Ethnic Restaurants: Bringing Uniqueness to the Table Through Handwriting

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Abstract

While the restaurant industry is seeing an unprecedented rise of ethnic restaurants, the existing hospitality literature provides little guidance on how to enhance perceived uniqueness of ethnic menu offerings through visual design. The present research offers an innovative marketing strategy (i.e., using real handwriting in menus) to boost consumer evaluations. From a consumer behavior perspective, we examine the impact of menu style (handwriting vs. print) and the moderating roles of restaurant busyness (busy vs. non-busy) and gender (female vs. male) on consumers' menu processing. Findings of this research show that handwriting offers a competitive advantage when the restaurant is less busy and when the consumer is a male. Moreover, the moderated mediation results reveal that perceived uniqueness of ethnic menu offerings is the underlying mechanism explaining the impact of menu style, busyness, and gender on consumer attitudes toward the menu. Theoretical and managerial implications for hospitality managers are discussed.

"There is something so charming about seeing the handwritten menu."

—Chris W. on www.yelp.com

Introduction

Ethnic cuisines such as Chinese, Japanese, Mexican, Korean, and Italian are increasingly popular in the United States. According to Technomic's Ethnic Food and Beverage Consumer Trend Report, 36% of U.S. consumers treat themselves to ethnic foods at least once a week, and 32% of U.S. consumers express a willingness to pay extra for authentic flavors (Technomic, 2018). As the ethnic restaurant industry grows, it is crucial to develop effective marketing strategies to attract customers in today's competitive market. In the hospitality industry, uniqueness is an essential attribute that enhances the brand's competitive advantage and its ability to attract more customers (Bai et al., 2006). Furthermore, customers patronizing ethnic restaurants primarily seek exotic flavors and unique experiences (Jang et al., 2012; J. H. Kim et al., 2017; S. Q. Liu & Mattila, 2015), and therefore, it is particularly important for ethnic restaurants to promote uniqueness. Previous hospitality research in uniqueness has focused on luxury experiences (Yang & Mattila, 2016), interior design (Lin & Mattila, 2010), food sourcing (Zeng et al., 2012), and table settings

(E. Kim et al., 2018). In this research, we propose that a visual menu design strategy—handwritten menus—boosts perceived uniqueness, and therefore, enhances consumers' attitudes toward the menu in ethnic restaurants.

In this research, we focus on handwritten menus defined as menus that are presented with the service provider's unique, real handwriting on a menu as opposed to menus that are printed or photocopied.[1] Such handwritten menus can be displayed on a board inside or outside the restaurant, or presented on paper menu at the table. For example, En Hakkore, a Korean restaurant in Chicago, features classic Korean bibimbap rice bowls alongside paratha tacos and fusion snacks in a handwritten menu presented on the blackboard (Kristina, 2013). Momofuku Ko, a fine-dining Japanese restaurant in New York City, has a short à la carte notebook menu with handwritten pages changed each day (Wells, 2018). China Boy is a no-frills, tiny eatery located in Washington, D.C.'s Chinatown with its handwritten menu hung on the wall (Valery, 2016). Despite the widespread use of handwriting in

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promoting ethnic restaurants' menu offerings, the effectiveness of such a practice is not well understood. Can handwriting influence consumers' perceptions of menu offerings? If so, what is the underlying mechanism? What are the boundary conditions for such a handwriting effect?

Prior marketing research suggests that subtle cues in the physical servicescape, such as incomplete versus complete typeface logos (Hagtvedt, 2011), angular versus circular shapes (S. Q. Liu et al., 2018), and rounded versus non-rounded prices (Wadhwa & Zhang, 2015), may shape consumers' perceptions and affect their decision making in an unconscious manner. Drawing on the signaling theory, such physical or visual cues are associated with meanings, thus conveying characteristics of the product or the brand to consumers (Hagtvedt, 2011; Jiang et al., 2016; Naipaul & Parsa, 2001). For example, Hagtvedt (2011) shows that incomplete typeface logos (such as the "IBM" logo with blank stripes crossing the letters) can signal innovativeness. Notably, the menu is one of the most important marketing tools in the restaurant industry (Reynolds et al., 2005). Indeed, recent research on menu psychology has started to demonstrate the influence of various menu design elements on consumer behavior (Choi et al., 2018; K. Kim & Baker, 2017; J. H. Kim et al., 2017; S. Q. Liu et al., 2019; Youn & Kim, 2017). For example, menu prices ending in "9" can signal value whereas prices ending in "0" can cue quality (Naipaul & Parsa, 2001).

Utilizing the signaling perspective (Hagtvedt, 2011; Jiang et al., 2016; Naipaul & Parsa, 2001), the current research examines whether handwritten menus can signal uniqueness in the context of ethnic restaurants. Drawing on the marketing literature on busyness (Hwang et al., 2012; S. Q. Liu et al., 2018; Noone & Mattila, 2009) and the selectivity model of gender ((Meyers-Levy & Maheswaran, 1991; Meyers-Levy & Zhu, 2010; Wolin, 2003), this research posits that the handwriting effect is contingent on the level of busyness in the restaurant and the consumer's gender.

The signaling effect relies on information obtained through the visual modality and can be affected by other visual cues observed in the social servicescape, such as how busy a restaurant appears to be (e.g., the number of customers in the service environment). The busyness level can be influenced by uncontrollable situational factors such as government regulations and industry trends. Due to the social distancing restrictions, restaurants are not allowed to operate at full capacity, and they need to restrict the number of customers in the restaurant. As online ordering has gained popularity during the COVID-19 pandemic, restaurants may also see a reduction in dine-in customers. As a result, restaurants are likely to appear non-busy. The level of busyness, which is a visually observable and practical relevant social servicescape cue (Hanks et al., 2017; S. Q. Liu et al., 2018; Maeng et al., 2013), may affect how consumers process information

signaled by menus (Mano, 1997; Sanbonmatsu & Kardes, 1988). Specifically, we speculate that the handwriting effect might be more salient in a non-busy service environment where consumers have sufficient capacity to capture the uniqueness cue of handwritten menus. Conversely, in a busy service environment consumers tend to be more aroused, thus leading to a reduced processing capacity to infer uniqueness from the handwritten menu.

Furthermore, when investigating information processing involving multiple cues, it is important to consider gender differences in consumers' information processing strategies (see Meyers-Levy & Loken, 2015, for a review). As males are selective processors (Darley & Smith, 1995; Meyers-Levy & Zhu, 2010), they may be inclined to rely on simple heuristics (e.g., "handwritten menus are unique") when evaluating the menu. In contrast, females are systematic processors and tend to evaluate all available information instead of being heavily influenced by a single cue (Meyers-Levy & Maheswaran, 1991; Wolin, 2003). Accordingly, we predict that male consumers in a non-busy ethnic restaurant will perceive a handwritten (vs. printed) menu as more unique and, as a result, exhibit more favorable attitudes toward the menu. However, such a handwriting effect should be attenuated when the restaurant is busy or when the consumer is a female. Findings of this research highlight the effectiveness of using real handwriting in promoting ethnic restaurants via perceived uniqueness while also identifying the boundary conditions for such a marketing strategy.

Theoretical Background

Menu Design

Prior research has demonstrated that physical servicescape cues (e.g., décor, themes, and menus) are influential in shaping consumer perceptions of ethnic restaurants (Jang et al., 2012; Y. Liu & Jang, 2009; Wang & Mattila, 2015). Menu design, as a critical dimension of the physical servicescape, has recently received increasing attention in hospitality research (Choi et al., 2018; K. Kim & Baker, 2017; J. H. Kim et al., 2017; Naipaul & Parsa, 2001; Parsa & Njite, 2008; Youn & Kim, 2017). For example, consumers' acceptance of ethnic foods is higher when the menu includes pictures or descriptive information of the menu items (Jang & Kim, 2015). Moreover, authentic-language menu labels (e.g., "Khao Pad Sapparod" as opposed to "Pineapple Fried Rice") might backfire as they are more bothersome for consumers to process (Choi et al., 2018).

More importantly, the menu influences consumers through signaling (Kirmani & Rao, 2000; Naipaul & Parsa, 2001). Subtle cues embedded in the menu are associated with distinctive meanings, thus conveying information about the menu offerings and the restaurant to consumers. According to the signaling theory (Hagtvedt, 2011; Jiang

et al., 2016; Kirmani & Rao, 2000), companies may intentionally display visual cues that act as signals of specific characteristics of the product or brand. Previous research on psychological pricing reveals that the presentation of menu prices (e.g., ending in 0 vs. 9) can influence consumer perceptions of value and quality, thus shaping their preferences (Naipaul & Parsa, 2001). In a similar vein, research on the signaling effect in advertising suggests that a greater numerical precision in advertising claims (e.g., 9.24% vs. 10%) can signal competence (Xie & Kronrod, 2012). In addition to prices and numbers, menu labels convey specific meanings. In ethnic restaurants, using a foreign language (e.g., Korean vs. English) and unfamiliar labels (e.g., "ants climbing a tree" vs. "pork noodles") to present menu items signals authenticity and thus increases consumers' re-patronage intention and willingness to pay more in ethnic restaurants (K. Kim & Baker, 2017; Youn & Kim, 2017).

Although the importance of menu design is widely recognized, the hospitality literature offers little guidance on the strategic use of handwriting in restaurant menus. This neglect is surprising as a recent stream of research suggests that handwriting might be especially effective for experiential services—such as lodging and dining (Ren et al., 2018; Tassiello et al., 2018). In the next sections, we will discuss (a) how handwriting may induce a sense of uniqueness, (b) the moderating role of busyness and gender, and (c) the underlying mechanism explaining the handwriting effect in ethnic restaurants.

How Does Handwriting Enhance Perceived Uniqueness?

Handwriting carries important benefits in interpersonal communications (Childers et al., 1980; Chou, 2015; Kettle & Häubl, 2011). Compared to typed and printed messages, handwriting is more engaging, personal, emotion-evoking, and unique (Childers et al., 1980; Chou, 2015; Johnson et al., 2017; Kettle & Häubl, 2011). In service settings, handwritten messages may convey feelings of warmth via perceived effort and closeness, thus having a positive impact on relationship building (Ren et al., 2018). In addition, handwriting highlights the human touch thus triggering feelings of empathy, which in turn reduce consumers' propensity to give negative and extreme service evaluations (Tassiello et al., 2018). In service encounters with minimal face-to-face interaction (e.g., housekeeping), a handwritten greeting card from the room attendant may help fill in the gap of personal touch and encourage tipping (Shih et al., 2019). The restaurant industry uses cues such as menu prices (Naipaul & Parsa, 2001) and menu labels (Lo et al., 2017) to signal food quality. In the context of ethnic restaurants, we argue that handwriting may help signal the uniqueness of the ethnic menu to consumers.

Servicescape cues often act as signals that convey information in the restaurant industry. In the physical servicescape, angular shape cues (e.g., restaurant logos, ceiling lights, and tables) signal competence of the service provider while circular shape cues signal warmth (S. Q. Liu et al., 2018). Typeface also serves as a visual tool to signal brand identity when used in commercial communications such as logo design and advertising. For example, a company logo using handwriting typefaces signals a subtle image of the brand, while logos using common and highly readable typefaces (e.g., Georgia) are often used by formal firms (e.g., law firms) to signal a reassuring corporate image (Henderson et al., 2004). Despite the research examining servicescape design cues, the signaling role of real handwriting in restaurant menus is not well understood.

In today's highly digitalized business environment, communications with consumers are often mass-produced and presented in print (e.g., emails, ads, and cards), resulting in a loss of human touch (Schroll et al., 2018). Thus, using handwritten messages may invoke emotional bonding with the service provider (Shih et al., 2019; Tassiello et al., 2018). Furthermore, the heterogeneity in human handwriting may augment perceived uniqueness (Johnson et al., 2017). People write differently—each individual's handwriting is distinctive and difficult to be reproduced by others (Huber & Headrick, 1999). Similar to people's voice and body language, handwriting conveys personality and unique characters of the communicator (Mendel, 1947; Prasad et al., 2010; Warner & Sugarman, 1986). Past research suggests that, in the ethnic restaurant industry, uniquely named dishes (e.g., "Buddha jumps over the wall" instead of "seafood soup") positively influence consumers' affective and behavioral responses (Youn & Kim, 2017). It is likely that handwriting gives a restaurant's menu more character and makes the food seem more attractive (Nemeschansky, 2009). Therefore, we predict that handwriting may enhance perceived uniqueness of the restaurant's menu offerings and generate favorable attitudes toward the menu. However, the effectiveness of handwriting might depend on factors influencing consumers' information processing strategies, such as the restaurant's busyness level (busy vs. non-busy) and the consumer's gender (male vs. female).

Busyness of Restaurant Servicescape

A restaurant's busyness level can be inferred through occupancy of customers in the service environment (S. Q. Liu et al., 2018)—high occupancy means the place is busy, whereas low occupancy means slow business times. The mere presence of many other customers may contribute to perceived crowdedness and high arousal, which might influence consumers' judgments and decision-making processes (Hanks et al., 2017; D. Y. Kim et al., 2010; Maeng et al., 2013; Wirtz et al., 2000).

Arousal refers to the state of the organism related to alertness and activation, ranging from extreme drowsiness to extreme wakefulness (Humphreys & Revelle, 1984; Sanbonmatsu & Kardes, 1988). Prior research suggests that a consumer's arousal level increases with the presence of a large number of other diners (Hwang et al., 2012; Noone & Mattila, 2009). Most importantly, high arousal levels may disrupt consumers' information processing by reducing the amount of attentional and processing capacity (Mano, 1997; Sanbonmatsu & Kardes, 1988). It has been demonstrated that higher arousal leads to lesser attention paid to a task, reduced processing of the task's most prominent features, and decreased recall of information (Kahneman, 1973). Furthermore, high arousal restricts cognitive effort such that individuals are less likely to engage in extensive elaboration and more inclined to simplify decision making by focusing on fewer nonessential cues (Mano, 1992). Due to its negative impact on attention and elaboration, higher arousal has been shown to hinder recall of advertising information (Pavelchak et al., 1988).

We argue that the proposed handwriting effect is moderated by perceived busyness of the restaurant. Specifically, we expect that handwritten menus are less effective in a busy environment given the negative impact of high arousal on consumers' attentional and processing capacity (Mano, 1992, 1997; Pavelchak et al., 1988; Sanbonmatsu & Kardes, 1988). With reduced cognitive capacity, consumers are less likely to deliberately focus on the handwriting cue and interpret its uniqueness. Therefore, the positive impact of handwriting is reduced in busy restaurant environments. In contrast, a non-busy restaurant is likely to induce relatively low levels of arousal, allowing consumers to process the subtle handwriting cue. Taken together, we posit that the handwriting effect is more likely to occur in non-busy (vs. busy) service environments.

Gender Differences in Information Processing

Gender differences have been extensively investigated in the marketing and hospitality literature (Fan et al., 2018; Fischer & Arnold, 1990; Joe & Choi, 2019; Shin & Mattila, 2019). Some of the revealed gender differences are due to socially constructed gender identities (e.g., Shin & Mattila, 2019), which might shift over time. However, the difference in cognitive processing between the biologically based sex groups tends to endure (Fischer & Arnold, 1990). According to the selectivity model of gender (Meyers-Levy & Maheswaran, 1991; Meyers-Levy & Zhu, 2010; Wolin, 2003), males and females adopt different information processing strategies. Males are selective processors and tend to form judgments based on only a proportion of all available information (Darley & Smith, 1995). This renders males to rely on simple heuristics, and therefore, they are more influenced by cues that are salient and easily accessible (Darley & Smith, 1995; Meyers-Levy & Loken, 2015). In contrast, females are inclined to use a comprehensive

strategy and process all available information in an extensive and systematic manner to guide their decisions (Darley & Smith, 1995; Meyers-Levy & Loken, 2015). In the restaurant domain, it has been shown that males (vs. females) tend to use more restricted evaluation criteria when judging food services (Kwun, 2011).

In light of the selectivity model, we predict that male consumers encountering handwritten menus are likely to use simple heuristics such as "handwritten menus are unique" to form primary evaluations. However, female consumers are prone to systematic consideration of all information available on the menu. As a consequence, the effect of handwriting is likely to be diluted due to the presence of various cues in the menu. Therefore, we argue that gender will moderate the handwriting effect in a non-busy service environment, such that handwritten menus are less influential among female (vs. male) consumers. Utilizing the signaling perspective, we propose that handwritten menus signaling menu uniqueness is the psychological mechanism underlying the joint effects of menu style, busyness, and gender on consumers' attitudes toward the menu in ethnic restaurants (see conceptual framework in Figure 1). Formally:

Hypothesis 1 (H1): There will be a significant three-way interaction between busyness, menu style, and gender on perceived uniqueness, such that:

> **Hypothesis 1a (H1a):** During non-busy times, menu offerings presented in real handwriting (vs. print) will lead to higher levels of perceived uniqueness among male consumers.
>
> **Hypothesis 1b (H1b):** During non-busy times, menu offerings presented in real handwriting (vs. print) will lead to similar levels of perceived uniqueness among female consumers.
>
> **Hypothesis 1c (H1c):** During busy times, perceived uniqueness will be unaffected by menu style regardless of gender.

Hypothesis 2 (H2): There will be a significant three-way interaction between busyness, menu style, and gender on attitude toward the menu, such that:

> **Hypothesis 2a (H2a):** During non-busy times, menu offerings presented in real handwriting (vs. print) will lead to more favorable attitudes toward the menu among male consumers.
>
> **Hypothesis 2b (H2b):** During non-busy times, menu offerings presented in real handwriting (vs. print) will lead to similar attitudes toward the menu among female consumers.
>
> **Hypothesis 2c (H2c):** During busy times, attitude toward the menu will be unaffected by menu style regardless of gender.

Hypothesis 3 (H3): Perceived uniqueness will mediate the impact of menu style, busyness, and gender on attitude toward the menu in ethnic restaurants.
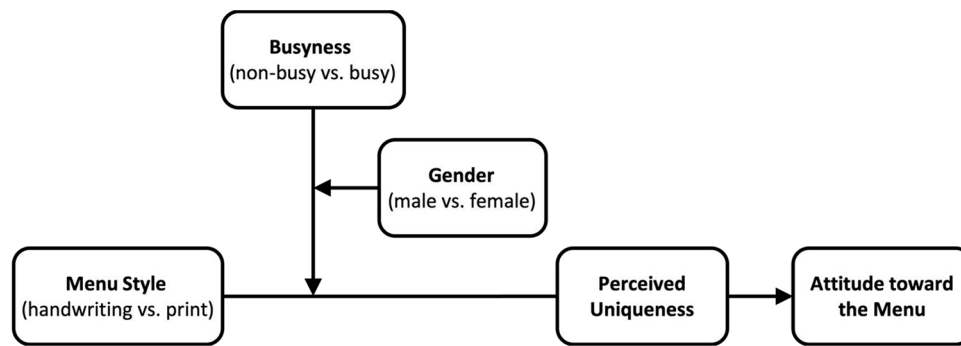
Figure 1.
Conceptual Framework.

Method

Study Design and Sample

The study utilized a 2 (menu style: handwriting vs. print) $\times$ 2 (busyness: non-busy vs. busy) $\times$ 2 (gender: male vs. female) quasi-experimental design,[2] with menu style and busyness manipulated as between-subject factors. Participants' gender was measured. A total of 277 U.S. adult consumers, recruited via Amazon's Mechanical Turk (MTurk), participated in the study. MTurk has been shown to be a valid and reliable data collection platform that provides high-quality data for consumer experiments (Buhrmester et al., 2011; Paolacci et al., 2010) and is commonly utilized by hospitality researchers (Choi et al., 2018; Hanks et al., 2017; Zhang & Yang, 2019). We took several measures to ensure data quality. Specifically, in the recruitment message we broadly described the research as a consumer behavior study and did not mention the ethnic restaurant context to minimize potential self-selection bias (Bethlehem, 2010). In addition, we included several attention check questions and screened participants for duplicate IP addresses (Oppenheimer et al., 2009). Furthermore, the demographic profile of our sample is similar to the general US consumer population (United States Census Bureau, 2020), demonstrating sampling representation (Thompson, 2012). Respondents in the sample were between the ages of 20 and 73 ($M = 35.3$). Among the respondent, 51.3% were male, 62.8% were Caucasian, 71.5% had a college degree or above, and 71.4% earned an annual household income above $40,000.

Procedures and Materials

Participants recruited via MTurk were invited to participate in an online survey. After providing their consent, participants were instructed to imagine themselves in a hypothetical scenario describing a dinner with friends in a Chinese restaurant. Participants were randomly assigned to one of the four experimental conditions that manipulated busyness (non-busy vs. busy) and menu style (handwriting vs. print).

Busyness was manipulated through varying occupancy of customers in the service environment (Hanks et al., 2017; S. Q. Liu et al., 2018). In the non-busy condition, the restaurant was operating at 70% capacity—28 out of 40 seats were occupied (see Figure 2 left panel). In the busy condition, the restaurant was operating at 15% capacity—6 out of 40 seats were occupied (see Figure 2 right panel).

Menu style was manipulated through presenting the menu on a board inside the restaurant allowing diners to view the menu upon entering the restaurant and/or from their seats. In the handwriting condition, the menu was written by hand (see Figure 3 left panel). In the print condition, the menu was typed on a computer using a standard font (see Figure 3 right panel). All participants were told that after being seated they noticed a big menu board on the wall featuring the Chef's Specials. They were asked to carefully examine the menu. The menu items were held constant across the two menu style conditions and participants were randomly assigned to view one of the two menus. This controlled experimental design through randomization allows for greater reliability and validity of statistical estimates of the treatment effect (i.e., menu style) while minimizing the influences of nuisance factors (e.g., individual differences in responding to menu items itself) on the experimental results (Kuehl, 2000).

Next, participants were asked to answer a series of questions about their reactions to the stimuli. Attitude toward the menu was measured on 7-point scale (dislike/like, bad/good, unappealing/appealing, unfavorable/favorable, low quality/high quality; $\alpha = .96$) adapted from Schroll et al. (2018). Perceived uniqueness was measured by asking participants the extent to which they thought the menu was unique, one-of-a-kind, and special (1 = *strongly disagree*, 7 = *strongly agree*; $\alpha = .92$) adapted from Franke and

Non-busy condition

Busy condition
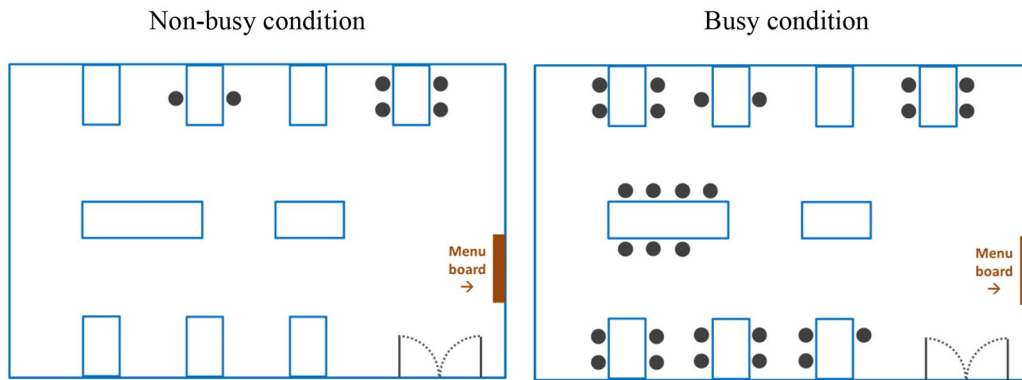
Figure 2.
Manipulation of Busyness.

Handwriting condition

Print condition

Figure 3.
Manipulation of Menu Style.

Schreier (2008). To check the manipulation of menu style, we instructed participants to rate whether they perceived the menu as handwritten or printed (1 = *definitely handwritten*, 7 = *definitely printed*). To check the manipulation of busyness, we asked participants the extent to which they perceived the restaurant as busy (1 = *definitely not busy*, 7 = *definitely busy*). Finally, we asked participants how realistic the scenario was (1 = *unrealistic*, 7 = *realistic*). Demographic information (e.g., age, gender) was collected at the end.

Results

Manipulation Checks

We conducted a menu style × busyness × gender ANOVA on the manipulation check of menu style. As expected, the ANOVA results revealed only a main effect of menu style, demonstrating a significant difference between the handwriting condition ($M = 3.40$) and the print condition ($M = 6.12$), $F(1, 269) = 156.53$, $p < .001$. In addition, we performed a menu style × busyness × gender ANOVA on the

Perceived Uniqueness
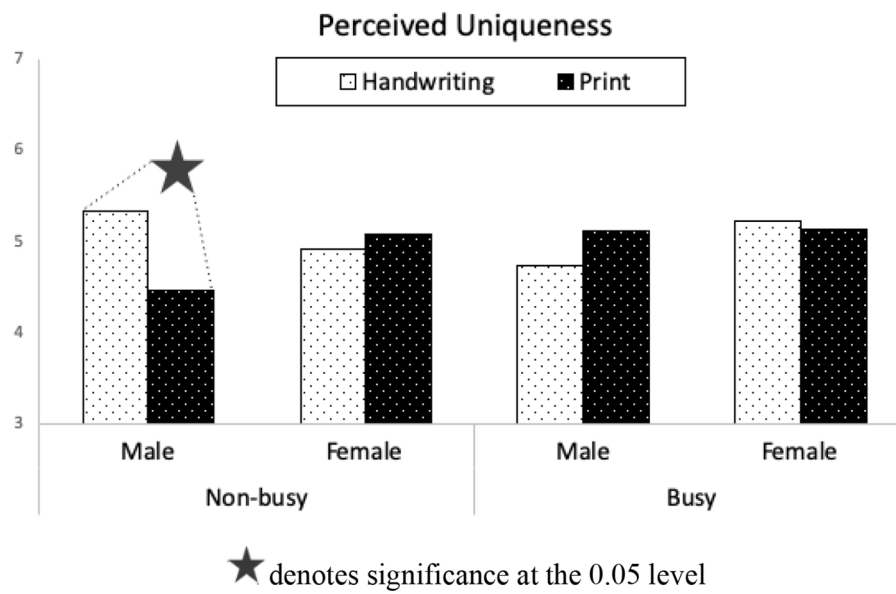
Figure 4.
The Impact of Menu Style, Busyness, and Gender on Perceived Uniqueness.
The star denotes the significance at the 0.05 level.

manipulation check of busyness. As expected, the ANOVA results suggested only a main effect of busyness, indicating a significant difference between the non-busy condition ($M = 2.36$) and the busy condition ($M = 4.25$), $F(1, 269) = 430.29$, $p < .001$. Moreover, the average stimuli realism score was high ($M = 5.81$; $t = 23.41$, $p < .001$ as compared to the scale midpoint), indicating that participants evaluated the scenarios to reflect real-life ethnic restaurant contexts. Taken together, our experimental manipulations were successful.

Perceived Uniqueness

We performed a menu style × busyness × gender ANOVA on perceived uniqueness. As expected, the ANOVA results yielded a significant three-way interaction between menu style, busyness, and gender, $F(1, 269) = 4.31$, $p < .05$, partial $\eta^2 = .020$, illustrated in Figure 4. The main effects of menu style, $F(1, 269) = 0.33$, $p = .57$, partial $\eta^2 = .001$; busyness, $F(1, 269) = 0.30$, $p = .59$, partial $\eta^2 = .001$; gender, $F(1, 269) = 0.92$, $p = .34$, partial $\eta^2 = .003$; and the two-way interactions between menu style and busyness, $F(1, 269) = 1.85$, $p = .18$, partial $\eta^2 = .007$, between menu style and gender, $F(1, 269) = 0.56$, $p = .46$, partial $\eta^2 = .002$, and between busyness and gender, $F(1, 269) = 0.20$, $p = .66$, partial $\eta^2 = .001$, were not significant.

A simple main effect analysis was conducted to interpret the significant three-way interaction. We broke down the three-way interaction by busyness level. As expected, when the restaurant's busyness level was low, male consumers

perceived the handwritten menu (vs. print) as more unique ($M_{handwriting} = 5.34$ vs. $M_{print} = 4.46$), $F(1, 269) = 5.60$, $p < .05$, partial $\eta^2 = .020$, providing support for H1a; such an effect was diminished among female consumers ($M_{handwriting} = 4.92$ vs. $M_{print} = 5.08$), $F(1, 269) = 0.19$, $p = .66$, partial $\eta^2 = .001$, supporting H1b. In contrast, when the restaurant's busyness level was high, consumers' uniqueness perceptions were unaffected by menu style regardless of gender ($ps > .27$, partial $\eta^2 s < .005$), which is consistent with H1c.

Attitude Toward the Menu

We conducted a menu style × busyness × gender ANOVA on attitude toward the menu. As expected, the ANOVA results revealed a significant three-way interaction between menu style, busyness, and gender, $F(1, 269) = 4.95$, $p < .05$, partial $\eta^2 = .020$, which is visualized in Figure 5. The main effects of menu style, $F(1, 269) = 1.15$, $p = .28$, partial $\eta^2 = .004$; busyness, $F(1, 269) = 1.25$, $p = .27$, partial $\eta^2 = .005$; gender, $F(1, 269) = 0.09$, $p = .77$, partial $\eta^2 < .001$; and the two-way interactions between menu style and busyness, $F(1, 269) = 0.34$, $p = .56$, partial $\eta^2 = .001$, between menu style and gender, $F(1, 269) = 1.45$, $p = .23$, partial $\eta^2 = .005$, and between busyness and gender, $F(1, 269) = 0.53$, $p = .47$, partial $\eta^2 = .002$, were not significant.

A simple main effect analysis was conducted to interpret the significant three-way interaction. We broke down the

Attitude toward the Menu
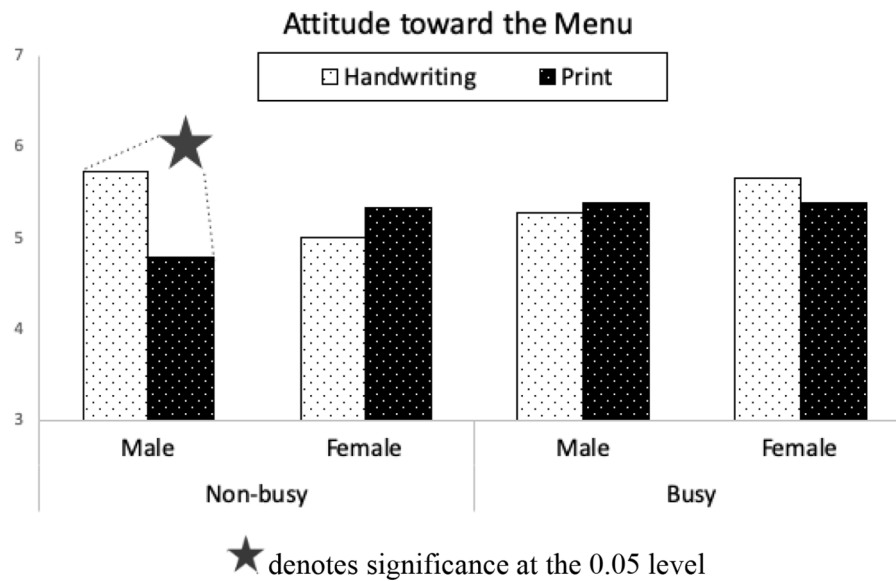
Figure 5.
The Impact of Menu Style, Busyness, and Gender on Attitude Toward the Menu.
The star denotes the significance at the 0.05 level.

three-way interaction by busyness level. Specifically, when the restaurant's busyness level was low, male consumers indicated more favorable attitudes toward the handwritten menu as opposed to the print version ($M_{handwriting}$ = 5.73 vs. M_{print} = 4.78), $F(1, 269)$ = 6.41, $p < .05$, partial η^2 = .020, supporting H2a; such an effect was attenuated among female consumers ($M_{handwriting}$ = 5.01 vs. M_{print} = 5.34), $F(1, 269)$ = 0.77, p = .38, partial η^2 = .003), providing support for H2b. However, when the restaurant's busyness level was high, consumers' attitudes toward the menu were unaffected by menu style regardless of gender ($ps > .46$, partial η^2s $< .005$), which is consistent with H2c.

Mediation Analysis

To test H3, we performed a moderated mediation analysis employing the bootstrapping approach through PROCESS V3.3 Model 12 (Hayes, 2017). In the model, we specified menu style as the independent variable, busyness and gender as moderators, perceived uniqueness as the mediator, and attitude toward the menu as the dependent variable. The bootstrapping results revealed that in the non-busy restaurant condition, perceived uniqueness mediated the impact of menu style on attitude toward the menu among male consumers (indirect effect = 0.5036, 95% CI = [0.0544, 0.9688]), but not among female consumers (indirect effect = −0.0937, 95% CI = [−0.4711, 0.2731]). As expected, in the busy restaurant condition, such mediation process did not occur among male consumers (indirect effect = −0.2237,

95% CI = [−0.6142, 0.1742]) or female consumers (indirect effect = 0.0578, 95% CI = [−0.4130, 0.5037]). Hence, H3 is also supported.

Discussion

The ethnic restaurant business is a large and fast-growing sector of the U.S. hospitality industry (Synergy, 2019; Technomic, 2018; Winsight, 2019). Although many ethnic restaurants present menus in handwriting (Kristina, 2013; Valery, 2016; Wells, 2018), the existing literature offers limited guidance on the effectiveness of such a menu design strategy. To address this gap, this research draws on the signaling theory (Hagtvedt, 2011; Jiang et al., 2016; Kirmani & Rao, 2000) and examines U.S. consumers' reactions to handwritten menus in an ethnic restaurant setting. Uniqueness differentiates the restaurant and responds to consumers' increasing need for novel and one-of-a-kind experiences (Bai et al., 2006; Monin, 2019). In the ethnic restaurant industry, uniqueness may be particularly appealing to consumers (Jang et al., 2012; J. H. Kim et al., 2017). A handwritten menu can signal that the menu offerings are unique. Our findings suggest that handwritten menus may enhance uniqueness perceptions and elicit more favorable attitudes toward the menu. However, the restaurant's busyness level (Hwang et al., 2012; S. Q. Liu et al., 2018; Noone & Mattila, 2009) and the consumer's gender (Meyers-Levy & Maheswaran, 1991; Meyers-Levy & Zhu, 2010; Wolin, 2003) serve as contextual and individual-level boundary factors for the handwriting

effect. Specifically, male consumers in a non-busy restaurant exhibit more favorable attitudes toward the menu presented in handwriting (vs. print). Such an effect diminishes when the restaurant is busy or when the consumer is a female. Finally, findings from the mediation analyses demonstrate that handwriting signaling uniqueness of menu offerings is the psychological mechanism underlying the handwriting effect in the ethnic restaurant industry.

Theoretical Implications

Findings of this research make several theoretical contributions to the hospitality literature. First, we extend research on servicescape cues by examining the effectiveness of handwritten menus in an ethnic dining context. Hospitality researchers have devoted increasing effort to understanding menu design in ethnic restaurants, such as price presentations (Naipaul & Parsa, 2001; Parsa & Njite, 2008), language used in menu labeling (Choi et al., 2018; K. Kim & Baker, 2017), stories about food origins (Youn & Kim, 2017), unfamiliar dish names and ingredients (J. H. Kim et al., 2017), verbal and visual message framing (Jang & Kim, 2015), and the "secret" menu (S. Q. Liu & Mattila, 2015). While prior research suggests that ethnic foods can appeal to local consumers due to perceived uniqueness (Jang et al., 2012; J. H. Kim et al., 2017), little is known regarding how to enhance such uniqueness via visual cues in menu design. Relying on the signaling theory (Hagtvedt, 2011; Jiang et al., 2016; Kirmani & Rao, 2000), our research focuses on handwritten menus that are frequently used, but not well understood, by ethnic restaurant operators. The current research adds to the growing stream of work on menu design by demonstrating that handwriting as a menu cue can effectively signal uniqueness of the ethnic menu offerings and enhance consumers' attitudes toward the menu.

Second, this research adds to the servicescape literature by examining how a social servicescape cue (i.e., busyness level inferred from the presence of other customers) interacts with a physical servicescape cue (i.e., menu style) to affect consumer responses to restaurant menus. Previous research suggests that the volume of other consumers in the service environment can influence consumers' emotional responses (Hwang et al., 2012; Mattila & Hanks, 2012), satisfaction (D. Y. Kim & Park, 2008; Zehrer & Raich, 2016), and restaurant choice (Ha et al., 2016; N. Kim & Lee, 2012). However, the impact of the busyness level on consumers' information processing is not well understood. Prior research suggests that a high level of arousal might influence consumers' information processing by reducing cognitive capacity (Sanbonmatsu & Kardes, 1988). Findings of this research suggest that a busy service environment as a source of high arousal may exert influence on consumers' processing capacity and affect their judgments. With reduced cognitive capacity, consumers are less likely to

deliberately focus on the handwriting cue as a signal of uniqueness. As a result, the handwriting effect is less likely to occur in busy service environments.

Finally, this research offers novel theoretical implications for gender differences in consumers' processing of physical and social servicescape cues. Our findings reveal that male consumers, who are selective processors, tend to be more susceptible to the handwriting effect, perceiving handwritten menus as unique and favorable. In contrast, the handwriting effect is attenuated among female consumers, who are comprehensive processors and inclined to evaluate all available information instead of being heavily influenced by a single cue (e.g., handwriting). These findings are consistent with the selectivity model (Meyers-Levy & Maheswaran, 1991; Meyers-Levy & Zhu, 2010; Wolin, 2003) and previous hospitality research showing that males (vs. females) use more restricted evaluation criteria when judging foodservice operators (Kwun, 2011). Our findings add to this stream of research by providing insights into how gender influences consumers' information processing of physical servicescape cues such as a handwritten menu.

Managerial Implications

Our findings provide several implications for ethnic restaurants. Hospitality marketers should be aware of the many benefits of handwritten messages. Consumers typically perceive handwritten communications as more engaging, personal, emotion-evoking, and unique (Childers et al., 1980; Chou, 2015; Johnson et al., 2017; Kettle & Häubl, 2011). In addition, handwritten messages convey personal effort, thus creating a sense of closeness, warmth, and empathy that facilitates relationship building in service contexts (Ren et al., 2018; Shih et al., 2019; Tassiello et al., 2018). Most importantly, our findings reveal that as handwriting can signal uniqueness, handwritten menus may trigger perceived uniqueness, thus generating favorable attitudes toward the menu. With the number of ethnic restaurants rapidly growing in the United States (e.g., IBISWorld, 2018, 2019) highlighting unique characteristics of the restaurant can differentiate the business and offer a competitive advantage (Bai et al., 2006). Furthermore, as customers who visit ethnic restaurants primarily seek exotic flavors and unique experiences (Jang et al., 2012; J. H. Kim et al., 2017; S. Q. Liu & Mattila, 2015), it is particularly important for ethnic restaurants to promote uniqueness. Our findings demonstrate that merely presenting the menu in real handwriting can signal uniqueness and influence consumer evaluations of the menu. Therefore, ethnic restaurants should consider utilizing handwritten menus to attract consumers and to enhance their evaluations.

However, ethnic restaurant operators should understand that the handwriting effect is bounded by contextual factors. Specifically, our findings suggest that a restaurant's busyness level plays an important moderating role in influencing

how consumers respond to an ethnic menu, such that the handwriting effect is more pronounced in a service environment with a relatively low busyness level. In other words, the handwritten menu strategy might be particularly effective in ethnic restaurants during non-busy hours. While the varying demand and busyness levels drive revenue management strategies (Kimes et al., 1999), restaurant marketers have not considered these important factors in menu design. Hence, there is a great opportunity for restaurant managers to fine-tune their menu designs by taking the servicescape busyness level into consideration to convey desirable brand characteristics. For example, ethnic restaurants in Silicon Valley, where a large proportion of local residents are male IT engineers, are usually busier on weekends than on weekdays (Tripadvisor, 2019). While these restaurants may present handwritten menus throughout the week, using handwriting in their weekday menus might be particularly beneficial. Furthermore, the current social distancing restrictions result in most restaurants being non-busy. Therefore, handwritten menus are likely to be effective in the current environment. However, for busy ethic restaurants, alternative strategies should be utilized for establishing uniqueness, such as a focus on luxury experiences (Yang & Mattila, 2016), novel interior design (Lin & Mattila, 2010), innovation in food sourcing and service design (Zeng et al., 2012), or special table settings such as communal tables (E. Kim et al., 2018).

Finally, as our findings suggest, ethnic restaurant operators should be aware that the effectiveness of the handwriting effect is contingent on the consumer's gender. In particular, male consumers may rely on heuristics such as "menu presented in handwriting feels unique" when forming primary menu evaluations, while the handwriting effect is less pronounced among female consumers as they process information more comprehensively. Therefore, when designing menus, ethnic restaurants should take the dominant gender of their target customers into consideration. If the target customers are mainly males, it would be a good idea to utilize handwriting to enhance the perceived uniqueness of the ethnic menu offerings, thus boosting consumer attitudes toward the menu. Furthermore, service employees should be educated about the gender effect. For instance, some ethnic restaurants present their daily special menu in handwriting and their regular menu in print. When a male consumer is deciding what to order, the service employee should deliberately point to the handwritten menu to recommend daily specials. Such a menu presentation strategy may elicit more perceived uniqueness and favorable attitudes toward the menu. It should be noted that, although the handwriting effect is reduced for females, we did not find any negative effect of handwritten menus on female diners. Therefore, when a table seats a group of both female and male diners, the service staff should present the handwritten menu to everybody to avoid any differential treatment.

Limitations and Future Research

This research has several limitations. First, this study was conducted via an online experiment using hypothetical restaurant scenarios and survey measures. Future research is encouraged to validate the handwriting effect in a field setting and observe consumers' actual ordering behaviors. Second, we recruited the participants only through MTurk. However, it has been shown that MTurk samples tend to take less time to answer survey questions, demonstrate higher negative emotions, and display lower social engagement (McCredie & Morey, 2019; Smith et al., 2016). Future research conducted with consumers across various data collection platforms and cultures may help improve the generalizability of our findings. As pointed out by the review team, we used a Chinese restaurant in the stimuli and the menu items reflected Chinese cuisine. Future research should validate the signaling role of handwriting across different ethnic restaurants (e.g., Korean restaurants, Italian restaurants).

In addition, our study focuses on the handwriting effect in ethnic restaurants where uniqueness perceptions are particularly relevant (Jang et al., 2012; J. H. Kim et al., 2017). However, prior research also suggests that perceived uniqueness is associated with scarcity and exclusiveness of luxury products (Vigneron and Johnson, 1999, 2004; Yang & Mattila, 2016). Therefore, future research should extend the investigation of the handwriting effect to the luxury dining context, such as celebrity-chef or fine-dining restaurants. It is possible that handwriting may convey a sense of high status and, as a result, increase consumers' willingness to pay.

There might be alternative mechanisms for the observed gender differences. For instance, fonts can be associated with gendered impressions such as masculinity and femininity (Grohmann, 2016), or warmth versus competence (Huang & Liu, 2020). Future research should examine whether women and men exhibit different preferences for handwriting as it usually contains more feminine features such as curves and rounded strokes.

We used restaurant layout pictures to manipulate the busyness level (Hanks et al., 2017; S. Q. Liu et al., 2018). Future research can use actual photos of busy versus non-busy restaurants to enhance the vividness and strength of the busyness manipulation. In addition, the busyness level of the restaurant in an online setting can be signaled by other cues, such as scarcity cues (Huang et al., 2020). Future research may extend the handwriting effect to virtual communications and examine the role of virtually signaled busyness.

Furthermore, while this research focused on the differences between handwritten versus printed menus, it is possible that where the menu is written or printed (e.g., on a board or paper) might also affect consumers' information processing and decision making. Therefore, it would be interesting for future research to examine the interaction

between menu style (handwriting vs. print) and menu type (board vs. paper) on consumer responses.

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Notes

1. In this article, handwritten menus do not include printed menus that contain fonts resembling handwritten words or photocopied menus.
2. The cell sizes ranged from 29 to 40 ($M = 35$). Results from chi-square tests suggested that gender distribution did not differ by menu style conditions or ($\chi^2 = 1.60$, $p = .21$) busyness conditions ($\chi^2 = 0.29$, $p = .59$). Therefore, gender was equally distributed across conditions.

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