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Love is in the menu: Leveraging healthy restaurant brands with handwritten typeface



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ABSTRACT

Recently, the restaurant industry has witnessed an unprecedented rise of healthy restaurant brands. However, the existing literature offers little guidance on how to effectively leverage such brands in the marketplace. To address this gap, the current research examines a novel marketing strategy (i.e., using handwritten typeface on menus) that enhances consumer responses to healthy restaurant brands. The results show that handwritten typeface creates a competitive advantage by conveying a sense of human touch, which subsequently induces the perception that love is symbolically imbued in the restaurant's offerings. The belief that "menu contains love" leads to a wide range of favorable consumer responses including positive attitudes toward the menu, enhanced perceived healthiness of the brand, and higher social media engagement. The results show that these positive effects occur only when the restaurant brand is health-focused. Moreover, the handwritten typeface effect with healthy restaurants is observed in both social and solo dining contexts. Implications for branding, visual design, and menu psychology are discussed.

A customer tweeted: "@NourishcafeGill My *favourite* Hermanus coffee, fresh healthy soul food place. Everything is made with love."

1. Introduction

Today's consumers are becoming increasingly health-conscious. They look for healthier and higher-quality foods when eating out, are drawn by descriptions such as "locally grown" "seasonal" and "superfood", and show a greater demand for menus with fresh, nutritious, and sustainable options (The Hartman Group, 2015; The Mintel Group, 2016). As a result, the restaurant industry has witnessed an unprecedented rise of healthy restaurant brands (Garfield, 2018; Gasparro, 2017; Olayanju, 2018). Even Oprah Winfrey is investing in a healthy restaurant brand named True Food Kitchen. According to Fortune (2018), Winfrey was very impressed by the team's love and passion for healthy dining. Can a restaurant's menu offerings contain "love"? Love in this context can be defined as "a consumer's perception of an artisan's emotion of strong attraction and passionate attachment to the product and its production process" (p. 99; Fuchs, Schreier, & Van Osselaer, 2015). Can customers feel it? Will it generate any favorable brand-related outcomes?

The visual design aspect of the service experience has received increasing attention in marketing research (Foroudi, Melewar, & Gupta, 2014; Hagtvedt & Brasel, 2017; Hagtvedt & Patrick, 2008; Hwang, Shin, & Mattila, 2018; Liu, Bogicevic, & Mattila, 2018; Van Ittersum & Wansink, 2012; Wansink & Love, 2014). In this article, we offer an innovative visual design strategy to leverage consumer responses to healthy restaurant brands. Specifically, we focus on handwritten typeface, defined as printed typeface that appears to have been written by humans (Schroll, Schnurr, Grewal, Johar, & Aggarwal, 2018). For example, as part of the brand's makeover, Wendy's logo now adopts a more handwritten look (see the web appendix). Typefaces are ubiquitous in the marketplace, and previous research shows that typeface design affects brand perceptions (Magnini & Kim, 2016; Ren, Xia, & Du, 2018), brand associations (Hagtvedt, 2011; Jiang, Gorn, Galli, & Chattopadhyay, 2016), brand memorability (Childers & Jass, 2002; McCarthy & Mothersbaugh, 2002), and financial performance (Hertenstein, Platt, & Brown, 2001; Wallace, 2001). While machinewritten typeface (e.g., Helvetica, Calibri, Geneva) is widely utilized in marketing communications, the competitive advantage of using handwritten typeface is not well understood by service marketers.

Drawing on the positive contagion effect (Argo, Dahl, & Morales, 2008; Fuchs et al., 2015), we argue that using handwritten (vs.

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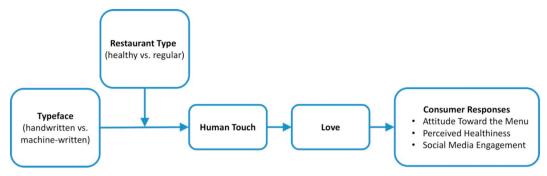


Fig. 1. Conceptual framework.

machine-written) typeface in a menu enhances a sense of "human touch", which subsequently triggers the perception that "love" is symbolically imbued in the restaurant's offerings. Perceiving the menu as containing love spills over to a series of brand-related outcomes including consumers' attitudes toward the menu, perceived healthiness of the brand, and social media engagement with the brand. In addition, we examine restaurant type (healthy vs. regular) as an important moderating factor, such that the favorable spillover effect of handwritten typeface is limited to brands with a health-focused positioning. Moreover, solo consumption has become ubiquitous in the service industry (Hwang et al., 2018; Ratner & Hamilton, 2015). In a follow-up study, we show that the handwritten typeface effect with healthy restaurants is robust in both social and solo dining contexts. Findings of this research highlight an innovative typeface strategy in fine-tuning consumer responses to healthy restaurant brands. A conceptual framework is provided in Fig. 1.

2. Theoretical background

2.1. Healthy dining

In recent years, consumers are increasingly seeking healthier foods and dining options (National Restaurant Association, 2017). To meet the needs of today's health-conscious consumers, restaurants (e.g., McDonald's, Applebee's, Au Bon Pain) strive to create a healthier menu based on fresh, natural, nutritious, and sustainable ingredients. The restaurant industry has witnessed an inevitable trend where old brands are repositioning themselves to be healthy and new healthy restaurant brands are booming everywhere (Garfield, 2018; Gasparro, 2017; Olayanju, 2018). Indeed, previous research demonstrates that consumers' health values positively affect their intention to choose healthy foods (Kang, Jun, & Arendt, 2015), and marketing communications have a positive influence on consumers' perceptions of the restaurant (Berry, Burton, & Howlett, 2018; Chrysochou & Grunert, 2014; Wansink & Love, 2014). Prior research suggests that restaurants can use nutrition and health claims (e.g., organic ingredients, heart healthy, low saturated fat or sodium) to generate favorable consumer attitudes toward menu items (Kozup, Creyer, & Burton, 2003; Lu & Gursoy, 2017), although sometimes healthy claims might ironically lead to overconsumption and obesity (Finkelstein & Fishbach, 2010; Wansink & Chandon, 2006; Wilcox, Vallen, Block, & Fitzsimons, 2009). In addition, the positive effects of healthy menu labeling are attenuated when consumers perceived such labeling as mandatory rather than voluntary (Berry et al., 2018). Furthermore, consumers may naturally adopt the "unhealthy = tasty" and "healthy = not tasty" intuition (Raghunathan, Naylor, & Hoyer, 2006), and thus react negatively to health claims on a menu. In sum, using health claims as a menu strategy does not always work, calling for creative branding approaches to promote healthy restaurants. Addressing this gap, the current research offers a novel marketing strategy, namely using typeface design to influence consumer responses to healthy restaurant brands.

2.2. Branding through typeface design

Typeface design is an effective marketing tool in communicating brand personality (Celhay, Boysselle, & Cohen, 2015; Childers & Jass, 2002; Foroudi et al., 2014; Henderson, Giese, & Cote, 2004). The branding literature suggests that consumers make two types of inferences from a word: denotation and connotation (Hagtvedt, 2011; Jiang et al., 2016; Kronrod & Danziger, 2013). Denotation is a translation of the message precisely to its literal meanings, more or less like dictionaries try to define it. Connotation refers to ideas and feelings that a word invokes in addition to its primary meaning. Through signifying connotative meanings, typeface design can be utilized to convey a wide range of brand characteristics. For example, Hagtvedt (2011) investigates the impact of incomplete typeface in brand logos (e.g., the IBM logo), where parts of the characters are intentionally missing or blanked out. He reveals that consumers perceive logos with incomplete (vs. complete) typeface as high on interestingness, which spills over to affect their judgments of brand innovativeness. Jiang et al. (2016) suggest that circular and curved typeface activates a "softness" association, which leads to enhanced perceptions of product comfortableness, whereas angular typeface engenders a "hardness" association and an increase in perceived product durability. Magnini and Kim (2016) show that italicized typeface in a restaurant's menu leads consumers to perceive the restaurant as more upscale and delivering higher service quality.

We explore the opportunity of promoting healthy restaurant brands through handwritten (vs. machine-written) typeface. Machine-written typeface is typically straight, squared and regular, whereas handwritten typeface is imperfect, organic, and active with curved, slanted, irregular strokes and letters (Henderson et al., 2004; Mackiewicz, 2005; Schroll et al., 2018). We aim to gain a deeper understanding on how restaurants can incorporate handwritten typeface as a novel marketing strategy to boost consumers' attitudes toward the menu, perceived healthiness of the brand, and social media engagement. In addition, we examine the boundary condition of restaurant type (healthy vs. regular) on the handwritten typeface effect, as well as its underlying mechanism through a serial mediation investigation (typeface → human touch → love → consumer responses).

2.3. The handwritten typeface effect

Extant research has demonstrated the benefits of handwriting in

commercial settings (Chou, 2015; Kettle & Häubl, 2011; Ren et al., 2018; Tassiello, Viglia, & Mattila, 2018). Handwritten communications are more personal, laborious, and emotion-laden, whereas machinewritten communications are considered impersonal, mass-produced, and less effortful (Childers, Pride, & Ferrell, 1980). Handwriting typically requires more effort, thus conveying warmth, which in turn helps create psychological closeness with consumers (Ren et al., 2018). Due to more deeply rooted elaboration of information, handwriting induces emotional empathy, and as a result, firms can use handwriting to reduce negative and extreme online rating scores (Tassiello et al., 2018). Most importantly, handwriting embodies human characteristics (Fluckiger, Tripp, & Weinberg, 1961; King & Koehler, 2000; Schroll et al., 2018). As the increasing mechanization, automation, and digitalization of our modern lives has resulted in a loss of human touch, handwriting may serve as a medium to convey human warmth and sensitivity in products (goods or services) (Ren et al., 2018; Tassiello et al., 2018). Recent research suggests that using handwritten typeface on product packaging can create perceptions of human presence and enhance emotional attachment between the consumer and the product, which in turn boosts product evaluations (Schroll et al., 2018). In other words, although handwritten typeface is in fact printed, it still looks handwritten and has many benefits of real handwriting.

In our context of promoting healthy restaurant brands, we argue that handwritten typeface activates human associations (Schroll et al., 2018), and subsequently, triggers the perception that the menu contains the service provider's love and passion for what they do. Love is conceptualized as "a consumer's perception of an artisan's emotion of strong attraction and passionate attachment to the product and its production process, which becomes symbolically embedded in the product" (p. 99, Fuchs et al., 2015). Notably, previous research suggests that products labeled as handmade (vs. machine-made) are perceived to have a special aura or "essence", because the artisan has transmitted his or her love for creating this product to the product itself (Fuchs et al., 2015)—a positive contagion process (Argo et al., 2008; Nemeroff & Rozin, 1994; Newman & Dhar, 2014; Newman, Diesendruck, & Bloom, 2011). Although love is a sentiment which does not have a real presence in a product, consumers may perceive that love has been imbued in a product in a symbolic and figurative nature (Fuchs et al., 2015; Norton, Mochon, & Ariely, 2012; Schmidt, Sääksjärvi, & de Hooge, 2015). We thus argue that consumers may view menu offerings as "containing love". Indeed, healthy restaurants are often perceived as going for an extra mile to care for their customers throughout the process of menu design, sourcing, and production. This process not only reflects the service provider's efforts devoted to improving food quality, but also their passion and genuine concern for consumers' well-being (Berry et al., 2018; Lee, Conklin, Cranage, & Lee, 2014). For the same reason, we argue that handwritten typeface will not translate into love when the restaurant brand does not have a salient health-focused positioning. In other words, we expect that restaurant type (healthy vs. regular) will serve as a contextual boundary condition for the handwritten typeface effect.

It's reasonable to make the prediction that viewing a menu as symbolically imbued with love will generate favorable attitudes toward the menu (Fuchs et al., 2015). However, we also argue that the belief "love is in the menu" will have a spillover effect on perceived healthiness of the restaurant brand through a "prosocial halo" (Chernev & Blair, 2015; Gürhan-Canli & Batra, 2004; Liu & Mattila, 2016). The halo effect refers to an individual's tendency to use global impressions to make judgments about specific characteristics (Feingold, 1992; Thorndike, 1920). For example, in a wine testing experiment, consumers who were aware of the winery's charitable donations (a prosocial image) gave higher ratings on the taste as compared with those who were unaware of such donations (Chernev & Blair, 2015). In a similar

vein, we argue that a global perception of the restaurant's prosocial and loving image is likely to extend to the local attribute judgment of healthiness.

Finally, we argue that the handwritten typeface effect will extend to consumers' social media engagement behaviors based on the notion of "social reciprocity"—the idea of giving something in return to people who give us benefits (Gouldner, 1960; Regan, 1971). Indeed, consumers appreciate firms who make an extra effort and reward such companies by increasing their willingness to pay more for the product, likelihood to choose the store, and overall evaluations (Morales, 2005). This rewarding process is defined broadly as general reciprocity accompanied by feelings of indebtedness and gratitude (Palmatier, Jarvis, Bechkoff, & Kardes, 2009). As consumers increasingly use social media to interact with brands and to spread word-of-mouth, we investigate consumers' reciprocity behavior in the form of enhanced social media engagement with the brand (Eisingerich, Chun, Liu, Jia, & Bell, 2015).

In sum, we propose that handwritten (vs. machine-written) typeface will elevate consumer responses, including their attitudes toward the menu, perceived healthiness of brand, and social media engagement, when the restaurant has a salient health-focused positioning. Such handwritten typeface effect is explained by a "typeface \rightarrow human touch \rightarrow love \rightarrow consumer responses" serial mediation process. Formally:

H1. Healthy restaurants using handwritten (vs. machine-written) typeface will generate more favorable consumer responses, including: (a) attitudes toward the menu, (b) perceived healthiness, and (c) social media engagement. In contrast, the handwritten typeface effect is not expected for regular restaurants.

H2. The handwritten typeface effect with healthy restaurants will be explained by a "typeface \rightarrow human touch \rightarrow love \rightarrow consumer responses" serial mediation process. More specifically, the mediation is expected to hold for: (a) attitudes toward the menu, (b) perceived healthiness, and (c) social media engagement.

3. Study 1

3.1. Study design and sample

A 2 (typeface: handwritten vs. machine-written) \times 2 (restaurant type: healthy vs. regular) between-subjects experimental design was used to test the hypotheses. A total of 185 U.S. adult consumers, recruited via Amazon Mechanical Turk's consumer panel, were randomly assigned to one of the four experimental conditions. The sample was between the ages of 20 and 84 (M = 36.2), 53.5% of the respondents were male, 77.3% were Caucasian, 63.3% had a four-year college degree, and 62.6% earned more than \$40,000 annually.

3.2. Procedures and materials

Participants were asked to imagine themselves in a scenario where they patronized a fictitious restaurant named Rilo's Kitchen. They were randomly assigned to one of the four experimental conditions. Restaurant type was manipulated as followed in the healthy restaurant condition: "Rilo's Kitchen is a health-conscious restaurant, its entire menu is based on locally-grown, non-GMO, antibiotic-free ingredients, and it is committed to sustainability". Such information was omitted from the regular restaurant condition. Typeface was manipulated through menu stimuli. Consistent with Schroll et al. (2018), we used "DJB This is Me" as the handwritten typeface whereas "Helvetica" as the machine-written typeface in the menus. The menu stimuli are provided in Appendix A.

Following the scenarios, participants completed a series of questions measuring their attitudes toward the menu ($\alpha=0.92$; Schroll et al., 2018), perceived healthiness of the brand (r=0.74, p<.001; Wilcox et al., 2009), social media engagement ($\alpha=0.96$; Eisingerich et al., 2015), human touch ($\alpha=0.94$; Schroll et al., 2018), and love ($\alpha=0.91$; Fuchs et al., 2015). The measurement scales are provided in Appendix B.

To check the manipulation of typeface, we asked participants the extent to which the menu appeared handwritten (1 = looks machine-written, 7 = looks handwritten). We also asked participants to rate the information presented in the menu in terms of its ease of processing (1 = difficult to process, 7 = easy to process). To check the manipulation of restaurant type, we asked participants whether it was mentioned that Rilo's Kitchen was a health-focused brand (1 = definitely no, 7 = definitely yes). Finally, we asked participants how realistic the scenario was (1 = unrealistic, 7 = realistic).

3.3. Results

3.3.1. Manipulation checks

As expected, a two-way ANOVA on the restaurant type manipulation check revealed only a main effect of restaurant type (F(1,181) = 50.59, p < .001), indicating a significant difference between the healthy restaurant condition (M = 6.00) and the regular restaurant condition (M = 4.03). Similarly, a two-way ANOVA on the typeface manipulation check yielded only a main effect of typeface (F(1, 181) = 51.46, p < .001), indicating a significant difference between the handwritten condition (M = 4.60) and the machine-written condition (M = 2.43). In addition, results from a two-way ANOVA on ease of processing indicated no differences in ease of processing across the experimental conditions (F(1, 181) = 0.62, p = .43, ns). Furthermore, the mean rating on scenario realism was high (M = 5.85; t = 20.70, p < .001, as compared to the scale midpoint), suggesting that participants in this study perceived the scenarios to reflect real-life restaurant contexts. Results from a two-way ANOVA on scenario realism indicated no differences between the handwritten and machine-written conditions (M = 5.56 and M = 5.71, respectively; F(1, 181) = 0.45, p = .50, ns). In conclusion, our experimental manipulations were effective.

3.3.2. Consumer responses

We conducted a two-way ANOVA on attitude toward the menu. The results revealed a main effect of typeface (F(1, 181) = 5.30, p < .05) and a main effect of restaurant type (F(1, 181) = 5.21, p < .05). Most

importantly, they were qualified by a significant 2-way interaction between typeface and restaurant type (F(1, 181) = 4.96, p < .05), illustrated in Fig. 2 Panel a. Specifically, in the healthy restaurant condition, handwritten typeface (M = 6.24) led to more favorable attitudes toward the menu than machine-written typeface (M = 5.44; F(1, 181) = 9.49, p < .05). In contrast, in the regular restaurant condition, attitude toward the menu was unaffected by the typeface (M = 5.44 and M = 5.43, handwritten vs. machine-written, respectively; F(1, 181) = 0.003, p = .96, ns). Taken together, these results are consistent with H1a.

We performed a two-way ANOVA on perceived healthiness. The results revealed a main effect of restaurant type (F(1, 181) = 4.62, p < .05) and a significant 2-way interaction between typeface and restaurant type (F(1, 181) = 3.79, p < .05), illustrated in Fig. 2 Panel b. Specifically, in the healthy restaurant condition, handwritten typeface (M = 6.33) led to higher levels of perceived healthiness than machine-written typeface (M = 5.77; F(1, 181) = 5.89, p < .05). In contrast, in the regular restaurant condition, perceived healthiness was unaffected by the typeface (M = 5.68 and M = 5.74, handwritten vs. machine-written, respectively; F(1, 181) = 0.06, p = .81, ns). These results provide support for H1b.

We ran a two-way ANOVA on social media engagement. As expected, the results indicated a significant 2-way interaction between typeface and restaurant type (F(1, 181) = 4.04, p < .05), illustrated in Fig. 2 Panel c. Specifically, in the healthy restaurant condition, handwritten typeface (M = 4.98) led to higher levels of social media engagement than machine-written typeface (M = 4.08; F(1, 181) = 4.99, p < .05). In contrast, in the regular restaurant condition, social media engagement was unaffected by the typeface (M = 4.08 and M = 4.28, handwritten vs. machine- written, respectively; F(1, 181) = 0.30, p = .59, ns). Therefore, H1c is also supported.

3.3.3. Mediation analysis

Our theorizing predicted that a serial mediation of human touch and love explains the impact of typeface on consumer responses, including attitude toward the menu, perceived healthiness, and social media engagement. To test H2, we conducted three serial mediation analyses using the bootstrapping approach (PROCESS Model 86; Hayes, 2017). In these mediation models, we specified typeface as the independent variable, human touch, and love as serial mediators, restaurant type as the moderator (see Fig. 3). The response variables were attitude toward the menu, perceived healthiness, and social media engagement, one at a time

We specified attitude toward the menu as the response variable in

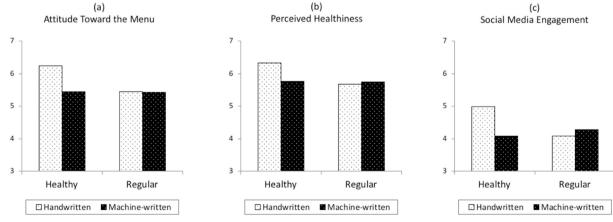


Fig. 2. Effects of typeface and restaurant type on (a) attitude toward the menu, (b) perceived healthiness, and (c) social media engagement.

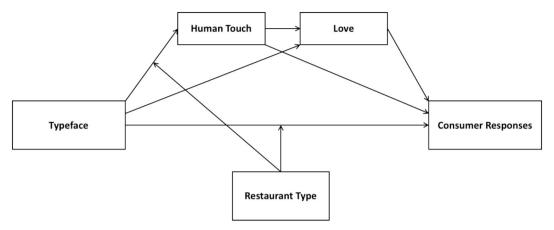


Fig. 3. Serial mediation model.

the serial mediation model.¹ The bootstrapping results revealed a significant "typeface \rightarrow human touch \rightarrow love \rightarrow attitude toward the menu" serial mediation process in the healthy restaurant condition (indirect effect = 0.2024, 95% CI = 0.0212 to 0.4690). As expected, the mediation was insignificant in the regular restaurant condition (indirect effect = -0.2053, 95% CI = -0.2071 to 0.1403, ns). Hence, H2a is supported.

We entered perceived healthiness as the response variable in the serial mediation model. The bootstrapping results indicated a significant "typeface \rightarrow human touch \rightarrow love \rightarrow perceived healthiness" serial mediation process in the healthy restaurant condition (indirect effect = 0.1869, 95% CI = 0.0206 to 0.4301). As expected, the mediation was insignificant in the regular restaurant condition (indirect effect = -0.0234, 95% CI = -0.1958 to 0.1341, ns). These results are consistent with H2b.

We specified social media engagement as the response variable in a serial mediation model. The bootstrapping results showed a significant "typeface \rightarrow human touch \rightarrow love \rightarrow social media engagement" serial mediation process in the healthy restaurant condition (indirect effect = 0.4131, 95% CI = 0.1095 to 0.7646). Again, the mediation was insignificant in the regular restaurant condition (indirect effect = -0.0517, 95% CI = -0.3961 to 0.2975, ns). Taken together, these results provide support for H2c.

Study 1 demonstrates that, in the context of health-focused restaurants, using handwritten typeface in the menu generates more favorable consumer responses. In the next study, we aim to extend our investigation to the solo dining context, which is becoming a ubiquitous phenomenon in today's world (Hwang et al., 2018; Ratner & Hamilton, 2015). Thus, we test the robustness of the handwritten typeface effect with healthy restaurants. In addition, the restaurant's name "Rilo's Kitchen" could have induced inferences of personal or human touch. Therefore, we use a more neutral restaurant name "Northstar Kitchen" in Study 2.

4. Study 2

4.1. Study design and sample

Study 2 utilized a 2 (typeface: handwritten vs. machine-

written) \times 2 (dining party: solo vs. social) between-subjects experimental design. A total of 191 U.S. adult consumers, recruited via Amazon Mechanical Turk's consumer panel, were randomly assigned to one of the four experimental conditions. The sample was between the ages of 21 and 77 (M = 36.8), 57.1% of the respondents were male, 74.3% were Caucasian, 71.3% had a four-year college degree, and 69.1% earned more than \$40,000 annually.

4.2. Procedures and materials

Participants were asked to imagine themselves in a hypothetical scenario where they patronized a healthy restaurant named Northstar Kitchen. They were randomly assigned to one of the four experimental conditions. Dining party was manipulated by describing that the focal customer went to the restaurant "with friends" (social dining condition) or "by yourself" (solo dining condition). Typeface was manipulated in the same way as in Study 1. Following the scenarios, participants completed a series of questions measuring their attitudes toward the menu ($\alpha = 0.97$; Schroll et al., 2018), perceived healthiness of the brand (r = 0.88, p < .001; Wilcox et al., 2009), and social media engagement ($\alpha = 0.95$; Eisingerich et al., 2015), same as in Study 1. To check the manipulation of typeface, we asked participants the extent to which the menu appeared handwritten (1 = looks machine-written,7 = looks handwritten). We also asked participants to rate the information presented in the menu in terms of its ease of processing (1 = difficult to process, 7 = easy to process). To check the manipulation of dining party, we asked participants whether the focal customer when to the restaurant alone or with friends (1 = definitely alone)7 = definitely with friends). Finally, we asked participants how realistic the scenario was (1 = unrealistic, 7 = realistic).

4.3. Results

4.3.1. Manipulation checks

As expected, a two-way ANOVA on the dining party manipulation check revealed only a main effect of dining party (F(1, 187) = 127.28, p < .001), indicating a significant difference between the solo dining condition (M = 3.09) and the social dining condition (M = 6.20). Similarly, a two-way ANOVA on the typeface manipulation check yielded only a main effect of typeface (F(1, 187) = 53.01, p < .001), indicating a significant difference between the handwritten condition (M = 4.88) and the machine-written condition (M = 2.69). In addition, results from a two-way ANOVA on ease of processing indicated no differences in ease of processing across the experimental conditions (F(1, 187) = 0.30, p = .59, ns). Furthermore, the mean rating on scenario realism was high (M = 5.91; t = 22.16, p < .001, as compared to the scale midpoint), suggesting that participants in this study perceived the scenarios to reflect real-life restaurant contexts. Results from a two-way

¹ The alternative serial mediation model "Typeface → human touch → love → perceived healthiness → attitude toward the menu" was not significant for healthy restaurants (indirect effect = 0.1335, 95% CI = -0.0094 to 0.3770, ns).

² The alternative serial mediation model "Typeface → human touch → love → perceived healthiness → social media engagement" was not significant for healthy restaurants (indirect effect = -0.0495, 95% CI = -0.2131 to 0.0135, ns).

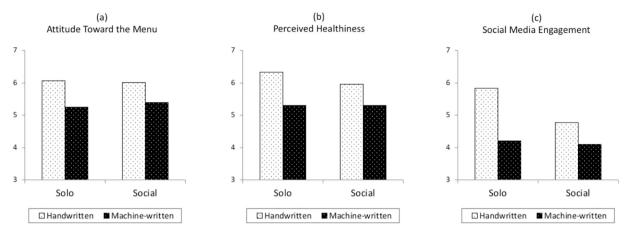


Fig. 4. Effects of typeface and dining party on (a) attitude toward the menu, (b) perceived healthiness, and (c) social media engagement.

ANOVA on scenario realism indicated no differences between the handwritten and machine-written conditions (M=6.04 and M=5.77, respectively; F(1, 187)=2.56, p=.11, ns). In conclusion, our experimental manipulations were effective.

4.3.2. Consumer responses

We conducted a two-way ANOVA on attitude toward the menu. The results revealed a main effect of typeface (F(1, 187) = 13.40, p < .05). The 2-way interaction between typeface and dining party was insignificant (F(1, 187) = 4.96, p = .64, ns), suggesting that the effect of typeface on attitude toward the menu did not differ by dining party (see Fig. 4). Specifically, in the social dining condition, handwritten typeface (M = 6.02) led to more favorable attitudes toward the menu than machine-written typeface (M = 5.39; F(1, 187) = 5.22, p < .05), replicating findings in Study 1. Similarly, in the solo dining condition, handwritten typeface (M = 6.07) led to more favorable attitudes toward the menu than machine-written typeface (M = 5.25; F(1, 187) = 8.32, p < .05).

We performed a two-way ANOVA on perceived healthiness. The results revealed a main effect of typeface (F(1, 187) = 16.04, p < .05). The 2-way interaction between typeface and dining party was insignificant (F(1, 187) = 0.767, p = .38, ns), suggesting that the effect of typeface on perceived healthiness did not differ by dining party. Specifically, in the social dining condition, handwritten typeface (M = 9.96) led to higher levels of perceived healthiness than machinewritten typeface (M = 5.31; F(1, 187) = 5.02, p < .05), replicating findings in Study 1. Similarly, in the solo dining condition, handwritten typeface (M = 6.33) led to higher levels of perceived healthiness than machine-written typeface (M = 5.31; F(1, 187) = 11.61, p < .05).

We ran a two-way ANOVA on social media engagement. The results indicated a main effect of typeface (F(1, 187) = 24.17, p < .05). Most importantly, it was qualified by a significant 2-way interaction between typeface and dining party (F(1, 187) = 4.05, p < .05). Specifically, in the social dining condition, handwritten typeface (M = 4.78) led to higher levels of social media engagement than machine-written typeface (M = 4.10; F(1, 187) = 4.33, p < .05). In the solo dining condition, handwritten typeface (M = 6.33) also led to higher levels of social media engagement than machine-written typeface (M = 5.31; F(1, 187) = 11.61, p < .05). However, the magnitude of such differences was greater in the solo (vs. social) dining condition as indicated by the significant 2-way interaction (F(1, 187) = 4.05, p < .05). In other words, the handwritten typeface effect on social media engagement is stronger when customers dine alone.

5. General discussion

While the restaurant industry is witnessing an unprecedented rise of

healthy restaurant brands (Garfield, 2018; Gasparro, 2017; Olavanju, 2018), the existing literature provides little guidance on how to leverage consumer responses to such brands. To address this gap, the present research examines a novel visual design strategy (i.e., using handwritten typeface in menus) that enhances consumer responses to healthy restaurant brands. Findings of this research demonstrate that using handwritten (vs. machine-written) typeface enhances the sense of human touch, and subsequently, induces perceptions that love is symbolically embedded in the restaurant's menu offerings. Such perception that "menu contains love" spills over to positively influence a series of important brand-related outcomes including consumers' attitudes toward the menu, perceived healthiness of the brand, and social media engagement with the brand. However, restaurant type (healthy vs. regular) serves as a contextual boundary factor for the handwritten typeface effect, such that handwritten typeface leads to more favorable consumer responses only when the restaurant brand is health-focused. Finally, findings from our mediation analyses suggest that the handwritten typeface effect with healthy restaurant brands is explained by a "typeface → human touch → love → consumer responses" serial mediation mechanism.

5.1. Theoretical implications

This research makes several theoretical implications. First, it adds to the services management literature by shedding light into consumers' judgment and decision-making processes regarding healthy restaurant brands. Prior research has examined the benefits of using health and nutrition claims in restaurant menus (Kozup et al., 2003; Lu & Gursoy, 2017), however, vital drawbacks of healthy labeling strategies have also been identified (Finkelstein & Fishbach, 2010; Wansink & Chandon, 2006; Wilcox et al., 2009). This calls for novel marketing strategies that communicate the brand in a more implicit manner and bolster persuasion effects (Jiang et al., 2016; Morales, 2005). The present research addresses this gap by offering a dynamic picture of the logical flow from handwritten typeface → a sense of human touch \rightarrow perception that love is symbolically imbued in the menu offerings → a series of favorable consumer responses including attitude toward the menu, perceived healthiness, and social media engagement. These results enrich the services management literature on the restaurant industry, healthy dining, and menu psychology (Berry et al., 2018; Gao & Mattila, 2017; Hsiao, Chen, Chang, & Chiu, 2016; Jang & Namkung, 2009; Wansink & Love, 2014).

Second, this research extends research on visual design by focusing on handwritten versus machine-written typeface. Previous research on typeface design has mostly concentrated on logos or packages of utilitarian goods (Hagtvedt, 2011; Jiang et al., 2016; Schroll et al., 2018), but the impact of typeface design in experiential services, where

emotional connectivity plays a critical role (Mattila & Enz, 2002), is not well understood. While information on the menu is easy to manipulate, and menus are an inevitable touchpoint every consumer has with a restaurant encounter, prior research has largely neglected the effect of typeface design on consumers' brand perceptions (for a notable exception, see Magnini and Kim (2016)). To the best of our knowledge, this is the first research to examine the use of handwritten versus machinewritten typeface in restaurant menus. Consistent with Schroll et al. (2018), we show that handwritten typeface activates human associations, such that menus with handwritten (vs. machine-written) typeface intensify a sense of human contact, warmth, and sensibility. We further demonstrate that perceived human touch translates into a symbolic interpretation that love has been injected into the restaurant's healthy offerings. This process is congruent with prior research on the positive contagion effect (Argo et al., 2008; Fuchs et al., 2015). Furthermore, our findings are consistent with the notion that consumers' attitudes toward a product become more favorable when they perceive the product as containing love and special labor (Fuchs et al., 2015; Norton et al., 2012; Schmidt et al., 2015). Therefore, our findings also add to the growing body of literature on product humanization, positive contagion, consumer labor theory.

Finally, this research contributes to the literature by showing that even a subtle manipulation of typeface design can effectively enhance seemingly unrelated consumer responses—such as perceived healthiness of brand and social media engagement—pointing to a new domain for restaurant business research. We show that handwritten typeface creates a prosocial and loving halo for the restaurant brand, triggering consumers to perceive the brand as high on healthiness. This finding is consistent with prior research on prosocial halo effects (Chernev & Blair, 2015; Gürhan-Canli & Batra, 2004; Liu & Mattila, 2016). In addition, we demonstrate that the handwritten typeface effect extends to consumers' social media engagement with the brand. As today's consumers increasingly rely on user-generated online content, it is extremely important and beneficial for brands to maximize positive wordof-mouth and fan behaviors in the online brand community (Eisingerich et al., 2015). Our findings indicating consumers reward the brand with enhanced social media engagement is congruent with the notion of social reciprocity in the service encounter (Morales, 2005). By bridging several unique streams of research (e.g., visual Servicescape design, product humanization, love, halo effect, and reciprocity), the present research provides a deeper understanding of typeface design as a branding tool in services marketing.

5.2. Managerial implications

Our findings provide important managerial insights with regard to how to market healthy restaurant brands through visual design and menu psychology. Restaurant menus are a crucial component of the physical Servicescape (Zeithaml, Bitner, & Gremler, 2000), acting as an inevitable touch point of customer-brand interaction. Moreover, menus designs can be easily manipulated via visual cues (Gray, 2017). It is important for restaurant managers to understand that visual design of the physical Servicescape (e.g., menu typeface) could convey connotative meanings with regard to brand characteristics and alter consumer perceptions in a symbolic manner (Hagtvedt & Patrick, 2008; Liu et al., 2018; Morales, 2005). Our findings show that the choice of handwritten (vs. machine-written) typeface communicates a deeper layer of meanings. Handwritten typeface suggests that the restaurant invested effort and passion in creating a healthy menu because they genuinely care about their customers' well-being. Consequently, the menu portrays love-an artisan's emotion of strong attraction and passionate attachment to the product and its production process (Fuchs et al., 2015).

In the service industry, marketers have just begun to understand the benefits of handwriting communication (Ren et al., 2018; Tassiello et al., 2018), which is perceived as more personal, laborious, and emotional-laden than machine-written communications (Childers et al.,

1980). However, we show that brands may enjoy similar advantages by utilizing handwritten typeface in marketing communications. Our findings reveal that handwritten typeface evokes human associations and perceptions that the dishes on the menu are full of love and passion, which boost consumer responses to the restaurant brand. Interestingly, our content analysis of healthy restaurants in the field suggests that only a small percentage of restaurants take advantage of the handwritten typeface effect. In this field analysis, we generated a list of ninety-five restaurants with health-focused positioning or advertising themselves as healthy, based on recent news coverage on the topic of healthy restaurants (Akkam, 2016; Barnes, 2016; DeCoursy, 2016; Garfield, 2018; Laseter, 2018; Olmsted, 2013; Smith, 2016). These restaurants include independent restaurants (e.g., ABC Kitchen, Koriente), chain restaurants (e.g., Subway, TGI Fridays), fast-food restaurants (e.g., Organic Coup, Pret-a-Manger), casual dining restaurants (e.g., Living Kitchen, Just Salad), fine dining restaurants (e.g., Zaytinya, Blue Hill), and coffee shops (e.g., Good Karma Café, Spa Café; see a full list in the web appendix). The results show that only 17.9% of these restaurants are using handwritten typeface in their menus, which is significantly lower than the proportion of restaurants solely relying on machine-written typeface (82.1%). In other words, there is great room for healthy restaurants to adopt handwritten typeface as a marketing strategy. We encourage healthy restaurants to consider taking advantage of handwritten typeface in menu design.

However, restaurant managers should be aware that such positive handwritten effect occurs only when the restaurant positions itself as a health-focused brand. Restaurant brands with an explicit positioning on health signal their dedication to creating a healthier menu based on fresh, natural, nutritious, and sustainable ingredients driven by a true passion for healthy dining. Therefore, it is not surprising that handwritten typeface triggers perceptions that love is symbolically imbued in the restaurant's menu offerings only when the restaurant is a healthy brand. In other words, simply writing "Big Mac" in handwritten typeface is not able to make "Big Mac" to be perceived as containing love or influence consumers' evaluations of McDonald's. In order to enjoy the handwritten typeface effect, the restaurant must make its health-focused brand image salient to consumers. For example, the restaurant could emphasize healthy dining in its slogan (e.g., Subway's "Eat Fresh") and have the slogan highlighted across the various elements of the physical Servicescape, such as interior walls, employee uniforms, and product packages. A health-focused brand should also emphasize words such as "locally grown" "organic" and "superfood" in its marketing communications.

Consumers exhibit more favorable attitudes toward the menu when they view the menu as containing love. In addition, the perception that "menu contains love" engenders a prosocial and altruistic brand image, which spills over to influence healthiness perceptions of the brand (Berry et al., 2018; Chernev & Blair, 2015; Gürhan-Canli & Batra, 2004). Given the increasing competition among health-focused restaurant brands, a boost in perceived healthiness is particularly crucial for sustaining a competitive advantage. Furthermore, our findings suggest that the handwritten typeface effect extends to social media engagement based on the notion of "social reciprocity". In other words, consumers appreciate firms who make an extra effort and reward them by giving back (Gouldner, 1960; Morales, 2005; Regan, 1971), such as spreading positive word-of-mouth on social media (Eisingerich et al., 2015). Also, considering the power of electronic word-of-mouth (Chevalier & Mayzlin, 2006; Kozinets, De Valck, Wojnicki, & Wilner, 2010), this can be highly beneficial to newly opened healthy-dining restaurants, as in this initial stage, brand awareness and new followers on social media are vital to success (Asmussen, Harridge-March, Occhiocupo, & Farquhar, 2013; Baker, Donthu, & Kumar, 2016; Godey et al., 2016).

Finally, given its focus on human warmth and love, the handwritten typeface effect is likely to bolster reactions of customers who are alone and experiencing loneliness—indeed, solo consumption has become ubiquitous in the service industry (Hwang et al., 2018; Ratner & Hamilton, 2015). The need to belong is a fundamental human

motivation (Baumeister & Leary, 1995). As people who experience social exclusion are motivated to seek emotional cues for social connection (Gardner, Pickett, Jefferis, & Knowles, 2005; Maner, DeWall, Baumeister, & Schaller, 2007), they should be more susceptible to the influences of handwritten typeface that conveys a sense human contact, warmth, and sensitivity (Schroll et al., 2018). Therefore, the handwritten typeface should be highly effective among solo diners due to their desire for a sense of human touch. Indeed, our findings suggest that the handwritten typeface effect is observed in both social and solo dining contexts. Furthermore, the impact of handwritten typeface on social media engagement is stronger for solo diners than social diners. As a result, the typeface strategy might be particularly effective in encouraging social media engagement for restaurants that are in the breakfast and lunch business and serve a lot of solo customers, such as Panera, True Food Kitchen, and Bob Evans.

5.3. Limitations and future research

This research has several limitations. First, our experiments were conducted through a scenario-based survey relying on self-reported responses. To overcome this limitation, future research should test the effect of handwritten typeface in a field setting and collect data on consumers' actual behavioral responses. More specifically, future research should examine online review data to test whether social media engagement increases in response to handwritten typeface. Second, we

Appendix A. Menu stimuli

Handwritten Typeface

TODAY'S SPECIAL

THAI SHRIMP SALAD

Grilled shrimp, fresh greens and edamame, topped with almonds and a drizzle of Thai peanut sauce with lime vinaigrette. 1 \$12

PEPPER-CRUSTED SIRLOIN & WHOLE GRAINS
Sirloin on a bed of hearty whole grains with fire-roasted
grape tomatoes and portobellos. | \$14

CEDAR GRILLED SALMON
Grilled salmon with mango salsa, steamed
asparagus, and spaghetti squash. | \$15

GRILLED LEMON CHICKEN
Grilled chicken on cranberry-pecan rice and quinoa
with Granny Smith apple relish and lemon. 1 \$13

SPICED CRISP CAULIFLOWER TOSTADA (V)
Warm chipotle bean spread, corn, shaved
cabbage, pickled red onion, radish, pico de gallo,
and queso fresco. | \$10

restricted our investigation to menu design, while the impact of handwritten typeface could potentially extend to other contexts (e.g., CSR and sharing economy) where a sense of human warmth is crucial. For example, future research could explore the potential benefits of using handwritten (vs. machine-written) typeface in increasing consumer engagement in the brand's corporate social responsibility initiatives, such as making charitable donations or exhibiting green behaviors. Similarly, future research could examine whether using handwritten (vs. machinewritten) typeface in the marketing communication of Airbnb might lead to stronger persuasion effects, and identify potential moderators. Moreover, as handwritten typeface humanizes the object, it might be beneficial to apply handwritten typeface to communications involving non-human service agents such as robots, virtual agents, and Artificial Intelligence. For example, future research could examine whether a service robot (e.g., Aloft Hotel's Botlr) is perceived more humanlike when handwritten texts are shown on its monitor. Finally, respondents on MTurk may be more open to innovations, better educated and more health-concerned than the general population. Therefore, future research should validate the handwritten typeface effect using different samples, and even conducting a cross-cultural study.

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Machine-written Typeface

TODAY'S SPECIAL

THAI SHRIMP SALAD
Grilled shrimp, fresh greens and edamame, topped
with almonds and a drizzle of Thai peanut sauce
with lime vinaigrette. | \$12

PEPPER-CRUSTED SIRLOIN & WHOLE GRAINS Sirloin on a bed of hearty whole grains with fire-roasted grape tomatoes and portobellos. | \$14

CEDAR GRILLED SALMON
Grilled salmon with mango salsa, steamed asparagus, and spaghetti squash. | \$15

GRILLED LEMON CHICKEN
Grilled chicken on cranberry-pecan rice and quinoa
with Granny Smith apple relish and lemon. | \$13

SPICED CRISP CAULIFLOWER TOSTADA (V)
Warm chipotle bean spread, corn, shaved
cabbage, pickled red onion, radish, pico de gallo,
and queso fresco. | \$10

Appendix B. Measurement scales

Attitude toward the menu (Schroll et al., 2018)

Overall, how do you rate the menu of Rilo's Kitchen?

- 1 = dislike, 7 = like
- 1 = bad, 7 = good
- 1 = unappealing, 7 = appealing

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1 = unfavorable, 7 = favorable
1 = low quality, 7 = high quality
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Perceived healthiness (Wilcox et al., 2009)

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The foods at Rilo's Kitchen are...

1 = unhealthy, 7 = healthy

1 = bad for you, 7 = good for you
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Social media engagement (Eisingerich et al., 2015)

Please indicate the likelihood that you would...

Say positive things about Rilo's Kitchen on social media sites (e.g., Yelp, Instagram, Twitter, Facebook).

Use social media sites to encourage friends and relatives to patronize Rilo's Kitchen.

Recommend Rilo's Kitchen on social media sites.

Become a fan of Rilo's Kitchen on social media sites.

(1 = not at all, 7 = very much)

Human touch (Schroll et al., 2018)

There is a sense of human contact in the menu.

There is a sense of personalness in the menu.

There is a sense of sociability in the menu.

There is a sense of human warmth in the menu.

There is a sense of human sensitivity in the menu.

(1 = strongly disagree, 7 = strongly agree)

Love (Fuchs et al., 2015)

I think the dishes on the menu are full of "love".

I think the dishes on the menu are full of "passion".

The dishes on the menu can figuratively be described as "warmhearted".

(1 = strongly disagree, 7 = strongly agree)

Appendix C. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.jbusres.2019.02.022.

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