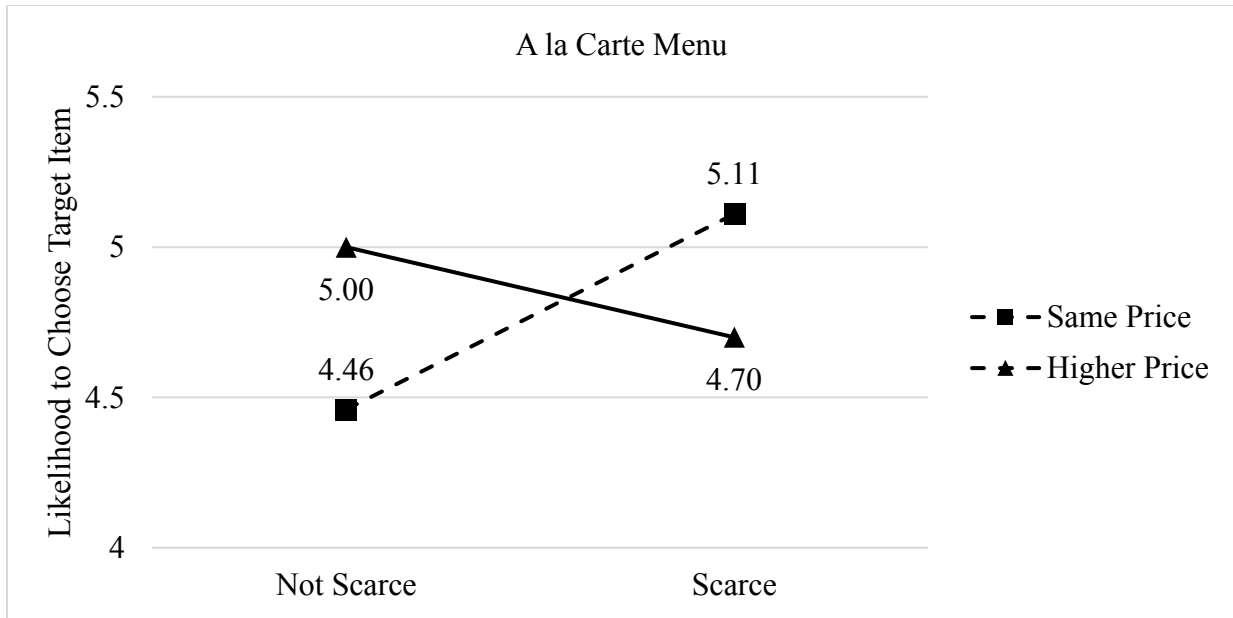
Table 14

Study 1 Main Effects for Target Item's Ratings and Purchase Likelihood

Dependent Variable	Mean (M)		$F_{(1, 576)}$
	Scarcity 1	Scarcity 2	
	No	Yes	
Appeal	5.10	5.15	.127
Likelihood to purchase	4.81	4.80	.007
	No	Yes	
Appeal	5.15	5.09	.161
Likelihood to purchase	4.82	4.80	.007
	A la Carte	Specials	
Appeal	5.08	5.16	.286
Likelihood to purchase	4.86	4.77	.288
	Equivalent	Higher	
Appeal	5.10	5.14	.072
Likelihood to purchase	4.82	4.80	.007

The results showed a significant three-way interaction between scarcity 1, price, and bundling on likelihood to purchase the target item ($F_{1, 576} = 8.117, p = .005, \eta^2 = .014$). Simple interaction effects tests were conducted to analyze the effects of scarcity 1 and price at each level of bundling. The results showed no significant effects of scarcity 1 ($F_{1, 292} = .566, p = .453$) or price ($F_{1, 292} = .084, p = .773$) on likelihood to purchase in the a la carte menu condition. The test revealed no significant effects of scarcity 1 ($F_{1, 292} = .787, p = .376$) or price ($F_{1, 292} = 1.134, p = .288$) for the lunch specials menu. The tests showed a significant interaction between scarcity 1 and price for the a la carte menu ($F_{1, 292} = 4.100, p = .044, \eta^2 = .014$), as well as for the lunch specials menu ($F_{1, 292} = 4.045, p = .045, \eta^2 = .014$).

With the finding of an interaction effect between scarcity 1 and price at each level of bundling, follow-up tests were conducted to ascertain the effects of scarcity 1 at each level of price. Results of the follow-up tests revealed a significant effect for scarcity 1 when the target item was equally priced with the rest of the menu items in the a la carte menu ($F_{1, 292} = 3.779, p = .054, \eta^2 = .025$). Likelihood of choosing the target item was higher in the presence of scarcity 1 ($M = 5.11$) and lower in the absence of it ($M = 4.46$). When the target item was priced higher than the rest of the menu items in the a la carte menu, no significant effects were observed ($F_{1, 292} = .827, p = .365$). For the lunch specials menu, follow-up tests demonstrated a significant effect of scarcity 1 when the target item was priced equally with the rest of the menu items ($F_{1, 292} = 4.200, p = .042, \eta^2 = .028$) but not when the target item was priced higher than the rest of the items on the lunch specials menu ($F_{1, 292} = .632, p = .428$). Participants were more likely to choose the target item when no limited availability message was on the menu ($M = 5.26$) than when a limited availability message appeared on the menu ($M = 4.60$). Results of the simple effects lend support to hypothesis 5. Figure 4 illustrates the three-way interaction effects.



Note. The figure reflects likelihood to choose the target item when it is priced equivalent to or higher than, with scarcity cue or without scarcity cue. Dashed line significant at $p < .05$, solid line not significant $p = .365$.



Figure 4. Three-way interaction effects of scarcity $1 \times$ price \times bundling on likelihood to choose.

Note. The figure reflects likelihood to choose the target item when it is priced equivalent to or higher than, with scarcity cue or without scarcity cue. Dashed line significant at $p < .05$, solid line not significant $p = .428$.

Quality, Value, and Price

The target item evaluations were analyzed using a 2 (scarcity 1) \times 2 (scarcity 2) \times 2 (bundling) \times 2 (price) ANOVA on the ratings of quality, value, and price fairness. There were no main effects of scarcity 1 ($F_{1, 576} = 1.135, p = .287$), scarcity 2 ($F_{1, 576} = .035, p = .851$), bundling ($F_{1, 576} = .770, p = .381$), or price on quality ($F_{1, 576} = 1.418, p = .234$). Therefore, hypotheses 2, 8, and 13 were not supported. There was no effect of scarcity 1 ($F_{1, 576} = .742, p = .389$) or scarcity 2 ($F_{1, 576} = .582, p = .446$) on value and there was no bundling effect on value ($F_{1, 576} = 3.052, p = .081$). Therefore, hypothesis 3 and hypothesis 9 were rejected. The results demonstrated a marginal effect of price on value ($F_{1, 576} = 3.589, p = .059, \eta^2 = .006$), supporting hypothesis 14. Participants perceived the target sandwich to have higher value when its price was comparable to that of the rest of the menu items ($M = 4.89$) versus when the price was higher ($M = 4.63$).

The results showed no interaction effects between the variables on quality and value. On ratings of price fairness, no significant main effects were observed for scarcity 1 ($F_{1, 576} = .405, p = .525$), scarcity 2 ($F_{1, 576} = .290, p = .590$), or bundling ($F_{1, 576} = .127, p = .261$). A significant effect of price was found on price fairness ($F_{1, 576} = 5.521, p = .019, \eta^2 = .009$). This indicates that participants perceived the target item to be fairly priced when it was priced the same as the rest of the menu items ($M = 5.08$) than when it was priced higher ($M = 4.76$). This finding serves as a manipulation check for price.

There were no effects of scarcity 1 ($F_{1, 576} = 1.168, p = .280$) on willingness to pay for the target item. However, there was a significant effect of scarcity 2 on willingness to pay ($F_{1, 576} = 6.796, p = .009, \eta^2 = .012$). Participants exposed to the scarcity message through interaction with the server were willing to pay more for the target sandwich ($M = \$8.65$) versus those who were not exposed to the scarcity cue ($M = \$7.68$). This finding supports hypothesis 4. Based on the

results, there were no significant effects of bundling ($F_{1, 576} = .625, p = .430$) or price ($F_{1, 576} = 2.947, p = .087$) on willingness to pay. Therefore, hypothesis 10 and hypothesis 15 were not supported. The means and significance tests are displayed in Table 15.

Table 15

Study 1 Main Effects for Target Item's Price, Quality, and Value

Dependent Variable	Scarcity 1		$F_{(1,576)}$	η^2	
	Absent	Present			
Quality	5.79	5.91	1.135	-	
Value	4.81	4.70	.742	-	
Price Fairness	4.88	4.97	.405	-	
Willingness to Pay	\$8.37	\$7.97	1.168	-	
		Scarcity 2		$F_{(1,576)}$	η^2
		Absent	Present		
Quality		5.84	5.86	.035	-
Value		4.70	4.80	.582	-
Price Fairness		4.89	4.96	.290	-
Willingness to Pay		\$7.68	\$8.65	6.796**	0.12
		Bundling		$F_{(1,576)}$	η^2
		A la Carte	Specials		
Quality		5.80	5.90	.770	-
Value		4.63	4.88	3.052	-
Price Fairness		4.85	5.00	1.268	-
Willingness to Pay		\$7.85	\$8.47	.625	
		Price		$F_{(1,576)}$	η^2
		Equivalent	Higher		
Quality		5.78	5.91	1.418	-
Value		4.88	4.63	3.589*	.006
Price Fairness		5.08	4.76	5.521**	.009
Willingness to Pay		\$8.31	\$8.02	2.947	-

Note. * $p < .06$; ** $p < .01$.

Choice

Chi-square tests were conducted to ascertain the associations between the selection of sandwiches and the independent variables of the study. The chi-square tests demonstrate no significant associations between sandwich selection and scarcity 1 ($\chi^2(5, n = 592) = 6.702, p = .244$), scarcity 2 ($\chi^2(5, n = 592) = 5.274, p = .383$), bundling ($\chi^2(5, n = 592) = 6.514, p = .259$), or price ($\chi^2(5, n = 592) = 2.123, p = .832$). Table 16 displays the percentages of sandwiches chosen by scarcity, bundling, and price. A myriad of factors in the purchasing environment may have influenced participants' choices. Based on the chi-square results, it can be observed that participants seemed to favor the California Club Wrap and the Parmesan Sliders. These findings are discussed in chapter 5.

Table 16

Percentages of Sandwich Chosen by Independent Variables

	Chicken Sandwich Chosen (%)						Total
	Parmesan Sliders	French Bread	Caesar Ciabatta	Salad Croissant	Honey Mustard	Club Wrap	
(Target Item)							
Scarcity 1							
Absent	20.9	10.5	16.2	12.5	14.9	25.0	100
Present	22.6	13.5	11.1	14.5	17.9	19.9	100
Scarcity 2							
Absent	20.9	13.2	11.1	13.9	15.5	25.0	100
Present	22.6	10.8	16.2	13.2	17.2	19.9	100
Bundling							
A la Carte	23.3	11.1	15.5	10.8	15.2	24.0	100
Specials	20.3	12.8	12.2	16.2	17.6	20.9	100
Price							
Equivalent	19.9	11.5	14.9	13.5	16.2	24.0	100
Higher	23.6	12.5	12.8	13.5	16.6	20.9	100

Note. N = 592.

Choice Confidence

A four-way factorial ANOVA was conducted on participants' confidence in their sandwich selection. The results demonstrate marginal effects for scarcity 1 ($F_{1, 576}=3.218, p = .073$), but no significant effects for scarcity 2 ($F_{1, 576}=.578, p = .447$), bundling ($F_{1, 576} = 1.709, p = .192$), or price ($F_{1, 576}=.578, p = .447$) on choice confidence. A significant interaction between scarcity 1 and price was found on choice confidence ($F_{1, 576}=3.906, p = .049, \eta^2 = .007$). A simple effects test was conducted to examine the effects of scarcity 1 at each level of price. The results of the simple effects test indicated that when the price of the target item was the same as the rest of the items on the menu, scarcity 1 had no effect on participants' choice confidence ($F_{1, 576} = .018, p = .893$). However, when the target item was priced higher than the rest of the items on the menu, scarcity 1 had a significant effect on choice confidence ($F_{1, 576}=6.554, p = .011, \eta^2 = .022$). Participants were more confident with their selections when the target item was scarce ($M = 6.17$) than when it was not ($M = 5.75$). Figure 5 illustrates the interactions between scarcity 1 and price on choice confidence.

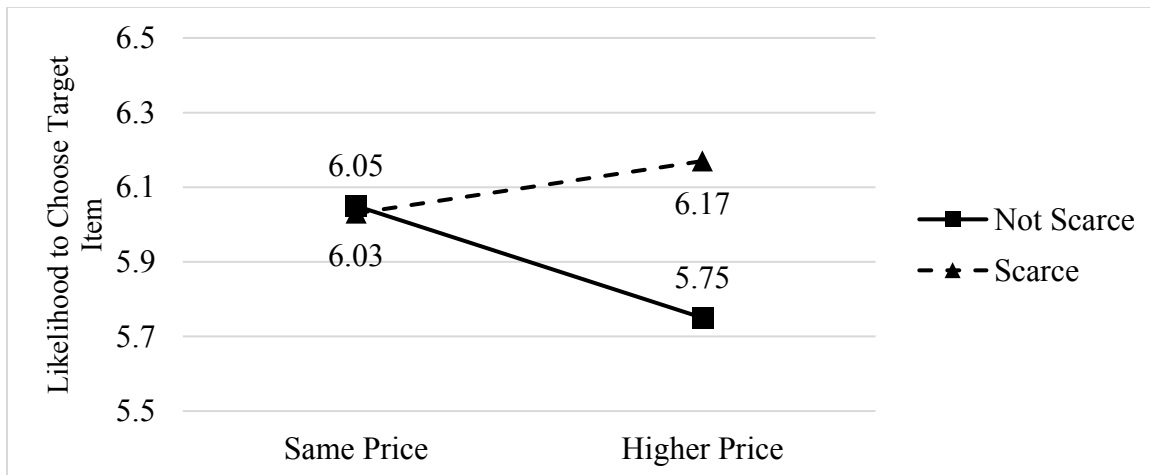


Figure 5. Interaction effects of scarcity 1 \times price on choice confidence.

Note. The figure reflects choice confidence when the target item was priced equivalent to or higher than, with scarcity cue or without scarcity cue. Dashed line significant at $p < .05$, solid line not significant $p = .893$.

The four-way factorial ANOVA revealed significant three-way interaction effects between scarcity 2, bundling, and price on choice confidence ($F_{1, 576} = 4.150$, $p = .042$, $\eta^2 = .007$). As a follow up to the three-way interaction effect, a simple interaction effect between scarcity 2 and price was conducted at each level of bundling. Results of the analysis showed no significant effects for scarcity 2 ($F_{1, 292} = .767$, $p = .382$) or price ($F_{1, 292} = .085$, $p = .771$) in the a la carte menu. The interaction effect between scarcity 2 and price in the a la carte menu was not significant ($F_{1, 292} = 3.523$, $p = .062$). The results indicated no significant effects for scarcity 2 ($F_{1, 292} = .031$, $p = .860$) or price ($F_{1, 292} = 2.007$, $p = .158$) in the lunch specials menu. There was no significant interaction effect between scarcity 2 and price in the lunch specials menu ($F_{1, 292} = .949$, $p = .331$).

Simple interaction effects tests were conducted to explore the effects of scarcity 2 and bundling at each price level. When the target item was priced the same as other menu items, no significant effects of scarcity 2 ($F_{1, 292} = .002$, $p = .964$) or bundling ($F_{1, 292} = 3.436$, $p = .065$) were observed. When the target item was priced higher, no significant main effects could be seen for scarcity 2 ($F_{1, 292} = .967$, $p = .326$) or bundling ($F_{1, 292} = .007$, $p = .935$).

Simple interaction effects tests were conducted to examine the effects of price and bundling at different levels of scarcity 2. The results indicated that when the target item was not scarce, there were no main effects of bundling ($F_{1, 292} = .351$, $p = .554$) or price ($F_{1, 292} = .002$, $p = .964$). However, a significant interaction effect between bundling and price on choice confidence was observed in the absence of scarcity 2 ($F_{1, 292} = 5.842$, $p = .016$, $\eta^2 = .020$). Follow-up tests were conducted to ascertain the effects of price at each level of bundling. The simple effects tests demonstrated no significant effects of price ($F_{1, 292} = 2.785$, $p = .097$) in the a la carte menu or in the specials menu ($F_{1, 292} = 3.061$, $p = .082$). When participants were exposed to the scarcity

message from the server, no significant effects were observed for bundling ($F_{1, 292} = 1.490$, $p = .223$) or price ($F_{1, 292} = .954$, $p = .330$).

Other Factors Influencing Choice

Participants rated the importance of five factors in influencing their choices. A MANOVA was conducted using four independent variables (scarcity 1, scarcity 2, bundling, and price) on five factors that may influence participants' sandwich choice (price, server's recommendation, food preferences, familiarity, and popularity). Several assumptions for MANOVA must be addressed before interpreting any results derived from the analysis. The sample size for this study is reasonable according to the central limit theorem because each cell has more than 20 cases. All cases are equal for each group. The Box's M test was not significant ($p = .025$) at the conservative alpha level of $p < .01$ (Hair, Black, Babin & Anderson, 2010). Therefore, the assumption of equal covariance matrices was upheld.

There were no significant main effects of scarcity 1 ($F_{5, 572} = .555$, $p = .734$), scarcity 2 ($F_{5, 572} = .853$, $p = .512$), bundling ($F_{5, 572} = 2.028$, $p = .073$), and price ($F_{5, 572} = 1.174$, $p = .320$) on the combined scores of the five dependent variables using Wilk's Lambda criterion. The results show a significant interaction effect between scarcity 1 and scarcity 2 at the multivariate level ($F_{5, 572} = 4.297$, $p = .001$, $\eta^2 = .036$). An examination of the between-subject effects indicates significant interactions between scarcity 1 and scarcity 2 on price ($F_{1, 576} = 7.508$, $p = .006$, $\eta^2 = .013$), familiarity ($F_{1, 576} = 21.569$, $p = .001$, $\eta^2 = .019$), and popularity ($F_{1, 576} = 16.892$, $p = .021$, $\eta^2 = .009$).

Finding significant interaction effects, simple effects tests were conducted to examine the effects of scarcity 2 at each level of scarcity 1. The follow-up test revealed a significant effect of scarcity 2 on the importance of price in menu item selection ($F_{1, 294} = 7.757$, $p = .006$, $\eta^2 = .026$).

When the scarcity message was not displayed on the menu or through the restaurant server, participants perceived price to be more important in influencing their menu item selection ($M = 5.58$) compared to when the restaurant's server informed them about the limited availability of the target item ($M = 5.07$). When the scarcity message was presented on the menu, the effect of scarcity 2 on the importance of price in influencing menu selection was not significant ($F_{1, 294} = 1.268, p = .261$). The interaction effects are illustrated in Figure 6.

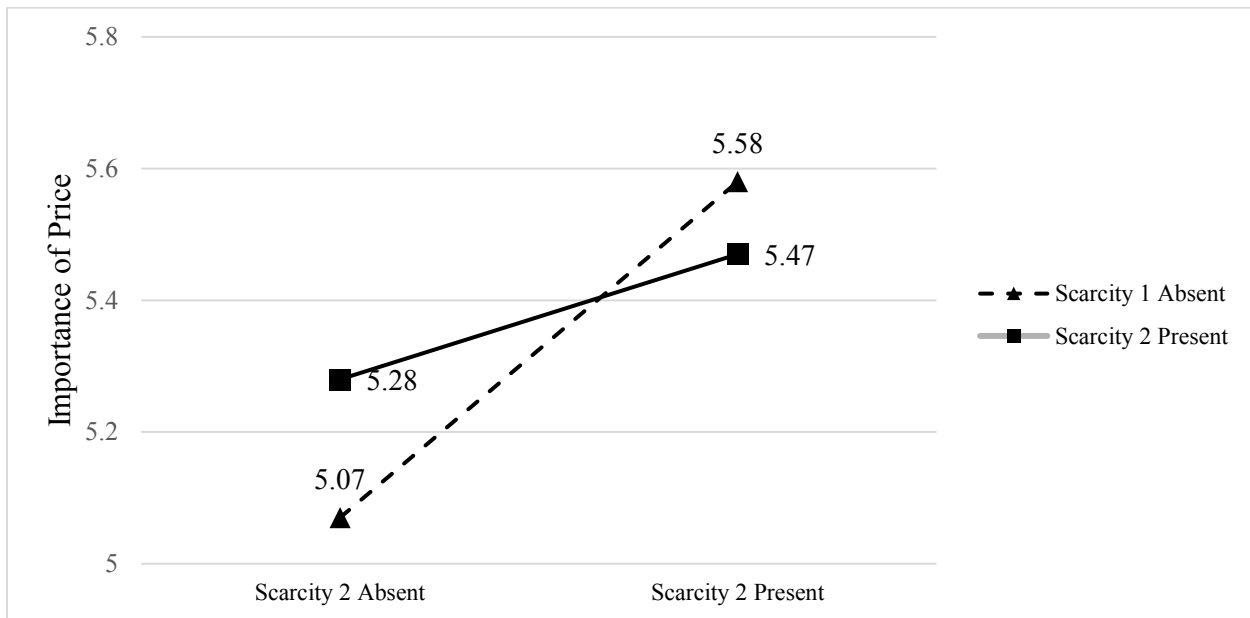


Figure 6. Interaction effects of scarcity 1 \times scarcity 2 on the importance of price on item selection.

Note: The figure reflects the importance of price in item selection in the presence or absence of scarcity cues. Dashed line significant at $p < .05$, solid line not significant $p = .261$.

Following a significant interaction effect of scarcity 1 and scarcity 2 on the importance of familiarity in menu item selection, simple effects tests were conducted to ascertain the effects of scarcity 2 at each level of scarcity 1. When no scarcity cue was on the menu, there was a marginal effect of scarcity 2 on the importance of item familiarity in influencing participants' selection ($F_{1, 294} = 3.738, p = .054, \eta^2 = .013$). Familiarity was perceived as being less important in influencing item selection in the presence of scarcity 2 ($M = 4.84$) and more important in the

absence of it ($M = 5.16$). This indicates that the scarcity message communicated through the server played a role in influencing participants' selection. The simple effects tests indicate that when a scarcity cue was on the menu, the effects of scarcity 2 were found to be significant ($F_{1, 294} = 7.791, p = .006, \eta^2 = .026$). Participants perceived familiarity to be a more important factor in influencing their choice when the target sandwich's limited quantity was conveyed via the menu and the server ($M = 5.34$) and less important when the server made no mention about the target sandwich's limited quantity ($M = 4.95$). Figure 7 displays the interaction effects.

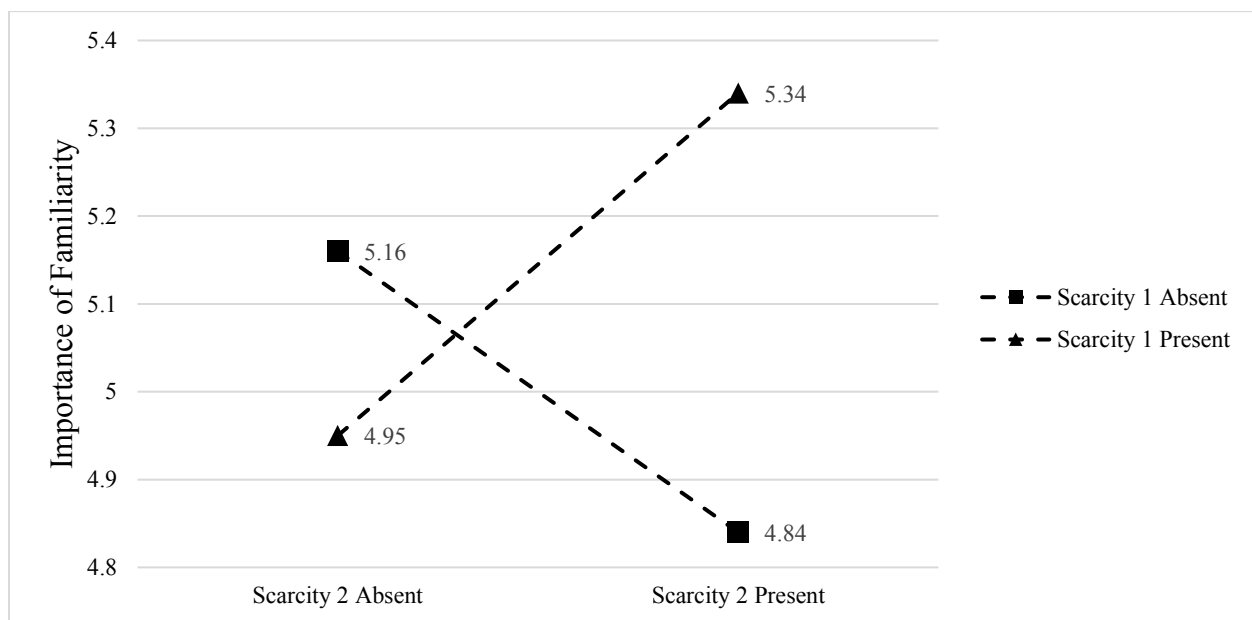


Figure 7. Interaction effects of scarcity 1 \times scarcity 2 on the importance of familiarity on item selection.

Note: The figure reflects the importance of familiarity in item selection in the presence or absence of scarcity cues. Dashed line significant at $p < .05$.

A significant interaction effect existed between scarcity 1 and scarcity 2 on the importance of popularity in participants' menu item selections. Simple effects tests were conducted to ascertain the effects of scarcity 2 at each level of scarcity 1. In the absence of scarcity 1, results of the simple effects tests indicated a significant effect of scarcity 2 on the importance of popularity in influencing participants' selection ($F_{1, 294} = 5.078, p = .025, \eta^2 =$

.017). When no scarcity cue was on the menu, the participants perceived the popularity of an item to be less important despite having received the scarcity message from the server ($M = 4.13$). The popularity of an item was more important when no scarcity cues were on the menu or delivered by the waiter ($M = 4.90$). When the scarcity cue was displayed on the menu, no significant effects of scarcity 2 on the importance of popularity were observed ($F_{1, 294} = 1.073$, $p = .301$). Figure 8 displays the interaction.

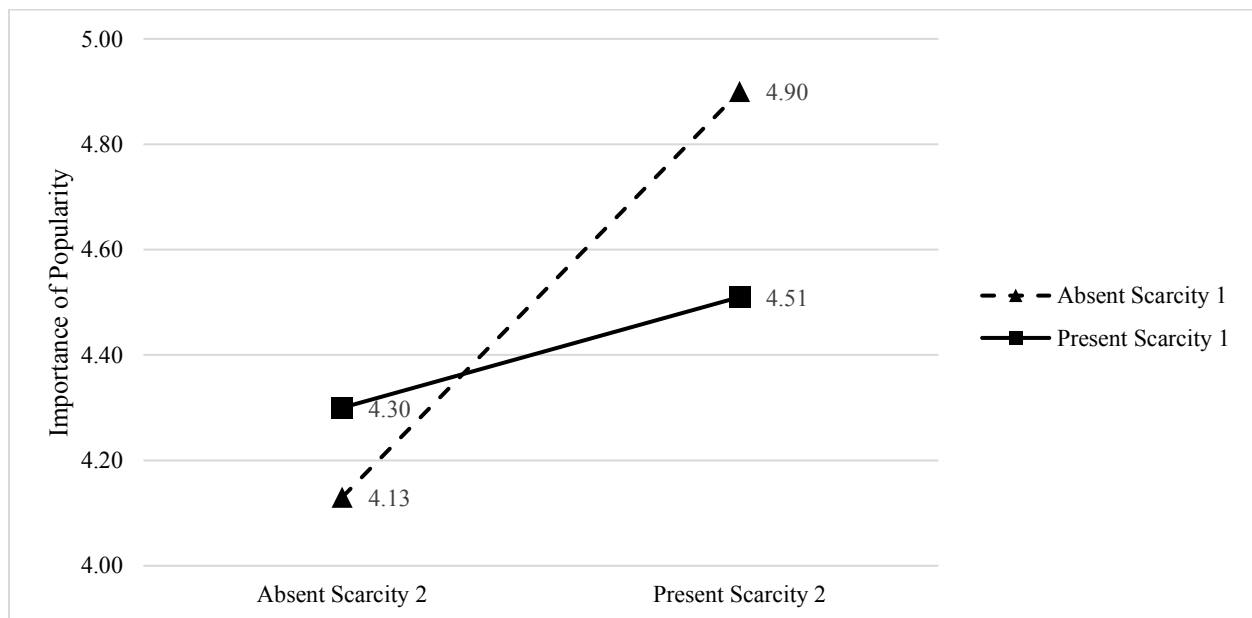


Figure 8. Interaction effects of scarcity 1 \times scarcity 2 on the importance of popularity on item selection.

Note: The figure reflects the importance of popularity in item selection in the presence or absence of scarcity cues. Dashed line significant at $p < .05$, solid line not significant $p = .301$.

Manipulation Checks

Manipulation checks were conducted to gauge whether the manipulations of the independent variables were effective. To test the effectiveness of the scarcity manipulations, participants evaluated the likelihood of the target item to be sold out. A two-way ANOVA was conducted to measure the effect of scarcity 1 and scarcity 2 on the likelihood of the target item being sold out. The analysis indicated no significant effect for scarcity 1 ($F_{1, 588} = .372$, $p = .542$).

There was a significant effect for scarcity 2 ($F_{1, 292} = 8.989, p = .003, \eta^2 = .015$). When the scarcity 2 cue was present, participants reported a higher likelihood of the target item being sold out ($M = 4.86$) versus the absence of scarcity 2 ($M = 4.47$). The results were not surprising considering that the scarcity 2 cue was presented in a scenario that was more vivid than scarcity 1's manipulation. To test whether the price manipulations worked, participants rated how expensive they perceived each entrée to be. A one-way ANOVA was conducted to measure the effect of price on perception of the target item's expensiveness. There was a significant effect of price on expensiveness ($F_{1, 590} = 12.285, p < .001, \eta^2 = .020$), suggesting that the price manipulation worked. Participants rated the realism of the reviews and the menu used in the study. The mean scores for the realism of the menu were $M = 5.82$ on a 7-point scale, indicating that the participants perceived the menu to be realistic. Table 17 presents the means and significant tests of the manipulation checks.

Table 17

Manipulation Checks for Study 1

Dependent Variable	Scarcity 1		$F_{(1,576)}$	Eta ²
	No	Yes		
Likelihood to be Sold Out	4.63	4.70	.372	-
Dependent Variable	Scarcity 2		$F_{(1,576)}$	Eta ²
	No	Yes		
Likelihood to be Sold Out	4.47	4.86	8.898*	.015
Dependent Variable	Price		$F_{(1,576)}$	Eta ²
	Equivalent	Higher		
Expensiveness	4.30	4.72	12.285*	.020

Note. * $p < .05$.

Study 2: Information Vividness, Frequency, and Price

Study 2 investigated the effects of information vividness, frequency, and price on evaluations, purchase likelihood, and participants' choice. Having examined the effects of availability cues on the selection of chicken sandwiches in Study 1, this study examined different types of availability cues on the selection of dinner entrées. The following sections are organized according to the dependent variables.

Likelihood and Ratings

A 3 (vividness) \times 2 (frequency) \times 2 (price) ANOVA was performed on ratings of the restaurant's appeal, the likelihood of visiting the restaurant mentioned on the review screen, and the likelihood of purchasing the target item mentioned in the reviews. The effects of information vividness ($F_{2, 432} = .018, p = .982$), frequency ($F_{1, 432} = .067, p = .797$), and price ($F_{1, 432} = 1.143, p = .286$) were not significant on restaurant appeal. No significant interactions existed between information vividness, frequency, and price with respect to restaurant appeal. Therefore, hypothesis 17, hypothesis 22, and hypothesis 27 were not supported.

Information vividness ($F_{2, 432} = 1.479, p = .229$), frequency ($F_{1, 432} = .266, p = .606$), and price ($F_{1, 432} = .815, p = .367$) were found to have no significant main effects on participants' likelihood of visiting the restaurant. No significant interactions between information vividness, frequency, and price were observed with respect to the likelihood of visiting the restaurant.

The results revealed no significant main effects of information vividness ($F_{2, 432} = .629, p = .534$) on likelihood to purchase the target entrée mentioned in the reviews, thus rejecting hypothesis 21. A significant main effect of frequency on the likelihood of purchasing the target entrée was found ($F_{1, 432} = 4.041, p = .045, \eta^2 = .009$), indicating that participants were more likely to purchase the target entrée when they were presented with four reviews mentioning the

target entrée (M = 5.67) compared to when they were presented with one review mentioning the target entrée (M = 5.37). This finding supports hypothesis 26. There was no significant effect of price on the likelihood of purchasing the target entrée ($F_{1, 432} = 2.384, p = .123$); thus, hypothesis 31 was not supported. The results show no significant interaction effects between information vividness, frequency, and price on likelihood to purchase. Table 18 displays the means and significance tests.

Table 18

Study 2 Main Effects for Ratings and Likelihood

Dependent Variable	Vividness			F _(2,432)	Eta ²
	Mundane	Descriptive	Dramatic		
Restaurant Appeal	6.19	6.16	6.18	.018	-
Likelihood to Visit	6.00	6.07	5.79	1.479	-
Likelihood to Purchase	5.40	5.58	5.57	.629	-
	Frequency			F _(1,432)	
	Infrequent	Frequent			
Restaurant Appeal	6.19	6.16	.067	-	
Likelihood to Visit	5.99	5.91	.266	-	
Likelihood to Purchase	5.37	5.68	4.041*	.009	
	Price			F _(1,432)	
	Same	Higher			
Restaurant Appeal	6.11	6.24	1.143	-	
Likelihood to Visit	5.89	6.02	.815	-	
Likelihood to Purchase	5.64	5.40	2.384	-	

Note. *p<.05.

Quality, Value, and Price

Ratings of the target item's quality, value, and price were analyzed using a 3 (vividness) × 2 (frequency) × 2 (price) ANOVA. There was no effect of vividness ($F_{2, 432} = .364, p = .695$)

and frequency ($F_{1, 432} = 1.255, p = .263$) on the expected quality of the target entrée. The results indicated a significant interaction effect between vividness and frequency on the expected quality of the target entrée ($F_{2, 432} = 3.196, p = .042, \eta^2 = .015$). There was no significant effect of price on expected quality ($F_{1, 432} = 1.930, p = .165$), resulting in the rejection of hypothesis 28.

The analysis revealed no significant effects of information vividness ($F_{2, 432} = .055, p = .946$) or frequency ($F_{1, 432} = .023, p = .881$) on perceived value. A significant main effect of price on value was observed ($F_{1, 432} = 6.212, p = .013, \eta^2 = .014$). This finding indicated that the target entrée was perceived as having more value when it was priced the same as the other entrées on the menu ($M = 5.40$), and lower value when it was priced higher than other entrées ($M = 5.03$). This finding supports hypothesis 29. There was also a significant interaction effect between information vividness and price on value ($F_{2, 432} = 6.612, p = .001, \eta^2 = .030$).

The results showed no main effects of information vividness ($F_{2, 432} = .487, p = .615$), frequency ($F_{1, 432} = .692, p = .406$), or price ($F_{1, 432} = 1.665, p = .198$) on price fairness. There was a significant effect between information vividness and frequency on price fairness ($F_{1, 146} = 5.582, p = .019, \eta^2 = .037$). Results of the analysis indicated no significant effects of information vividness on willingness to pay ($F_{2, 432} = .471, p = .625$), frequency ($F_{1, 432} = .114, p = .736$), or price ($F_{2, 432} = .114, p = .736$). Therefore, hypothesis 20, hypothesis 25, and hypothesis 30 were not supported. Table 19 displays the means and significance tests.

Following a significant interaction effect between vividness and frequency on the target item's expected quality ($F_{2, 432} = 3.196, p = .042, \eta^2 = .015$), follow-up simple effects tests were conducted to ascertain the effects of information frequency at each level of information vividness. Findings of the simple effects tests indicated that when the reviews were dramatic, a significant effect of frequency was found on the target entrée's expected quality ($F_{1, 146} = 6.342, p$

= .013, $\eta^2 = .042$). Participants anticipated that the target entrée's quality would be higher when there were four dramatic reviews ($M = 6.45$) and lower when there was one dramatic review mentioning the target entrée ($M = 6.01$). The results demonstrated no significant effects of frequency when the reviews were descriptive ($F_{1, 146} = .109$, $p = .298$) or mundane ($F_{1, 146} = .313$, $p = .577$). Figure 9 displays the interactions.

Table 19

Study 2 Main Effects for Target Item's Quality, Value, and Price

Dependent Variable	Vividness			F _(2,432)	η^2
	Mundane	Descriptive	Dramatic		
Quality	6.33	6.26	6.23	.364	-
Value	5.25	5.18	5.24	.055	-
Fairly Priced	5.01	5.09	5.20	.487	-
Willingness to Pay	16.35	16.64	17.34	.471	-
	Frequency			F _(1,432)	η^2
	Infrequent	Frequent			
Quality	6.22	6.33		1.255	-
Value	5.20	5.26		.023	-
Fairly Priced	5.03	5.16		.692	-
Willingness to Pay	16.63	16.92		.114	-
	Price			F _(1,432)	η^2
	Same	Higher			
Quality	6.20	6.34		1.932	-
Value	5.40	5.03		6.210*	.014
Fairly Priced	5.20	5.00		1.670	-
Willingness to Pay	\$16.91	\$16.63		.114	-

Note. * $p < .05$.

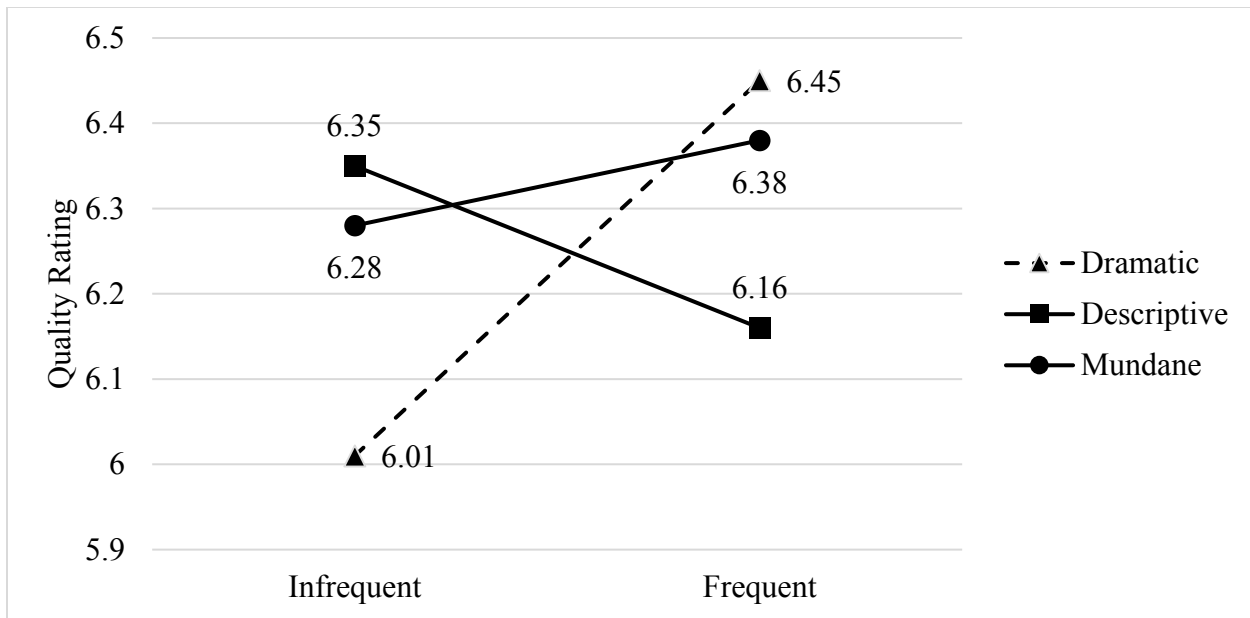


Figure 9. Interaction effects of vividness \times frequency on target item's quality.

Note. The figure reflects the effects of frequency on the target entrée's expected quality at each level of information vividness. Dashed line significant at $p < .05$, solid line not significant $p = .298$ (descriptive) and $p = (.577)$.

The 3 (vividness) \times 2 (frequency) \times 2 (price) ANOVA conducted on the target item's value revealed significant interaction between vividness and frequency on value ($F_{2, 432} = 3.631$, $p = .027$, $\eta^2 = .017$). Follow-up simple effects tests were conducted to examine the effects of frequency at each level of information vividness. Results of the follow-up tests indicated that when the reviews were dramatic, the effect of frequency on the target entrée's expected value was significant ($F_{1, 146} = 4.215$, $p = .042$, $\eta^2 = .028$). This suggests that when the dramatic reviews were displayed four times, participants perceived the target item as having more value ($M = 5.51$) than when the dramatic review was displayed once ($M = 4.97$). There were no significance effects of frequency on value when the reviews were descriptive ($F_{1, 146} = 2.79$, $p = .098$) or mundane ($F_{1, 146} = .011$, $p = .918$). Figure 10 displays the interaction effects.

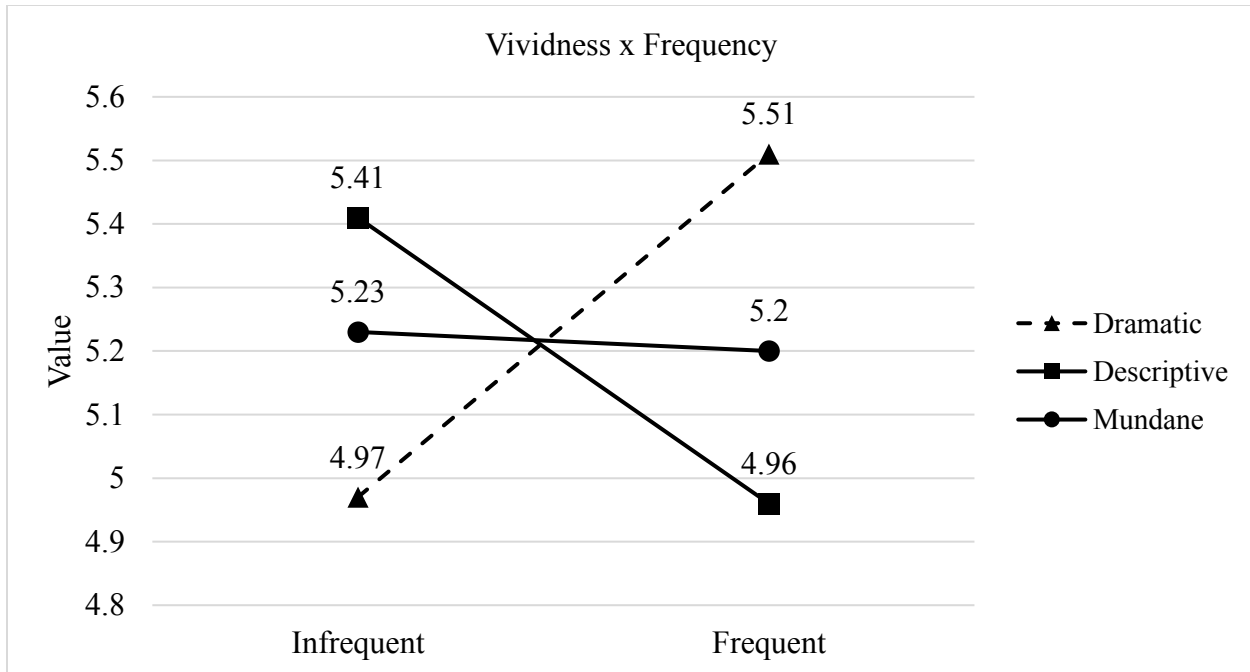


Figure 10. Interaction effects vividness × frequency on target item's expected value.

Note. The figure reflects the effects of frequency on the target entrée's expected value at each level of information vividness. Dashed line significant at $p < .05$, solid line not significant $p = .098$ (descriptive) and $p = (.918)$.

Results of the factorial ANOVA conducted indicated a significant interaction effect between information vividness and price on value ($F_{2, 432} = 6.612, p = .001, \eta^2 = .030$). Follow-up simple effects tests were conducted to ascertain the effects of frequency at each level of price. Results of the simple effects tests indicated that when the price of the target entrée was the same as that of the rest of the entrées on the menu, there was a significant effect for information vividness ($F_{2, 219} = 4.020, p = .019, \eta^2 = .035$). Results of the Tukey post hoc test suggested that the dramatic reviews ($p = .052, M = 5.58$) and mundane reviews ($p = .030, M = 5.64$) were significantly higher than descriptive reviews ($M = 4.99$) and were not significantly different from each other ($p = .975$) on the measures of the target item's value. This suggests that when the target entrée was priced the same as the other entrées on the menu, participants exposed to reviews that contained dramatic storylines reported higher value for the target entrée than did those exposed to descriptive reviews that contained only descriptions of the target entrée.

Surprisingly, participants who read the mundane reviews without vivid descriptions of the target entrée or dramatic storyline reported even higher value for the target item than those who read the descriptive reviews. No significant effects of information vividness were observed when the target entrée was priced higher than the other entrées ($F_{2, 219} = 2.66, p = .072$). Means and significance tests are displayed in Table 20.

Table 20

Simple Effects of Information Vividness on Target Item's Value

Dependent Variable	Vividness			F (2,219)	η^2
	Mundane	Descriptive	Dramatic		
	Same Price				
Value	5.64 _a	4.99 _b	5.58 _a	4.020*	.035
	Higher Price				
Value	4.80	5.38	4.91	2.661	.024

Note. Means without common subscripts are significantly different at $p < .052$.

A significant interaction effect existed between vividness and frequency on price fairness ($F_{2, 432} = 3.38, p = .035$). Follow-up simple effects tests were conducted to examine the effects of frequency at each level of information vividness. The results of the simple effects tests indicated that when the reviews were dramatic, there was a significant effect of frequency on the target item's price fairness ($F_{1, 146} = 5.582, p = .019, \eta^2 = .037$). Participants believed that the target item was more fairly priced when they were exposed to four dramatic reviews ($M = 5.51$) versus one dramatic review ($M = 4.88$). There were no significant effects of frequency on price fairness when the reviews were descriptive ($F_{1, 146} = 1.81, p = .180$) or when the participants read the mundane reviews ($F_{1, 146} = .192, p = .662$). Figure 11 displays the interaction.

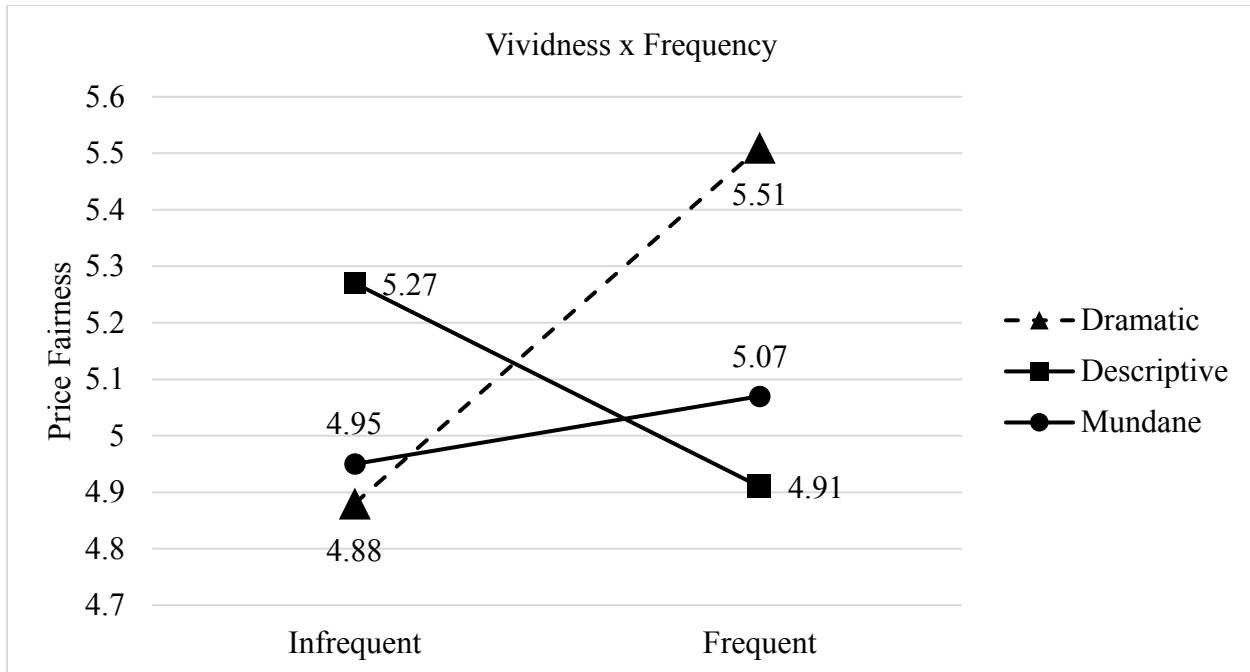


Figure 11. Interaction effects of vividness \times frequency on target item's price fairness.

Note: The figure reflects the effects of frequency on the target entrée's expected value at each level of information vividness. Dashed line significant at $p < .05$, solid line not significant $p = .098$ (descriptive) and $p = (.918)$.

Choice

Chi-square tests were conducted to identify significant associations between selection of entrées and the independent variables. The results indicated no significant associations between entrée selection and information vividness ($\chi^2(8, n = 444) = 8.004, p = .433$), frequency ($\chi^2(4, n = 444) = 6.750, p = .150$), or price ($\chi^2(4, n = 444) = 4.339, p = .362$). Table 21 displays the percentages of entrées chosen by vividness, frequency, and price. Participants' selections may have been influenced by other factors that exist in the purchasing environment. Based on the chi-square results, it can be observed that participants preferred the shrimp entrée to the chicken entrée (target entrée). These findings are discussed in chapter 5.

Table 21

Percentages of Entrées Chosen by Independent Variables

	Entrée Chosen (%)					Total
	Veal	Shrimp	Chicken (Target Item)	Pork	Vegetarian	
Vividness						
Dramatic	22.3	31.8	28.4	8.1	9.5	100
Descriptive	14.2	35.1	31.8	9.5	9.5	100
Mundane	14.9	33.1	29.7	14.9	7.4	100
Frequency						
Infrequent	21.2	33.3	26.1	11.3	8.1	100
Frequent (target item only)	13.1	33.3	33.8	10.4	9.5	100
Price						
Same	13.5	34.7	31.5	11.7	8.6	100
Higher (target item only)	20.7	32.0	28.4	9.9	9.0	100

Note: n = 444.

Choice Confidence

A three-way ANOVA was conducted on participants' confidence in choosing their dinner entrées. The results demonstrated no significant effects of information vividness ($F_{2, 432} = .124$, $p = .884$), frequency ($F_{2, 432} = .488$, $p = .485$), or price ($F_{2, 432} = .002$, $p = .963$) on choice confidence. However, the mean scores ranged from $M = 5.95$ to $M = 6.54$, indicating that the participants were generally confident in their choices.

Other Factors Influencing Choice

A three-way MANOVA (information vividness, frequency, and price) was conducted on six factors that the participants perceived as important in influencing their choices (price, reviews, recommendations, food preferences, familiarity, and popularity). Several assumptions for MANOVA must be addressed before interpreting any results derived from the analysis. The sample size for this study is reasonable according to the central limit theorem because we have more than 20 cases for each cell. All cases are equal for each group. The Box's M test was significant at ($p < .000$) at the conservative alpha level of $p < .001$. Therefore, the assumption of

equal covariance matrices was violated. However, MANOVA is robust to the violations of the homogeneity of variance-covariance matrices when there are equal sample sizes in each group.

Results of the analysis demonstrated no significant effect of information vividness ($F_{12, 856} = .855, p = .593$), frequency ($F_{6, 427} = .429, p = .860$), and price ($F_{6, 427} = .781, p = .860$) on the combined scores of the six dependent variable using the Wilk's Lambda criterion. The results indicated a significant interaction effect between information vividness and frequency on recommendation ($F_{2, 432} = 3.692, p = .026$) and food preferences ($F_{2, 432} = 3.23, p = .041$) at the univariate level.

Following a significant interaction effect between information vividness and frequency on recommendation, simple effects tests were conducted to examine the effects of information vividness on the importance of recommendation in entrée selection at each level of frequency. The findings showed that when the target entrée was mentioned in four reviews, a significant effect of information vividness on recommendation was observed ($F_{2, 219} = 5.181, p = .006, \eta^2 = .045$).

Results of the Tukey post hoc test on the dependent variable of recommendation indicated that the dramatic ($p = .009, M = 5.22$) and mundane reviews ($p = .033, M = 5.11$) were significantly higher than the descriptive reviews ($M = 4.54$) and were not significantly different from each other ($p = .881$). This indicates that participants perceived recommendation to be more important when the participants were exposed to dramatic reviews containing storylines and vivid descriptions of the target entrée versus when they read the descriptive reviews without any storylines. Interestingly, participants perceived recommendation to be more important in influencing their entrée selection when they were exposed to the mundane reviews than when they were exposed to the descriptive reviews.

No significant effects were observed for information vividness when the target entrée was mentioned in one review ($F_{2, 219} = .374, p = .689$). The means and significance tests are displayed in Table 22.

Table 22

Simple Effects of Recommendation and Food Preference Influence on Target Item's Choice

Dependent Variable	Vividness			F (2,219)	η^2
	Mundane	Descriptive	Dramatic		
	Frequent Mentions of the Target Item				
Recommendation	5.11 _a	4.54 _b	5.22 _a	5.181*	.045
Food Preferences	6.35 _{ab}	5.82 _b	6.16 _a	3.934*	.035
	Infrequent Mentions of the Target Item				
Recommendation	4.84	4.97	4.76	.37	.003
Food Preferences	6.14	5.95	6.00	.427	.004

Note: Means without common subscripts are significantly different at $p < .05$.

Following a significant interaction effect between information vividness and frequency on the importance of food preference in entrée selection, simple effects tests were conducted to ascertain the effects of information vividness at each level of frequency. When the target entrée was mentioned in four reviews, a significant effect of information vividness was observed.

The Tukey post hoc test conducted on measures of food preferences suggested that the dramatic reviews ($p = .017, M = 6.36$) were significantly higher than the descriptive reviews ($M = 5.82$), but were not significantly different from mundane reviews ($p = .582, M = 6.35$). There were no significant differences between mundane reviews and descriptive reviews on the measures of food preferences ($p = .181$). The results indicated that the dramatic reviews with storylines and vivid descriptions of the target entrée caused the participants to perceive that food preference was more important in influencing their item selection compared to when they were

exposed to the descriptive or mundane reviews. There were no significant effects of information vividness on the importance of food preference when there was one review mentioning the target item ($F_{2, 219} = .427, p = .653$). The means and significance tests are displayed in Table 22.

Manipulation Checks

Manipulation checks were conducted to gauge whether manipulations of the independent variables were effective. For information vividness, participants rated the overall set of reviews based on semantic measures of unfavorable – favorable, not interesting – interesting, dull – dramatic, and not stimulating – stimulating. One-way ANOVAs were conducted to examine any significant differences for the three review types on the four measures. The results indicated no significant differences among the three reviews on the measure of favorability. This suggested that all of the reviews were equally favorable. There were no significant differences among the three review types on measures of interesting ($F_{2,441} = 1.073, p = .343$), dramatic ($F_{2,441} = 2.037, p = .132$), or stimulating ($F_{2,441} = .140, p = .869$). Though there were no significant differences, the means for the dramatic reviews were consistently higher than for the descriptive and mundane reviews. The reviews had been thoroughly pretested prior to their inclusion in the stimulus. Evaluation of the reviews might have been tainted by filler reviews that were included to increase realism.

To test the effectiveness of frequency manipulation, participants rated the number of reviews that mentioned the target items. A one-way ANOVA measuring the effect of frequency on the number of reviews mentioning the target item was significant ($F_{1, 432} = 70.95, p < .001, \eta^2 = .138$). To test whether the price manipulations worked, participants rated how expensive they perceived each entrée to be. A one-way ANOVA was conducted to measure the effect of price on perception of the target item's expensiveness. There was a significant effect of price on

expensiveness ($F_{1, 432} = 4.092, p < .044, \eta^2 = .009$), suggesting that the price manipulation worked. Participants rated the realism of the reviews and the menu used in the study. The mean scores for realism of the reviews and menu were $M = 5.54$ and $M = 5.86$ on a 7-point scale, suggesting that the participants perceived the reviews and menu as being realistic. Table 23 presents the means and significant tests of the manipulation checks.

Table 23

Manipulation Checks for Study 2

Dependent Variable	Vividness			F (2,432)	
	Mundane	Descriptive	Dramatic		
Favorable	6.23	6.24	6.01		.784
Interesting	5.82	5.87	5.60		.746
Dramatic	5.27	5.18	5.22		.070
Stimulating	5.50	5.74	5.38		.140
	Frequency			F(1,432)	Eta ²
	Infrequent		Frequent		
Number of Mentions	1.78		2.77	70.953*	.138
	Price			F(1,432)	Eta ²
	Same		Higher		
Expensiveness	4.66		4.94	4.092*	.009

Note: * $p < .05$.

CHAPTER 5

DISCUSSION

This chapter presents the key findings of this dissertation. Both theoretical and practical implications arising from the findings are then discussed. The two studies examined the ways in which everyday food purchase decisions are influenced by availability cues that exist in the purchase environment as well as in easily accessible supplementary information. The results of the studies provide insight into the ways in which certain types of availability cues affect consumers' perceptions. This chapter concludes by addressing the studies' limitations and suggesting directions for future research.

Discussion of Findings

Built upon the foundation of judgment heuristics, this research investigates the effects of availability cues on consumers' perceptions and behavioral intentions. The purpose of this research was to identify the types of availability cues that affect consumers' cognitive processes and evaluations and under which conditions they operate. Two experiments were conducted to test the variables of interest. Study 1 examined how two different forms of scarcity, bundling, and price affect consumers' menu item evaluation and likelihood to purchase. Study 2 examined how classic availability cues such as information vividness and frequency interact with price to influence consumer perceptions and likelihood to purchase. Price has long been an established factor that influences purchase intentions. To investigate whether availability cues can override the effects of price, price manipulations were included in both studies. The research findings provide novel insights into the application of availability heuristics in the context of food purchasing. Table 1 summarizes the results of the testing of the hypotheses.

Table 24

Summary of Hypotheses Support

Hypothesis	Dependent Variable	Predicted Effect	Support
Study 1			
H1	Appeal	Scarcity > No Scarcity	No
H2	Quality	Scarcity > No Scarcity	No
H3	Value	Scarcity > No Scarcity	No
H4	Willingness to Pay	Scarcity > No Scarcity	Yes
H5	Likelihood to Purchase	Scarcity > No Scarcity	Yes
H6	-	Scarcity 2 > Scarcity 1	Yes
H7	Appeal	Bundle > A la Carte	No
H8	Quality	Bundle > A la Carte	No
H9	Value	Bundle > A la Carte	No
H10	Willingness to Pay	Bundle > A la Carte	No
H11	Likelihood to Purchase	Bundle > A la Carte	No
H12	Appeal	Higher Price > Equal Price	No
H13	Quality	Higher Price > Equal Price	No
H14	Value	Equal Price > Higher Price	Yes
H15	Willingness to Pay	Higher Price > Equal Price	No
H16	Likelihood to Purchase	Equal Price > Higher Price	No
Study 2			
H17	Appeal	Dramatic > Descriptive > Mundane	No
H18	Quality	Dramatic > Descriptive > Mundane	Partial
H19	Value	Dramatic > Descriptive > Mundane	Partial
H20	Willingness to Pay	Dramatic > Descriptive > Mundane	No
H21	Likelihood to Purchase	Dramatic > Descriptive > Mundane	No
H22	Appeal	Frequent > Infrequent	No
H23	Quality	Frequent > Infrequent	Yes
H24	Value	Frequent > Infrequent	Yes
H25	Willingness to Pay	Frequent > Infrequent	No
H26	Likelihood to Purchase	Frequent > Infrequent	Yes
H27	Appeal	Higher Price > Equal Price	No
H28	Quality	Higher Price > Equal Price	No
H29	Value	Equal Price > Higher Price	Yes
H30	Willingness to Pay	Higher Price > Equal Price	No
H31	Likelihood to Purchase	Equal Price > Higher Price	No

Scarcity

The findings of Study 1 provide evidence that consumers' evaluations and purchase intentions can be influenced by the limited availability of a menu item. Although no evidence exists to suggest that the presence of scarcity cues influenced consumers' ratings of a menu

item's appeal, quality, and value, the findings indicate that scarcity increased consumers' willingness to pay and intention to purchase. The findings of this study provide further support for existing research in which the effect of scarcity generated a sense of urgency and completion among buyers, leading to increased purchases and higher consumer satisfaction (Aggarwal, Jun, & Huh, 2011). Research found that the limited availability of wines influenced purchase decisions when consumers perceived that such limitations were created by demand and not supply (van Herpen, Pieters, & Zeelenberg, 2014). The findings of Study 1 did not lend enough evidence to support the theory that scarcity would affect consumers' ratings of the quality of the target chicken sandwich. Average consumers understand that high-quality wines are in high demand, and they expect those wines to be available only in limited quantities. By contrast, chicken sandwiches are a readily available, inexpensive food item. The findings of Study 1 suggest that the effects of scarcity are not as apparent or strong with respect to menu items when an abundance of substitutions is available to consumers.

As anticipated, consumers tend to be influenced by information that is more vivid in their minds. The study tested two different forms of scarcity cues: one was displayed on the menu, and the other was communicated via a scenario with the restaurant server. Although it was expected that a real-life server interaction would be more vivid than a scenario, the findings of Study 1 showed significant effects of scarcity 2 on consumers' willingness to pay for the target sandwich. This indicates that consumers were willing to pay a higher price for the target item if the item's limited availability was vividly communicated to them. Most people skim through a menu, and although the scarcity 1 cue was printed in red, participants could easily overlook it. When the limited availability of the target item was communicated through the server, participants may

have created this interaction in their minds, causing them to focus more on the information provided.

The availability bias suggests that individuals tend to make decisions based on information that is memorable and that can be easily retrieved from the mind (Kahneman, 2011). Therefore, it is expected that information that is more salient in the minds of consumers will have more influence on their judgments and evaluations. Information is communicated through multiple channels in a restaurant, through mediums such as the menu, servers, promotional ads, tent cards, online reviews, word-of-mouth, and much more. Out of these various channels, servers provide the most interactive and personalized information, which can be tailored to consumers' needs. Because individuals retain vivid information more easily than they do dull information (Holbrook & Moore, 1981; Veryzer & Hutchison, 1998), it is not surprising that the information conveyed through interactions with servers can be recalled more easily than pallid information. These findings validate those of previous studies, in which information vividness was found to be one of the crucial factors affecting information availability.

Bundling

The results of Study 1 show that consumers' product bundling did not affect consumers' product evaluation and likelihood of choice. The lack of evidence for bundling effects may be attributed to the presence of other cues, such as scarcity and price. Past research suggests that consumers are attracted to product bundles because of the inferred savings (Estalami et al., 2007). This theory postulates that consumers see product bundles as a source of savings due to the belief that product bundles inherently come at a discount. The anchoring and adjustment heuristic is one of the deciding factors that allows consumers to evaluate their savings when purchasing a bundle (Yadav, 1994). However, this study did not provide a price comparison

between the lunch specials and the a la carte menu, thus limiting participants' ability to use the a la carte prices as an anchor to assist in the evaluation of potential savings from the bundled meals.

Research suggests that convenience and value for money are among the factors that motivate consumers to opt for product bundles (Harris & Blair, 2006; Matthews, Somogyi, & Van Zanten, 2014). Purchasing a complete meal comprised of an entrée, a side, and a drink does not require significant search and assembly costs. Furthermore, there is a fairly low risk of product incompatibility when assembling menu items. Therefore, the bundling strategy may not have the same influence in the restaurant context as it does on other products or services that require extensive search costs and maintain a high risk of incompatibility. More often than not, consumers expect restaurants to provide specials or value meals. Although bundling reduces consumers' pain of paying (Yadav & Monroe, 1993), consumers require the freedom and flexibility to choose items from a range of categories. To control other confounding factors, this study provides a limited bundle offer: a sandwich, a side of fries, and a drink. Such limited bundle offers can be seen as limiting consumers' freedom of choice. Instead of generating demand, this strategy can create a backlash toward the foodservice establishment. As found in Study 1, consumers are willing to pay more for a scarce menu item when it is unbundled than when it is presented as a lunch special. This suggests that in food purchase situations in which bundle offers are limited, the effect of the bundling strategy on consumers' product evaluation and likelihood to purchase is questionable. Further research must be conducted to determine the effects of price bundling in the restaurant context.

The lack of evidence supporting the direct effect of scarcity on the likelihood to choose does not warrant a total dismissal of scarcity's influence on consumer decision-making. The

results of Study 1 reveal that instead of relying on a single cue, consumers tend to triangulate multiple cues in the environment to assist in their purchase decisions. Because a multitude of cues exists in the purchase ecosystem, it is possible that the interaction of these cues influences consumers' product evaluations. While this study tested the effect of each cue in isolation (as it is anticipated that consumers place different weights on different cues), the results revealed a significant interaction between cues. Price was shown as being pivotal in influencing consumers' choices. The effects of the scarcity cue on the menu were apparent when the target item was priced equal to the other menu items, suggesting that price overpowers the effects of scarcity.

When menu items were equally priced in the a la carte menu, consumers were more likely to choose the scarce target item. Interestingly, the reverse was true for the specials menu. Consumers were more likely to choose the target item when its quantities were not limited. Ordering a menu item that can possibly be sold out is a frustrating experience, so some consumers may opt for the least risky option of choosing items that are not produced in limited batches. This is particularly true for risk-averse individuals, as they see potential losses as being greater than potential gains (Kahneman & Tversky, 1979).

Frequency

The Internet and mobile applications have enabled consumers to obtain instant access to an abundance of information. Information that exists online and in the immediate purchase environment allows consumers to make well-informed decisions. The results of Study 2 show that the frequency with which the information is displayed to consumers increases their favorable perceptions and likelihood to purchase the target entrée. Frequency increases familiarity, and familiar events can be retrieved more easily than non-familiar ones. Research suggests that consumers are more likely to consider familiar brands than non-familiar ones (Coates, Butler, &

Berry, 2004). As consumers are repeatedly presented with the same information, it is expected that their familiarity will increase and that their purchase intentions will grow stronger.

Moreover, research suggests that consumers' purchase intentions are persuaded not only by an online reviewer's credibility, but also by the number of reviews a particular item receives (Zhang, Zhao, Cheung, & Lee, 2014). These findings suggest that the classic attributes that may lead to availability biases still hold in today's dynamic purchasing environment.

However, the results of Study 2 show a lack of evidence to demonstrate the effects of information frequency on restaurant ratings and likelihood to visit a restaurant. Despite reading favorable reviews about the restaurant and its menu, consumers were not persuaded to form favorable pre-purchase expectations about the restaurant. Because the restaurant was selected for them, the participants may have felt that they were not given the freedom of choice, causing them to assume that what they thought about the restaurant – and whether or not they intended to visit it – did not matter.

The results showed no evidence of support for the effects of frequency on ratings of the target entrée. Despite frequent mentions of the target entrée in the reviews, it is possible that the participants glanced through the reviews without paying much attention to them. Moreover, because the questions pertaining to the menu items were asked immediately after the menu was displayed, when answering the questions participants may have recalled the information on the menu more easily than on the reviews. This may be attributed to the recency effect, in which information presented last remains salient in the mind and influences consumers more than the initially presented information does (Brunel & Nelson, 2003). As opposed to the menu, the reviews were presented in a lengthy textual format. To conserve their mental energy, participants

may have simply glanced through the reviews, directing most of their attention to the vivid and colorful menu, which presented simpler and more attractive information.

The findings of this dissertation indicate that the frequency effects manifest themselves with respect to some variables, such as quality, value, and likelihood to purchase, but not others. Research suggests a curvilinear (inverted U) relationship between message repetition (frequency) and message effectiveness (Anand & Sternthal, 1990; Campbell & Keller, 2003). The effectiveness of a message increases as its frequency slowly increase and decreases as the repetition goes beyond a certain point (Cacioppo & Petty, 1979). The target item was mentioned in a decent numbers of reviews, thus explaining the favorable evaluation of the target item. The effects of frequency were not significant on intention to visit the restaurant, as most of the reviews fixated on the menu items and not on the restaurant.

Information Vividness

Researchers suggest that information vividness can affect the magnitude of availability bias. However, the findings of Study 2 did not support the existence of any effects of information vividness on consumers' evaluations of the target entrée. In contrast to previous research that suggests information vividness increases the ease of information retrieval (Reyes et al., 1980), the findings of Study 2 did not show any support for the effects of information vividness on consumers' ratings of the quality or value of the target entrée. In this study, information vividness was manipulated at different levels of drama and descriptiveness of online reviews. However, the manipulation checks revealed that the manipulations were not as strong as they had been during the pretests. Although the means were in the right direction, such weak manipulation may have contributed to the lack of evidence supporting the effects of information vividness.

Cues rarely exist in isolation from one another. This prompts consumers to use a combination of cues in their decision-making. The findings show that information frequency and vividness interact with one another to affect consumers' perceptions of quality, value, and price fairness. The online review environment inherently contains multiple cues that may interact with and overpower one another. The results of Study 2 indicate that when the target entrée is dramatically described and frequently mentioned, favorable evaluations of the target entrée's quality, value, and price fairness are generated. Frequent and dramatic presentation of information increases consumers' familiarity with the target entrée, enabling consumers to recall information pertaining to the target item and to retrieve this information faster (Shah & Oppenheimer, 2009).

Choice

All menu items used in this study were pretested for favorability to ensure that participants perceived them as equally favorable. Analysis revealed that despite their exposure to scarcity, bundling, and price manipulations, participants were more likely to choose the California Club Wrap and the Parmesan Sliders. Other factors, such as food preferences and familiarity, may have overpowered the effects of scarcity, bundling, and price on consumers' choice. Humans are creatures of habit, and deciding which sandwich to purchase is not as important as deciding which car to purchase. Such findings lend support to existing research on dual-process theory, where unimportant, low-risk decisions are made by the heuristic System 1 (Klein, 1989).

The results of Study 1 indicate that scarcity, bundling, and price do not influence participants' choice confidence. However, consumers were found to be more confident in their selection of sandwich when scarcity and price were manipulated. Consumers were more

confident in their choices when the availability of the target sandwich was scarce and when the sandwich was priced higher than the other sandwiches on the menu. Additionally, bundling was found to interact with price in influencing consumers' confidence. When presented with the lunch specials menu, consumers were confident that they had made the right sandwich selection when all of the sandwiches were priced similarly. This suggests that regardless of cues, price still plays an important role in influencing consumers' choice and selection.

Participants evaluated the factors they considered important in influencing their choices. The findings of Study 1 revealed that participants regarded price as more important when the target item's limited availability was communicated by the server and not by the menu. When there was no scarcity cue on the menu, the effects of the scarcity message conveyed through the interaction with the server triggered more deliberate processing by the participants, forcing them to consider other cues, such as price, before deciding what to purchase.

Other than price, familiarity was an important factor in affecting participants' choice. The results of the study showed that familiarity was more important in the presence of both scarcity cues. This indicates that when consumers were aware that one of the sandwiches was available in limited quantities, they relied on familiarity more when making decisions. In addition to familiarity, the popularity of an item is considered an important factor influencing consumers' choices. When consumers were exposed to the scarcity message through their interaction with the server, they tended to rely on the popularity of a menu item to help them make their selections. These findings suggest that scarcity cues instigate consumers' System 2, causing them to activate more systematic processing and utilize multiple cues to assist in their decision-making process.

The findings of Study 2 show that participants were more likely to choose the shrimp entrée regardless of their exposure to information vividness, frequency, and the price of the target entrée (chicken). Though the results indicated that information vividness, frequency, and price did not influence choice, the mean scores were in the predicted direction, indicating that the consumers were generally confident in their choices. The results of Study 2 indicate that consumers perceived recommendations and food preferences as being important factors in influencing their entrée selections. When participants were exposed to dramatic reviews that frequently mentioned the target entrée, the participants placed increased importance on recommendations and food preference in influencing their choices.

Theoretical Implication

This study provides meaningful insights into the application of availability heuristics in the hospitality industry, particularly in the restaurant environment. Research suggests that individuals are “misers,” preserving their cognitive effort and mental energy for more important decisions (Fiske & Taylor, 1991; Tversky & Kahneman, 1974; Shah & Oppenheimer, 2008). As such, it is expected that consumers’ food purchase decisions can be affected by subtle cues that exist in both immediate and intermediate purchase environments. The findings of this dissertation enrich Fiske and Taylor’s (1991) “cognitive miser” notion by providing empirical evidence that consumers utilize various cues before making food purchase decisions. Despite the weak evidence, it is premature to say that availability cues are not important in food-related decision-making. Rather than working in isolation, the cues interact with other cues to influence consumers’ decision-making. Because food purchase decisions require little attention and mental effort, consumers may not realize that they have invested extra cognitive effort into triangulating different cues that help them make better decisions.

While further investigation is needed, the findings demonstrate a recency effect in which consumers focused on the menu rather than on the reviews provided to them. This study mimics real food purchase decisions. Participants read the reviews before they looked at the menu and made their purchase decisions. Because focusing on lengthy reviews can be mentally strenuous, participants may have used the simple information on the menu to make their selections. Despite the presence of dramatic reviews, participants' choices were more likely influenced by the menu, as it appeared to be more vivid in terms of visual cues than were the lengthy textual reviews. Apparently, colorful and visually attractive information is more vivid than reviews containing emotionally interesting storylines. This supports the effects of availability bias in the food purchase environment.

The significant effects of scarcity, availability, and recency on food purchase decisions imply that the dynamic food purchase environment is affected by intertwining theories, necessitating more research before one can truly understand the reasons why consumers behave the way they do when making food purchase decisions. In short, the findings of this dissertation advance the understanding of how different cues in the purchase environment affect consumers' evaluations and purchase intentions. Evaluating the spectrum and magnitude of availability heuristic cues provides an understanding of how some cues are weighted more heavily than others in the food-purchasing context. The findings of this study foster a comprehension of how availability cues manifest themselves in different forms and degrees in the modern purchase environment, substantiating the classical principles of the availability heuristic (Tversky & Kahneman, 1974).

Practical Implications

The operation of the availability heuristic in daily consumer decision-making has important practical implications for industry players and marketers alike. Although retail businesses have manipulated scarcity to generate favorable consumer evaluations, the same strategy may not apply to the restaurant industry. Instead, the findings of this study suggest that restaurateurs should communicate scarcity messages interactively through their servers. Though it is imperative that scarcity messages be incorporated into menus, such messages, when conveyed through a medium that is more salient in the minds of consumers, will be more beneficial. Restaurateurs can create the perception of limited availability by using a tent card or a specials board placed outside the establishment. This could generate traffic into the restaurant. Business owners can remain profitable and sustainable by strategically utilizing scarcity to promote healthier menu options or items with high profit margins, or even to stimulate demand for items that use locally sourced produce. Limited availability or quantity limits generate higher purchase intentions than do time limits (Aggarwal et al., 2011). As such, practitioners should use a scarcity strategy that relies on a quantity limit rather than a time limit.

Due to the low level of attention consumers maintain when making food purchase decisions, marketers and restaurateurs must ensure that the cues they use to create favorable evaluations are frequently exposed to consumers via different platforms. Restaurateurs can capitalize on online review platforms by providing incentives for consumers to leave reviews. However, this should be done only after careful consideration of the service encounter and the costs that may be incurred in such an exchange. The findings of this study indicate that consumers are more affected by reviews that possess a dramatic storyline. This suggests that reviews presented in a narrative or story-telling format are more persuasive than descriptive

reviews. Restaurateurs could utilize excerpts of these reviews and highlight them on their restaurants' Facebook pages or official webpages. It is suggested that the marketing team solicit favorable reviews by encouraging consumers to relate their fondest memories of the restaurant. This could be done as a monthly competition, with the prize being meal vouchers. Because a business's internet presence is critically important, restaurants must grasp the importance of maintaining a positive online presence to ensure their sustainability.

Limitations and Recommendations for Future Research

This dissertation used two scenario-based experiments in which respondents evaluated menu items and made hypothetical purchase decisions. Although the stimuli used for both studies emulated the real world as closely as possible, the findings of this dissertation may not be generalized beyond the dissertation's context. Because the goal of this dissertation was to explore and test relationships between the variables of interest, internal validity was appropriately prioritized over external validity (Campbell & Stanley, 1973). To allow for greater generalizability of findings, future research can replicate this study in different contexts and settings. Experimental research allows researchers to construct controlled environments that effectively isolate variables of interest. This enables researchers to observe specific causal effects, something that is almost impossible to achieve in the robust real environment (Henshel, 1980; Kardes, 1996; Lehman, Lempert, & Nisbett, 1988).

While manipulations used in both of the studies were extensively pretested, some of the manipulations could have been stronger to foster better observation of their effects on the dependent variables. The manipulation used for scarcity 1 failed to yield the desired level of strength with respect to participants' perceptions of the likelihood of the target item selling out.

Although this shortcoming was compensated for by the second scarcity cue (scarcity 2), which was more salient in participants' minds, future research could investigate the use of different cues that are more vivid and better able to direct participants' attention to the scarcity message. Similarly, Study 2 could potentially produce better results if the manipulations used for information vividness were stronger. The weak manipulation effects could have been caused by respondents' survey fatigue, as the manipulation check questions were asked toward the end of the survey. Participants' perceptions of the reviews may have been swayed by the filler reviews that were provided to increase the realism of the review page. Pretests conducted on three different samples revealed that the strength of the review manipulations was sufficient. Furthermore, the mean scores for the different review types (dramatic, descriptive, and mundane) were in the anticipated direction. To attain stronger effects of information vividness, reviews can be accompanied by pictures – a common practice of reviewers on various online review platforms.

In both studies, participants made hypothetical purchase decisions. Because no monetary tradeoffs existed, participants could have been exposed to “hypothetical bias,” overstating their intentions in comparison to their actual actions (List & Gallet, 2001). Based on the classic theory of planned behavior (Ajzen, 1991), intentions are considered valid predictors of actual behavior. Future research can investigate the link between intentions generated by availability heuristic cues and consumers' actual purchases and food consumption. Though this study found small effects of availability cues on food purchase decisions, future research could manipulate different forms and degrees of availability to investigate their effects on other hospitality products. This will help identify the conditions under which the availability heuristic operates most strongly.

While research on judgment heuristics has been established in consumer behavior settings, the dynamic purchase environment that combines information in both physical and digital environments warrants further research in this area. Because a multitude of internal and external factors can influence the magnitude of availability, identifying how different factors and cues operate under different conditions can provide valuable insights for academicians and practitioners alike. This research serves as an impetus to drive more research into a relevant and ever-changing topic.

Summary

This chapter discussed key findings of the dissertation as well as theoretical and practical contributions that are applicable not only in the restaurant context, but in the context of consumer behavior. This study adds to the hospitality literature, particularly by providing an understanding of the psychological factors that can influence consumer decision making. In an age when information is easily accessible, it is important that researchers and practitioners understand the cues that influence consumer decision making, thus affecting the success of hospitality businesses.

APPENDIX A



UNLV Social/Behavioral IRB - Exempt Review Exempt Notice

DATE: October 13, 2016
TO: Sarah Tanford, Ph.D.
FROM: Office of Research Integrity - Human Subjects
PROTOCOL TITLE: [971349-1] Lunch and Dinner Purchase Decisions
ACTION: DETERMINATION OF EXEMPT STATUS
EXEMPT DATE: October 13, 2016
REVIEW CATEGORY: Exemption category #2

Thank you for your submission of New Project materials for this protocol. This memorandum is notification that the protocol referenced above has been reviewed as indicated in Federal regulatory statutes 45CFR46.101(b) and deemed exempt.

We will retain a copy of this correspondence with our records.

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 and/or the IRB which shall include using the most recently submitted Informed Consent/Assent Forms (Information Sheet) and recruitment materials. The official versions of these forms are indicated by footer which contains the date exempted. If your project involves paying research participants, it is recommended to contact Carisa Shaffer, ORI Program Coordinator at (702) 895-2794 to ensure compliance with subject payment policy.

Any changes to the application may cause this protocol to require a different level of IRB review. Should any changes need to be made, please submit a **Modification Form**. When the above-referenced protocol has been completed, please submit a **Continuing Review/Progress Completion report** to notify ORI - HS of its closure.

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 protocol title and IRBNet 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

STUDY 1 QUESTIONNAIRE

A. Informed Consent

Lunch Purchase Decisions

You are invited to participate in a research study. The purpose of this study is to evaluate how consumers make menu item choices. You are being asked to participate in the study because you are adult aged 21 and above and have dined out and used online review websites at least once in the past 6 months. If you volunteer to participate in this study, you will complete a survey in which you will view several menu items and make purchase decisions. Please read each question carefully and answer to the best of your ability. There may not be direct benefits to you as a participant in this study. There are risks involved in all research studies. This study may include only minimal risks. You may feel uncomfortable answering some of the questions. You may choose to discontinue participation at any time. There will not be financial cost to you to participate in this study. The study will take 10 minutes of your time. You will be compensated by your panel provider. All information gathered in this study will be kept confidential. 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 deleted from the hard drive of the computer and all documentation will be shredded. 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. If you have any questions or concerns about the study, you may contact Nadia Nazlan at (702) 832 8478 or nazlan@unlv.nevada.edu, as well as Sarah Tanford at (702) 895-5982 or Sarah.Tanford@unlv.edu. For questions regarding the rights of research subjects, any complaints or comments regarding the manner in which the study is being conducted you may contact the UNLV Office of Research Integrity – Human Subjects at 702-895-2794 or toll free at 877-895-2794 or via email at IRB@unlv.edu. I have read the above information and agree to participate in this study. I am at least 21 years of age. Check the box below to indicate your consent.

- I Agree
- I Do Not Agree

B. Screeners/Instructions

1. Are you over 21?

- Yes
- No

Terminate survey if "No" is selected

2. How many times have you dined out in the last 6 months?

- never
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- more than 10 times

Terminate if "0" is selected

3. Instructions

INSTRUCTIONS: PLEASE READ THIS PARAGRAPH CAREFULLY

You are going out for lunch with your colleagues to a newly opened sit-down sandwich shop. As you arrive at the sandwich shop you are greeted by your server as she hands you the menu. You go through each menu item before making your purchase decision.

C. Stimuli 1

1. Menu (Scarcity 1, Higher Price, Lunch Specials)

Randomly displayed



All specials are served with a side of fries & a large fountain drink

CHICKEN PARMESAN SLIDERS \$8⁵⁰
Grilled chicken breasts, Italian dressing, Parmesan, lettuce & marinara sauce on toasted slider buns.

CHICKEN STUFFED FRENCH BREAD \$8⁵⁰
Shredded chicken mixed with ranch dressing, cheese & green onions on toasted French bread.

CHICKEN CAESAR CIABATTA *\$9⁹⁹
Shredded chicken mixed with ranch dressing, cheese & green onions on freshly made Ciabatta
***LIMITED QUANTITIES AVAILABLE DAILY**

CHICKEN SALAD CROISSANT \$8⁵⁰
Roasted chicken cubes with mayonnaise, sour cream, chopped dill, salt, pepper & lemon juice on buttery croissant.

HONEY MUSTARD CHICKEN SANDWICH \$8⁵⁰
Chicken breast marinated in a mixture of Dijon mustard, honey & Cajun seasoning with lettuce, tomato & honey mustard dressing on pretzel bun.

CALIFORNIA CLUB WRAP \$8⁵⁰
Shredded chicken with California avocado and bacon in a tortilla wrap.



2. Menu (Scarcity 1, Higher Price, A la carte)
Randomly displayed



CHICKEN LICKEN
Gourmet Sandwiches

CHICKEN PARMESAN SLIDERS \$8²⁵

Grilled chicken breasts, Italian dressing, Parmesan, lettuce & marinara sauce on toasted slider buns.

CHICKEN STUFFED FRENCH BREAD \$8⁵⁰

Shredded chicken mixed with ranch dressing, cheese & green onions on toasted French bread.

CHICKEN CAESAR CIABATTA * \$10⁵⁰

Shredded chicken mixed with ranch dressing, cheese & green onions on freshly made Ciabatta

*** LIMITED QUANTITIES AVAILABLE DAILY**

CHICKEN SALAD CROISSANT \$8²⁵

Roasted chicken cubes with mayonnaise, sour cream, chopped dill, salt, pepper & lemon juice on buttery croissant.

HONEY MUSTARD CHICKEN SANDWICH \$8⁵⁰

Chicken breast marinated in a mixture of Dijon mustard, honey & Cajun seasoning with lettuce, tomato & honey mustard dressing on pretzel bun.

CALIFORNIA CLUB WRAP \$8⁷⁵

Shredded chicken with California avocado and bacon in a tortilla wrap.



3. Menu (Scarcity 1, Same Price, Lunch Specials)
Randomly displayed



Lunch
Specials
11am - 2pm

All specials are served with a side of fries & a large fountain drink



CHICKEN PARMESAN SLIDERS \$8⁵⁰

Grilled chicken breasts, Italian dressing, Parmesan, lettuce & marinara sauce on toasted slider buns.

CHICKEN STUFFED FRENCH BREAD \$8⁵⁰

Shredded chicken mixed with ranch dressing, cheese & green onions on toasted French bread.

CHICKEN CAESAR CIABATTA *\$8⁵⁰

Shredded chicken mixed with ranch dressing, cheese & green onions on freshly made Ciabatta

***LIMITED QUANTITIES AVAILABLE DAILY**

CHICKEN SALAD CROISSANT \$8⁵⁰

Roasted chicken cubes with mayonnaise, sour cream, chopped dill, salt, pepper & lemon juice on buttery croissant.

HONEY MUSTARD CHICKEN SANDWICH \$8⁵⁰

Chicken breast marinated in a mixture of Dijon mustard, honey & Cajun seasoning with lettuce, tomato & honey mustard dressing on pretzel bun.

CALIFORNIA CLUB WRAP \$8⁵⁰

Shredded chicken with California avocado and bacon in a tortilla wrap.



4. Menu (Scarcity 1, Same Price, A la Carte)
Randomly displayed



The logo features the words "CHICKEN LICKEN" in a bold, white, sans-serif font inside a black banner with a ribbon-like shape. Below this, the words "Gourmet Sandwiches" are written in a white, sans-serif font inside a green rectangular box with a black border.

CHICKEN PARMESAN SLIDERS \$8²⁵

Grilled chicken breasts, Italian dressing, Parmesan, lettuce & marinara sauce on toasted slider buns.

CHICKEN STUFFED FRENCH BREAD \$8⁵⁰

Shredded chicken mixed with ranch dressing, cheese & green onions on toasted French bread.

CHICKEN CAESAR CIABATTA * \$8⁵⁰

Shredded chicken mixed with ranch dressing, cheese & green onions on freshly made Ciabatta

*** LIMITED QUANTITIES AVAILABLE DAILY**

CHICKEN SALAD CROISSANT \$8²⁵

Roasted chicken cubes with mayonnaise, sour cream, chopped dill, salt, pepper & lemon juice on buttery croissant.

HONEY MUSTARD CHICKEN SANDWICH \$8⁵⁰

Chicken breast marinated in a mixture of Dijon mustard, honey & Cajun seasoning with lettuce, tomato & honey mustard dressing on pretzel bun.

CALIFORNIA CLUB WRAP \$8⁷⁵

Shredded chicken with California avocado and bacon in a tortilla wrap.



5. Menu (No Scarcity 1, Higher Price, Lunch Specials)
Randomly displayed



All specials are served with a side of fries & a large fountain drink 

CHICKEN PARMESAN SLIDERS \$8⁵⁰
Grilled chicken breasts, Italian dressing, Parmesan, lettuce & marinara sauce on toasted slider buns.

CHICKEN STUFFED FRENCH BREAD \$8⁵⁰
Shredded chicken mixed with ranch dressing, cheese & green onions on toasted French bread.

CHICKEN CAESAR CIABATTA \$9⁹⁹
Shredded chicken mixed with ranch dressing, cheese & green onions on freshly made Ciabatta

CHICKEN SALAD CROISSANT \$8⁵⁰
Roasted chicken cubes with mayonnaise, sour cream, chopped dill, salt, pepper & lemon juice on buttery croissant.

HONEY MUSTARD CHICKEN SANDWICH \$8⁵⁰
Chicken breast marinated in a mixture of Dijon mustard, honey & Cajun seasoning with lettuce, tomato & honey mustard dressing on pretzel bun.

CALIFORNIA CLUB WRAP \$8⁵⁰
Shredded chicken with California avocado and bacon in a tortilla wrap.



6. Menu (No Scarcity 1, Higher Price, A la Carte)
Randomly displayed

The logo for Chicken Licken Gourmet Sandwiches features the words "CHICKEN LICKEN" in a bold, white, sans-serif font inside a black banner with a ribbon-like shape. Below this, the words "Gourmet Sandwiches" are written in a white, serif font inside a green rectangular box with a black border.

CHICKEN PARMESAN SLIDERS \$8²⁵

Grilled chicken breasts, Italian dressing, Parmesan, lettuce & marinara sauce on toasted slider buns.

CHICKEN STUFFED FRENCH BREAD \$8⁵⁰

Shredded chicken mixed with ranch dressing, cheese & green onions on toasted French bread.

CHICKEN CAESAR CIABATTA \$10⁵⁰

Shredded chicken mixed with ranch dressing, cheese & green onions on freshly made Ciabatta

CHICKEN SALAD CROISSANT \$8²⁵

Roasted chicken cubes with mayonnaise, sour cream, chopped dill, salt, pepper & lemon juice on buttery croissant.

HONEY MUSTARD CHICKEN SANDWICH \$8⁵⁰

Chicken breast marinated in a mixture of Dijon mustard, honey & Cajun seasoning with lettuce, tomato & honey mustard dressing on pretzel bun.

CALIFORNIA CLUB WRAP \$8⁷⁵

Shredded chicken with California avocado and bacon in a tortilla wrap.



7. Menu (No Scarcity 1, Same Price, Lunch Specials)
Randomly displayed



Lunch
Specials
11am - 2pm

All specials are served with a side of fries & a large fountain drink



CHICKEN PARMESAN SLIDERS \$8⁵⁰

Grilled chicken breasts, Italian dressing, Parmesan, lettuce & marinara sauce on toasted slider buns.

CHICKEN STUFFED FRENCH BREAD \$8⁵⁰

Shredded chicken mixed with ranch dressing, cheese & green onions on toasted French bread.

CHICKEN CAESAR CIABATTA \$8⁵⁰

Shredded chicken mixed with ranch dressing, cheese & green onions on freshly made Ciabatta

CHICKEN SALAD CROISSANT \$8⁵⁰

Roasted chicken cubes with mayonnaise, sour cream, chopped dill, salt, pepper & lemon juice on buttery croissant.

HONEY MUSTARD CHICKEN SANDWICH \$8⁵⁰

Chicken breast marinated in a mixture of Dijon mustard, honey & Cajun seasoning with lettuce, tomato & honey mustard dressing on pretzel bun.

CALIFORNIA CLUB WRAP \$8⁵⁰

Shredded chicken with California avocado and bacon in a tortilla wrap.



8. Menu (No Scarcity 1, Same Price, A la Carte)
Randomly displayed



CHICKEN LICKEN
Gourmet Sandwiches

CHICKEN PARMESAN SLIDERS \$8²⁵

Grilled chicken breasts, Italian dressing, Parmesan, lettuce & marinara sauce on toasted slider buns.

CHICKEN STUFFED FRENCH BREAD \$8⁵⁰

Shredded chicken mixed with ranch dressing, cheese & green onions on toasted French bread.

CHICKEN CAESAR CIABATTA \$8⁵⁰

Shredded chicken mixed with ranch dressing, cheese & green onions on freshly made Ciabatta

CHICKEN SALAD CROISSANT \$8²⁵

Roasted chicken cubes with mayonnaise, sour cream, chopped dill, salt, pepper & lemon juice on buttery croissant.

HONEY MUSTARD CHICKEN SANDWICH \$8⁵⁰

Chicken breast marinated in a mixture of Dijon mustard, honey & Cajun seasoning with lettuce, tomato & honey mustard dressing on pretzel bun.

CALIFORNIA CLUB WRAP \$8⁷⁵

Shredded chicken with California avocado and bacon in a tortilla wrap.



D. Measures

1. How Appealing is this Sandwich

	Very Unappealing	Somewhat Unappealing	Slightly Unappealing	Neutral	Slightly Appealing	Somewhat Appealing	Very Appealing
Chicken Parmesan Sliders							
Chicken Stuffed French Bread							
Chicken Caesar Ciabatta							
Chicken Salad Croissant							
Honey Mustard Chicken Sandwich							
California Club Wrap							

2. How likely are you to purchase this sandwich?

	Highly Unlikely	Somewhat Unlikely	Slightly Unlikely	Neither Likely nor Unlikely	Slightly Likely	Somewhat Likely	Very Likely
Chicken Parmesan Sliders							
Chicken Stuffed French Bread							
Chicken Caesar Ciabatta							
Chicken Salad Croissant							
Honey Mustard Chicken Sandwich							
California Club Wrap							

3. How expensive or inexpensive is this item?

	Very Inexpensive 1	2	3	4	5	6	Very Expensive 7
Chicken Parmesan Sliders							
Chicken Stuffed French Bread							
Chicken Caesar Ciabatta							
Chicken Salad Croissant							
Honey Mustard Chicken Sandwich							
California Club Wrap							

E. Stimuli 2
 Interaction with server
Randomly displayed

a. Scarcity 2 Present

INSTRUCTIONS: PLEASE READ THIS PARAGRAPH CAREFULLY

After looking through the menu for a few minutes, your server comes back with glasses of water for your table. Since this is your first time at the sandwich place, you ask for the server’s recommendations. Your server lists a couple of her personal favorites and mentions that the Chicken Caesar Ciabatta is only available in limited quantities as the Ciabatta bread is made fresh in limited batches daily. Your server suggests that if you are interested in the Chicken Caesar Ciabatta, you should order it quickly before it runs out. You then decide that you are ready to order.

b. Scarcity 2 Absent

INSTRUCTIONS: PLEASE READ THIS PARAGRAPH CAREFULLY

After looking through the menu for a few minutes, your server comes back with glasses of water for your table. Since this is your first time at the sandwich place, you ask for the server’s recommendations. Your server lists a couple of her personal favorite. You then decide that you are ready to order.

F. Measures (continued)

4. What is the quality level expected of this sandwich?

	Low Quality 1	2	3	4	5	6	High Quality 7
Chicken Parmesan Sliders							
Chicken Stuffed French Bread							
Chicken Caesar Ciabatta							
Chicken Salad Croissant							
Honey Mustard Chicken Sandwich							
California Club Wrap							

6. This sandwich is a good value

	Strongly Disagree	Somewhat Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Somewhat Agree	Strongly Agree
Chicken Parmesan Sliders							
Chicken Stuffed French Bread							
Chicken Caesar Ciabatta							
Chicken Salad Croissant							
Honey Mustard Chicken Sandwich							
California Club Wrap							

7. Based on its quality, this sandwich is fairly priced

	Strongly Disagree	Somewhat Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Somewhat Agree	Strongly Agree
Chicken Parmesan Sliders							
Chicken Stuffed French Bread							
Chicken Caesar Ciabatta							
Chicken Salad Croissant							
Honey Mustard Chicken Sandwich							
California Club Wrap							

8. Regardless of the price shown, how much (in dollars) will you be willing to pay for this meal? Assume that you are paying for your own meal.

	\$0	(sliding scale with \$1 increments)	\$30
Chicken Parmesan Sliders			
Chicken Stuffed French Bread			
Chicken Caesar Ciabatta			
Chicken Salad Croissant			
Honey Mustard Chicken Sandwich			
California Club Wrap			

8. Your server will now be taking your orders. Which of these sandwiches will you choose?

- Chicken Parmesan Sliders
- Chicken Stuffed French Bread
- Chicken Caesar Ciabatta
- Chicken Salad Croissant
- Honey Mustard Chicken Sandwich
- California Club Wrap

9. How confident are you with your choice?

Not at all Confident 1 2 3 4 5 6 7 Very Confident

10. List 5 items that you can remember from the menu or your interaction with your server

1.
2.
3.
4.
5.

11. How important were these items in influencing your choice?

	Extremely Unimportant	Somewhat Unimportant	Slightly Unimportant	Neither Important nor Unimportant	Slightly Important	Somewhat Important	Extremely Important
Price							
Server's Recommendation							
Food Preferences							
Familiarity							
Popularity							

G. Manipulation Checks

1. How realistic was the menu?

Extremely Unrealistic 1 2 3 4 5 6 7 Extremely Realistic

2. How likely will the Chicken Caesar Ciabatta be sold out?

- Highly unlikely
- Somewhat unlikely
- Slightly unlikely
- Neither likely nor unlikely
- Slightly likely
- Somewhat likely
- Highly likely

H. Demographics

Instructions: Please answer the following questions for classification purposes.

1. In what year were you born?

(Participants select the year they were born in from a drop down list ranging between 1936 and earlier to 1995 and later)

2. What is your gender?

- Male
- Female

3. What is your marital status?

- Married
- Widowed
- Divorced
- Separated
- Never married

4. What is your ethnicity?

- African American / Black
- Caucasian / White
- Hispanic / Latino
- Asian
- Others

5. What is your highest level of education?

- Less than high school
- High school diploma or GED
- Some college
- Associate's degree
- Bachelor's degree
- Graduate degree

6. What is your employment status?

- Student
- Retired
- Employed Full Time
- Employed Part Time
- Unemployed

7. What is your annual household income?

- Less than \$25,000
- \$25,001 - \$50,000
- \$50,001 - \$75,000
- \$75,001 - \$100,000
- \$100,001 - \$125,000
- \$125,001 - \$150,000
- More than \$150,000

APPENDIX C

STUDY 2 QUESTIONNAIRE

A. Informed Consent.

Dinner Purchase Decisions

You are invited to participate in a research study. The purpose of this study is to evaluate how consumers make menu item choices. You are being asked to participate in the study because you are adult aged 21 and above and have dined out and used online review websites at least once in the past 6 months. If you volunteer to participate in this study, you will complete a survey in which you will view several menu items and make purchase decisions. Please read each question carefully and answer to the best of your ability. There may not be direct benefits to you as a participant in this study. There are risks involved in all research studies. This study may include only minimal risks. You may feel uncomfortable answering some of the questions. You may choose to discontinue participation at any time. There will not be financial cost to you to participate in this study. The study will take 10 minutes of your time. You will be compensated by your panel provider. All information gathered in this study will be kept confidential. 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 deleted from the hard drive of the computer and all documentation will be shredded. 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. If you have any questions or concerns about the study, you may contact Nadia Nazlan at (702) 832-8478 or nazlan@unlv.nevada.edu, as well as Sarah Tanford at (702) 895-5982 or Sarah.Tanford@unlv.edu. For questions regarding the rights of research subjects, any complaints or comments regarding the manner in which the study is being conducted you may contact the UNLV Office of Research Integrity – Human Subjects at 702-895-2794 or toll free at 877-895-2794 or via email at IRB@unlv.edu. I have read the above information and agree to participate in this study. I am at least 21 years of age. Check the box below to indicate your consent.

- I Agree
- I Do Not Agree

B. Screeners/Instructions

1. Are you over 21 years of age?

Yes

No

Terminate survey if "No" is selected.

2. How many times have you dined out in the last 6 months?

never

1

2

3

4

5

6

7

8

9

more than 10 times

Terminate survey if "0" is selected.

3. Instructions

PLEASE READ THIS PARAGRAPH CAREFULLY.

It's Friday night and you plan to go out for dinner with your friend at a new restaurant in town. Since neither of you has been to that restaurant before, you decide to check what others have to say about the restaurant via a popular online review website.

C. Stimuli 1

1. Review (Dramatic, Frequent)

Randomly displayed

GRAZE



\$\$ American (New), Steakhouse



Recommended Reviews for Graze

Joseph C. 1 day ago

Thanks to helpful Yelpers I called in advanced and reserved the complimentary limo pickup service. Promptly at 7.30 they were in front of our hotel ready to pick my husband and I up. When we arrived at the restaurant, we entered through a back entrance where a beautifully dressed hostess was waiting for us. She escorted us all the way into the actual restaurant and our table. Now, that's an entrance. The restaurant is not very large yet does not feel crowded in any way, instead it has a very intimate feeling. There are beautiful chandeliers and rich fabrics everywhere.

The food was delicious! I ordered the Rotisserie Chicken (stuffed with ricotta, sundried tomatoes, and spinach). The chicken had a nice crispy skin and was fall off the bone moist. It was paired with this amazing gravy that just added another layer of flavor to the already decadent chicken. The charming chef greeted us and we were able to fawn over his skills.

Before we left we were presented with gift bags with tea cake. Everything and anything you could possibly think of. Almost three hours later, we made our way, winding through the back entrance. There was a tray, with more champagne, while we waited for our car. The limo dropped us off at our hotel where we proceeded to begin our food coma for the night. Such a memorable experience!

Katherine M. 3 days ago

My husband wished me a happy 10th Anniversary and rattled off "Oh, by the way, we have a dinner reservation tonight at 9:30." Huh? What? Upon arriving to the restaurant, the hostess asked that we wait in the lounge while they prepare our table. A gentleman came by and asked if we'd like Champagne while we wait. Why not? Ten years of marriage deserves a toast. Our table was in the garden, flowers and vines were all around. The tables had teal runners, white napkins tied with teal ribbon. This shade was nearly identical to the colors I used for my wedding. Pure coincidence, but it was a lovely nod to our memorable day. I was so looking forward to this meal and knew after we got here, nothing would compare. And we were right.

We were sitting next to a lovely couple who highly recommended the rotisserie chicken. The roasted chicken was superbly moist. The accompanying gravy was very flavorful and chock full of mushroom and meat bits. My husband had braised beef cheeks in eggplant and the most delicious mashed potatoes in existence. In addition to dessert, you're given the opportunity to select treats from the Mignardises trolley. I refer to this as the Willy Wonka experience. There must have been a hundred different items to choose from, we only chose a handful because we were beyond stuffed. It was a fantastic experience and this restaurant is definitely the upper echelon of dining.

Derrick T. 7 days ago

I have always love this place. Ken was our server and he delivered amazing service. He made the evening enjoyable. I started with the escargot and love it! Great flavor and paired with the warm bread make it perfect! The beef wellington is one of my favorites and is was perfectly cooked medium rare, with just the right amount of sauce. I paired it with the asparagus, which was cooked to perfection.

(Continued)

Shawna T. 7 days ago

On my last night in town, my friends and I decided to dine out for my 40th birthday. As soon as I opened those shiny glass paned double doors, I knew I was in for a treat! As I walked into the main dining room, I was instantly transported into a luxurious 1930's style French bistro with a huge crystal chandelier cascading above me. Honestly, this place was dripping with opulence! The servers were warm, friendly and present without being overbearing. I was feeling like a king! A hungry one at that! Because we were in a festive mood, we decided on a bottle of bubbly!

I went with their signature rotisserie chicken which turned out to be very good. The chicken breast was tender and moist. The skin had a great flavor and was nicely crisp. The thigh and leg had more flavorful meat, not too greasy nor fatty. The sauce was a great accompaniment. It was similar to a brown gravy, had a good wine taste and had chunks of good veggies in it.

As the evening came to a close, the staff came out with a cart embellished with lavish decorative baubles and a small sign that read "Happy Birthday" The accompanying birthday cake was extraordinary! Perched on a large black pedestal, it was absolutely majestic but all I could think of was digging into it! To my surprise, it was a mango meringue ice cream cake and although we couldn't take it home with us, we did indulge in two large decadent slices and it was fantastic! Bravo to the dessert chef! If that wasn't enough we were given free reign of the mignardises (dessert cart) that had a vast selection of petit fors, small cookies and yes...macarons! They boxed up the cookies and gave us an additional box of marshmallow treats to take home with a copy of the menu and a nicely bound colored brochure documenting the magical evening. I'd have to say this was by far the most amazing dining experience of my life.

David W. 10 days ago

I made a reservation on OpenTable and we were extremely lucky to secure a spot before all tables were completely sold out for the day. Phew! The staffs were kind enough to reserve us a booth with an excellent view. I am really grateful! The restaurant is very modern and classy with great ambiance. For main course, I got the rotisserie chicken - basically the restaurant elevates this dish like no other. The chicken is roasted to perfect consistency with crisp buttery skin. They offer some roasted potatoes and Brussels sprouts too. The chicken meat is perfectly cooked and the sauce is amazing too. Did I mentioned that we went on Valentine's Day (which meant it was crazy busy) but we could barely tell because our waiter gave us the right amount of attention. They even took a cute polaroid pictures of us as a souvenir.

2. Review (Descriptive, Frequent)
Randomly displayed

GRAZE



\$\$ American (New), Steakhouse



Recommended Reviews for Graze

Joseph C. 1 day ago

The food was delicious! I ordered the Rotisserie Chicken (stuffed with ricotta, sundries tomatoes, and spinach). The chicken had a nice crispy skin and was fall off the bone moist. It was paired with this amazing gravy that just added another another layer of flavor to the already decadent chicken. My friend ordered the filet with a side of asparagus and loved everything about his meal. Service throughout the meal were just as good!

Katherine M. 3 days ago

We were served with warm, crunchy epi bread before our main course. I ordered the rotisserie chicken as my entrée. The chicken was moist and tender. The accompanying gravy was very flavorful and chock full of mushroom and meat bits. Like, are you kidding?! It was perfect. The side of fries were also exceptional. Everything was amazing. Between service, food, and value this place is not to be missed.

Derrick T. 6 days ago

I have always love this place. Ken was our server and he delivered amazing service. He made the evening enjoyable. I started with the escargot and love it! Great flavor and paired with the warm bread make it perfect! The beef wellington is one of my favorites and is was perfectly cooked medium rare, with just the right amount of sauce. I paired it with the asparagus, which was cooked to perfection.

Shawna T. 7 days ago

We started with a complimentary baguette with butter and smooth cherry jam. The bread's crust was good and distinct. I went with their signature rotisserie chicken which turned out to be very good. The chicken breast was tender and moist. The skin had a great flavor and was nicely crisp. The thigh and leg had more flavorful meat, not too greasy nor fatty. The sauce was a great accompaniment. It was similar to a brown gravy, had a good wine taste and had chunks of good veggies in it.

David W. 10 days ago

I always get the rotisserie chicken whenever I come here- basically the restaurant elevates this dish like no other. The chicken is roasted to perfect consistency with crisp buttery skin. They offer some roasted potatoes and Brussels sprouts too. The chicken meat is perfectly cooked and the sauce is amazing too.

3. Review (Mundane, Frequent)
Randomly displayed

GRAZE



\$\$ American (New), Steakhouse



Recommended Reviews for Graze

Joseph C. 1 day ago

Delicious! By far the best rotisserie chicken dish that I've had by far. Went in April a few years back and also just last year and the food quality has not changed. Ambiance and staff are excellent. This was a wonderful dining experience all together. Service was fast and polite. The food was great! Too bad I can't be a regular here since it's a bit far for me, but I will definitely be back.

Katherine M. 3 days ago

There was really no part of this meal that was anything but spectacular. If I came back again, I wouldn't do it any differently; start with a couple of cocktails and steamed mussels, move on to the soup of the day and finish with the rotisserie chicken. The chicken was perfect and was served with potatoes and some vegetables. It was all amazing. I'd definitely come back for the food.

Derrick T. 6 days ago

I have always love this place. Ken was our server and he delivered amazing service. He made the evening enjoyable. I started with the escargot and love it! Great flavor and paired with the warm bread make it perfect! The beef wellington is one of my favorites and is was perfectly cooked medium rare, with just the right amount of sauce. I paired it with the asparagus, which was cooked to perfection.

Shawna T. 7 days ago

Came here for dinner. Service was good. Food, excellent. I had the pot roast and my husband had the rotisserie chicken. Both entrees came with mashed potatoes and some veggies. The seasoned veggies were pretty good. The pot roast was tasty and my husband's chicken were simply out of this world. He finished everything on his plate. Service was very attentive and they promptly refilled glasses as soon as they got about half full.

David W. 10 days ago

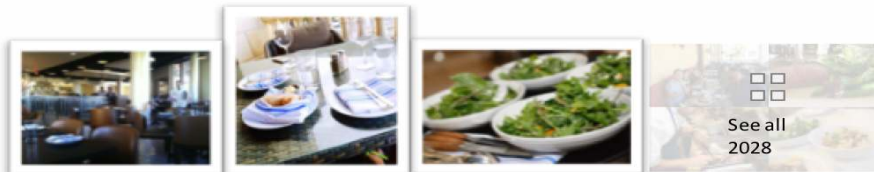
I always get the rotisserie chicken whenever I come here- basically the restaurant elevates this dish like no other. The chicken is roasted to perfect consistency with crisp buttery skin. They offer some roasted potatoes and Brussels sprouts too. The chicken meat is perfectly cooked and the sauce is amazing too.

4. Review (Dramatic, Infrequent) *Randomly displayed*

GRAZE



\$\$ American (New), Steakhouse



Recommended Reviews for Graze

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I have always love this place. Ken was our server and he delivered amazing service. He made the evening enjoyable. I started with the escargot and love it! Great flavor and paired with the warm bread make it perfect! The beef wellington is one of my favorites and is was perfectly cooked medium rare, with just the right amount of sauce. I paired it with the asparagus, which was cooked to perfection.

Katherine M. 3 days ago

Immediately greeted when we walked up to the counter! Our waiter was so attentive and professional, with a calm and kind demeanor. I ordered the calamari for a starter and it was tasty. I'm sure it tasted great because I was already hungry from leaving another food establishment that had horrible service. My guests were raving about the beef skewers and chicken salad. So far, this place is awesome!

Derrick T. 7 days ago

Thanks to helpful Yelpers I called in advanced and reserved the complimentary limo pickup service. Promptly at 7.30 they were in front of our hotel ready to pick my husband and I up. When we arrived at the restaurant, we entered through a back entrance where a beautifully dressed hostess was waiting for us. She escorted us all the way into the actual restaurant and our table. Now, that's an entrance.

The restaurant is not very large yet does not feel crowded in any way, instead it has a very intimate feeling. There are beautiful chandeliers and rich fabrics everywhere. The food was delicious! I ordered the Rotisserie Chicken Breast (stuffed with ricotta, sundried tomatoes, and spinach). The chicken had a nice crispy skin and was fall off the bone moist. It was paired with this amazing gravy that just added another layer of flavor to the already decadent chicken. The charming chef greeted us and we were able to fawn over his skills. Before we left we were presented with gift bags with tea cake. Everything and anything you could possibly think of.

Almost three hours later, we made our way, winding through the back entrance. There was a tray, with more champagne, while we waited for our car. The limo dropped us off at our hotel where we proceeded to begin our food coma for the night. Such a memorable experience!

Shawna T. 7 days ago

This. Place. Is. Absolutely. Amazing! I honestly don't think there's a better word to describe it. From the hostesses, to the wait staff, everyone was friendly and welcoming. But honestly, you probably want to hear about the food, right? Here goes...I got the spaghetini plate and my wife ordered the fettuccine. Our entrees were cooked to perfection and loaded with flavor. Everything was perfect. I highly recommend this place.

David W. 10 days ago

We loved it here!! Our waitress, Holly was so sweet. The service was fast and attentive. The food was delicious!! Even the complementary French baguette was so fresh and good. It was Sunday but the rainbow trout tasted fresh, the shrimp cocktail was very fresh!! The cobb salad with smoked bacon and grilled corn was amazing, too!! We had a very good experience here.

5. Review (Descriptive, Infrequent)
Randomly displayed

GRAZE



\$\$ American (New), Steakhouse



Recommended Reviews for Graze

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6. Review (Mundane, Inrequent)
Randomly displayed

GRAZE



\$\$ American (New), Steakhouse



Recommended Reviews for Graze

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Delicious! By far the best rotisserie chicken dish that I've had by-far. Went in April a few years back and also just last year and the food quality has not changed. Ambiance and staff are excellent. This was a wonderful dining experience all together. Service was fast and polite. The food was great! Too bad I can't be a regular here since it's a bit pricey for me, but I will definitely be back for certain occasions.

Shawna T. 7 days ago

This. Place. Is. Absolutely. Amazing! I honestly don't think there's a better word to describe it. From the hostesses, to the wait staff, everyone was friendly and welcoming. But honestly, you probably want to hear about the food, right? Here goes...I got the spaghetti plate and my wife ordered the fettuccine. Our entrees were cooked to perfection and loaded with flavor. Everything was perfect. I highly recommend this place.

David W. 10 days ago

We loved it here!! Our waitress, Holly was so sweet. The service was fast and attentive. The food was delicious!! Even the complementary French baguette was so fresh and good. It was Sunday but the rainbow trout tasted fresh, the shrimp cocktail was very fresh!! The cobb salad with smoked bacon and grilled corn was amazing, too!! We had a very good experience here.

D. Measures

1. How appealing is this restaurant?

Very Unappealing 1	2	3	4	5	6	Very Appealing 7
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2. How likely are you to visit this restaurant?

Highly Unlikely 1	2	3	4	5	6	Highly Likely 7
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INSTRUCTIONS:

PLEASE READ THIS PARAGRAPH CAREFULLY

After reading the reviews, you and your friend decide to have dinner at the restaurant. As you are seated, your server hands you the menu and recommends the Chef's specials. You go over the specials menu before making your I selection.

E. Stimuli 2

1. Menu (Higher Price)

Randomly displayed

Graze

-TODAY'S SPECIALS-

\$18* per order. Served with vegetables of the day, a choice of soup or salad and a beverage. Taxes and gratuities are not included.

ENTREES

VEAL PARMESAN
with provolone and marinara sauce and spaghetti

SHRIMP SCAMPI
with tomatoes, garlic, lemon butter and angel hair Aglio Olio

WOOD FIRED ROTISSERIE CHICKEN *add \$5 per order
with blistered cherry tomatoes and lemon tahini

PULLED PORK
pit-cooked and lightly seasoned

VEGETARIAN LASAGNE
roasted vegetable with basil pesto, mozzarella cheese and
marinara sauce

BEVERAGES

FOUNTAIN DRINKS
BLACK ICED TEA
TROPICAL GREEN ICED TEA
ARNOLD PALMER

2. Menu (Same Price)
Randomly displayed

Graze

-TODAY'S SPECIALS-

\$18* per order. Served with vegetables of the day, a choice of soup or salad and a beverage. Taxes and gratuities are not included.

ENTREES

VEAL PARMESAN

with provolone and marinara sauce and spaghetti

SHRIMP SCAMPI

with tomatoes, garlic, lemon butter and angel hair Aglio Olio

WOOD FIRED ROTISSERIE CHICKEN

with blistered cherry tomatoes and lemon tahini

PULLED PORK

pit-cooked and lightly seasoned

VEGETARIAN LASAGNE

roasted vegetable with basil pesto, mozzarella cheese and marinara sauce

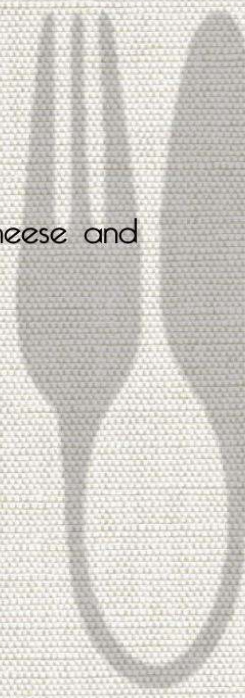
BEVERAGES

FOUNTAIN DRINKS

BLACK ICED TEA

TROPICAL GREEN ICED TEA

ARNOLD PALMER



F. Measures (continued)

3. How likely are you to purchase this item?

	Highly Unlikely	Somewhat Unlikely	Slightly Unlikely	Neither Likely nor Unlikely	Slightly Likely	Somewhat Likely	Very Likely
Veal Parmesan							
Shrimp Scampi							
Wood Fired Rotisserie Chicken							
Pulled Pork							
Vegetarian Lasagna							

4. What is the quality level expected of this item?

	Low Quality 1	2	3	4	5	6	High Quality 7
Veal Parmesan							
Shrimp Scampi							
Wood Fired Rotisserie Chicken							
Pulled Pork							
Vegetarian Lasagna							

5. This item is a good value

	Strongly Disagree	Somewhat Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Somewhat Agree	Strongly Agree
Veal Parmesan							
Shrimp Scampi							
Wood Fired Rotisserie Chicken							
Pulled Pork							
Vegetarian Lasagna							

6. Based on its quality, this I is fairly priced

	Strongly Disagree	Somewhat Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Somewhat Agree	Strongly Agree
Veal Parmesan							
Shrimp Scampi							
Wood Fired Rotisserie Chicken							
Pulled Pork							
Vegetarian Lasagna							

7. How expensive or inexpensive is this item?

	Very Inexpensive 1	2	3	4	5	6	Very Expensive 7
Veal Parmesan							
Shrimp Scampi							
Wood Fired Rotisserie Chicken							
Pulled Pork							
Vegetarian Lasagna							

8. Regardless of the price shown, how much (in dollars) will you be willing to pay for this meal? Assume that you are paying for your own meal.

	\$0	(sliding scale with \$2 increments)	\$60
Veal Parmesan			
Shrimp Scampi			
Wood Fired Rotisserie Chicken			
Pulled Pork			
Vegetarian Lasagna			

9. Your server will now be taking your orders. Which of these entrees will you choose?

- Veal Parmesan
- Shrimp Scampi
- Wood Fired Rotisserie Chicken
- Pulled Pork
- Vegetarian Lasagna

10. How confident are you with your choice?

Not at all Confident 1 2 3 4 5 6 7 Very Confident

11. List 5 items that you can remember from the reviews and from the menu

1.
2.
3.
4.
5.

12. How important were these items in influencing your choice?

	Extremely Unimportant	Somewhat Unimportant	Slightly Unimportant	Neither Important nor Unimportant	Slightly Important	Somewhat Important	Extremely Important
Price							
Reviews							
Server's Recommendation							
Food Preferences							
Familiarity							
Popularity							

G. Manipulation Checks

1. How realistic were the reviews?

Extremely Unrealistic 1 2 3 4 5 6 7 Extremely Realistic

2. How realistic was the menu?

Extremely Unrealistic 1 2 3 4 5 6 7 Extremely Realistic

3. Rate the reviews on the following scale

unfavorable	1	2	3	4	5	6	7	favorable
dull	1	2	3	4	5	6	7	dramatic
uninteresting	1	2	3	4	5	6	7	interesting
not stimulating	1	2	3	4	5	6	7	stimulating

4. How many reviews mentioned the Wood Fired Rotisserie Chicken?

- 0
- 1
- 2
- 3
- 4
- 5

H. Demographics

Instructions: Please answer the following questions for classification purposes.

1. In what year were you born?

(Participants select the year they were born in from a drop down list ranging between 1936 and earlier to 1995 and later)

2. What is your gender?

- Male
- Female

3. What is your marital status?

- Married
- Widowed
- Divorced
- Separated
- Never married

4. What is your ethnicity?

- African American / Black
- Caucasian / White
- Hispanic / Latino
- Asian
- Others

5. What is your highest level of education?

- Less than high school
- High school diploma or GED
- Some college
- Associate's degree
- Bachelor's degree
- Graduate degree

6. What is your employment status?

- Student
- Retired
- Employed Full Time
- Employed Part Time
- Unemployed

7. What is your annual household income?

- Less than \$25,000
- \$25,001 - \$50,000
- \$50,001 - \$75,000
- \$75,001 - \$100,000
- \$100,001 - \$125,000
- \$125,001 - \$150,000
- More than \$150,000

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