# **Consumer Preferences for Food Logos**

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### ABSTRACT

Consumer preference for food logos is a major area of research in the field of marketing psychology. This study explores consumer preferences for food logos across four elements--color red vs. green, complementary vs. analogous, words vs. no words, and circular vs. angular edges. Participants were given a survey of 30 questions to evaluate eight sets of logos. The results of this study suggest that logos with red as their primary color are preferred over logos where green is predominant, while logos with brand names are preferred over logos with-out.

# Introduction

Imagine strolling down the street on a Saturday night. The sun is calling it a day, removing the last trace of heat as you struggle with on hand to zip up your Canada Goose jacket. Your other hand seeks the lingering warmth from the white coffee cup, decorated with a contrasting red maple leaf. You are reminded of the homey couch in the corner of your bedroom. A spice-rich aroma radiates from your right. The bustling crowd suddenly turns into a freezeframe as you raise your eyebrow at the golden glowing "M".

Logos—designs adopted by businesses or organizations to represent their products and services—are everywhere. These symbols act as visual cues for businesses and are often understood as the most artsy aspect of a brand (Anthony, 2023; Ariella, 2022). According to a study from *Harvard Business Review*, logos visually communicate a brand's identity and often define a consumer's first impression of the business (Ariella, 2022; Luffarelli et al., 2019). Previous research suggests that 75% of people recognize a brand by its logo (Ariella, 2022). Some make individuals feel at home, while others make their stomachs growl. In addition, logos can influence a company's financial value (Park et al., 2012; Schechter, 1993; Van & Van, 2001), brand equity and loyalty (Muller et al., 2021; Park et al., 2012), consumer behavior, and brand performance (Luffarelli et al., 2019). Most importantly, due to their visual aspect, logos break language barriers, allowing brands to flourish internationally (Kohli et al., 2002). For these reasons, business owners seek feedback from consumers through market research and similar means to understand consumer insights and satisfaction (Yi, 1989). The food industry is no exception, even during hardships like a worldwide pandemic.

Unfortunately, studies have shown that food businesses worldwide have been dramatically affected by the COVID-19 pandemic (Barman et al., 2021; Hailu, 2020; Lee et al., 2021; Yi et al., 2021). As social distancing kept people apart, the "distance" between consumers and food outlets increased as well.

- All indoor dining restaurants were closed in New York State on March 22, 2020 (Yi et al., 2021).
- Food businesses in Chinese ethnic neighbourhoods in Manhattan experienced record low visitors (Yi et al., 2021).
- Canadian (in-person) restaurants experienced a sharp decline in demand (Hailu, 2020).
- Indonesia's food security was pressured due to decreased income (Virananda & Ikhsan, 2021).
- Consumer demand for food around the world increased, despite decreases in supply (Aday & Aday, 2020).

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Therefore, the importance of food logos may have increased even more during the COVID-19 pandemic due to increased demand for "untact" services (Lee & Lee, 2020; Lee & Ham, 2021; Liu et al., 2023). "Untact services" are services that minimize physical contact (e.g. ordering online).

- More than half of US adults purchased groceries online in 2021 and 2022 (Redman, 2022).
- Around 521 million Chinese people (49% of the Chinese user base) used online food delivery services in 2022 (Thomala, 2023).
- The online food delivery market worldwide is projected to grow by 12.67% from 2023-2027 (Statista, 2023).

Surely, many food businesses around the world used the power of technology as a tactic to survive the COVID-19 pandemic.

Consequently, the immense use of technology (both before and especially after the COVID-19 pandemic) resulted in a booming digital age, increasing consumer need for quick decision-making on screens (Mirsch et al., 2017). For example, when ordering takeout or groceries online, consumers face copious options. This is where the importance of logos comes into play: strong and appealing logos differentiate brands, allowing consumers to compare similar food products (Adir et al., 2012).

A logo is as small as a fingernail, but it consists of many individual components that companies should carefully consider (Kim & Lim, 2019). This study focuses on determining consumers' logo preferences based on four elements:

- 1. color 1 (red vs. green),
- 2. color 2 (complementary vs. analogous),
- 3. words (logos not containing brand name vs. containing), and
- 4. shapes (round edges vs. sharp edges).

While many of these conditions have been researched and studied (Aslam, 2006; Bar & Neta, 2007; Ciotti, 2014; Eskes, 2021; Foroni et al., 2016; Garber et al., 2016; Huang, 2023; Itten, 2001; Jiang et al., 2015; Luffarelli et al., 2019; Meiting & Hua, 2021; Morgan et al., 2021; Silva, 2017; Silva et al., 2009; Tey, 2022; Westland & Shin, 2015; White et al., 2021; Witkowska, 2018; Yuliana, 2016), there has been little research on consumer preferences when it comes to logos specifically in the food industry. This paper aims to fill gaps in the field of marketing psychology by finding consumer preferences about food logos since the COVID-19 pandemic.

### Hypotheses

Color 1 (Red Vs. Green)

Color is one of the elements of design (and art) that acts as an integral component of logo design (Westland & Shin, 2015). Studies have also found that color also greatly influences purchasing intent (Ciotti, 2014). The first comparison in this study is the color red vs. green in food logos. Foroni et al. (2016) have found that red contributes to arousal and perceived calorie content whereas green decreases appetite when it comes to food. Although many people view green positively (e.g. the color is associated with good taste and adventure in the US, with love and happiness in Japan, and with sincerity, trustworthiness, and dependableness in China), it is often only associated with "healthy food" and "vegetables" in the food industry (Aslam, 2006). Moreover, Huang (2023) suggests that individuals prefer warm-colored food (e.g. red) over cool-colored food (e.g. green). Therefore, I hypothesize that my test sample will prefer food logos that are primarily red rather than green.



#### Color 2 (Complementary Vs. Analogous)

In the marketing context, logos often contain a combination of colors (White et al., 2021). One way to classify color combinations is complementary vs. analogous. Complementary colors refer to colors on the opposite sides of the color wheel (Itten, 2001). Analogous colors refer to colors found beside each other on the color wheel (Garber et al., 2016; Itten, 2001) (Refer to Figure 1<sup>1</sup>). Previous studies have shown that, although some complementary color combinations in advertisements elicit positive attitudes, analogous color ads are generally preferred over complementary ones (Silva, 2017; White et al., 2021). In addition, a study done by Garber. et al. (2016) suggests that food with analogous colors is favored over complementary colored ones. Furthermore, when it comes to packaging, analogous colors are perceived as more appealing than complementary colors (Witkowska, 2018). Therefore, I hypothesize that food logos with analogous color combinations will result in greater preference than complementary color combinations.



Figure 1. From the left to right, complementary and analogous colors. Images were adopted from https://www.researchgate.net/figure/Analogous-Color-Wheel\_fig3\_271556788 and https://www.du-lux.com.au/how-to/how-to-use-acolour-wheel/

#### Words (Logos Not Containing Brand Name Vs. Containing)

Another integral element of many logos is brand name. Research on the effectiveness of textual elements in logos is scarce (Eskes, 2021). Nonetheless, available studies suggest that text-based logos are more effective than image-based logos when the brand is new or less familiar (Morgan et al., 2021). In addition, studies show that descriptive or suggestive logos (logos containing or hinting at the brand name or the product itself) are more effective than non-descriptive ones (Eskes, 2021; Luffarelli et al., 2019). Descriptive logos increase a brand's authenticity, leading to higher purchase intent among consumers and sales by allowing consumers to visually process and understand the brand (Luffarelli et al., 2019). Although not all logos that are descriptive/suggestive contain text, descriptive logos often entail a clear message (e.g. chicken leg logo for a fast food business) that achieves the same goal as textual elements. Hence, I hypothesize that food logos containing brand names will be favored more than logos without textual elements.

#### Shapes (Round Edges Vs. Sharp Edges)

The shape of logos also affects consumer perception. Generally speaking, logo shapes can be categorized as circular (shapes with round edges; e.g. circle, oval) or angular (shapes with sharp edges; e.g. rectangle, square).

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Circular logo shapes are often perceived as gentle and mild, whereas angular logo shapes are associated with words like hard and cruel (Jiang et al., 2015). Adjectives associated with circular logos are either neutral or positive, but angular logos often get associated with neutral or negative adjectives. Further, a study done by Moshe Bar and Maital Neta (2007) suggests that sharp objects significantly arouse the amygdala (part of the brain that processes fear) more than curved shapes, meaning that angular shapes agitate negative emotions (fear) in the human brain (Bar & Neta, 2007). Other studies suggest the same--round objects are preferred over angular ones due to human nature to avoid sharp ("dangerous") objects and bias towards rounded ("safer") ones. (Liu et al., 2021; Silvia & Barona, 2009; Tey, 2022; Yuliana, 2016). Thus, I hypothesize that logos with round edges will be preferred over angular logos.

Given the discussion around topics regarding consumer preferences on food logos stated above, my formal hypotheses are as follows:

H1: For color 1 (red vs. green), I hypothesize that primarily red food logos appear more appealing than green ones.

H2: For color 2 (complementary vs. analogous), I hypothesize that analogous colored logos will appear more attractive than complementary ones.

H3: For words (logos not containing brand name vs. containing), I hypothesize that logos containing brand name will be preferred over logos without brand name.

H4: For shapes (round edges vs. angular edges), I hypothesize that logos with round shapes/edges will provoke more appeal than logos with angular shapes/edges.

# Methods

#### Participants

A total of 501 participants were recruited through social media apps and word of mouth. Participants under 10 years old and participants who reported that their takeout frequency was less than once per year were excluded from the data analysis due to their inability to independently order takeout and/or limited exposure to food logos. To that end, 448 valid results were obtained and analyzed. Of the 448 participants, 212 were female (M:F = 53:47). The distribution of valid participants' locations was as follows: 98.7% of participants reported that they were born and raised in China; the remaining 1.3% were born and raised in the US or Canada. Random participants took the survey at will through WenJuanXing (https://www.wjx.cn/, survey applet in WeChat). 70% of valid respondents reported a takeout frequency of one or more times a week; 20% of valid respondents reported a takeout frequency of one or more times a week; 20% of valid respondents reported a takeout frequency of one or more times a week; 20% of valid respondents reported a takeout frequency of one or more times a week; 20% of valid respondents reported a takeout frequency of one or more times a week; 20% of valid respondents reported a takeout frequency of one or more times a week; 20% of valid respondents reported a takeout frequency of one or more times a week; 20% of valid respondents reported a takeout frequency of several times per month; 10% of valid respondents reported a takeout frequency of once every few months.

#### Measure

Eight sets of food logos (a total of 16 logos) were designed and implemented into a survey to test the study's hypothesis. Participants completed an online survey consisting of 30 questions on WenJuanXing (https://www.wjx.cn/, survey applet in WeChat) -- 6 of which aimed to collect background information of the sample, 8 of which were "this or that" questions based on food logo images, and the remaining (16) were Likert scale questions based on food logo images (refer to Appendix A for the actual survey).

### Procedure

The surveys were administered online using WenJuanXing (https://www.wjx.cn/, survey applet in WeChat). The survey was advertised through social media apps (Instagram and WeChat) in link and QR code formats. All participants were informed that the survey was within the field of marketing psychology and aimed to collect information regarding logo preferences and purchasing intent. All participants were given the choice to remain anonymous.

### Results

As our measures of preference were categorical in nature, our first analysis of data consisted of a comparison between logo types using a Chi-square test for independence for all participants who answered each question. All Chi-square tests reveal a significant difference between logo preferences. (See Table 1 below).

Better Burger Logo A	Better Burger Logo B	Statistically Significant?	
Mean Rating = 5.35	Mean Rating = 7.00	Yes, X <sup>2</sup> test for independence yielded p<.05	
Boss Boba Logo A	Boss Boba Logo B	Statistically Significant?	
Mean Rating = 6.32	Mean Rating = 5.24	Yes, X <sup>2</sup> test for independence yielded p<.05	
Sam's Salad Logo A	Sam's Salad Logo B	Statistically Significant?	
Mean Rating = 6.08	Mean Rating = 5.38	Yes, X <sup>2</sup> test for independence yielded p<.05	
Cindy's Candy Logo A	Cindy's Candy Logo B	Statistically Significant?	
Mean Rating = 6.31	Mean Rating = 5.53	Yes, X <sup>2</sup> test for independence yielded p<.05	
Wow Bao Logo A	Wow Bao Logo B	Statistically Significant?	
Mean Rating = 5.31	Mean Rating = 6.36	Yes, X <sup>2</sup> test for independence yielded p<.05	
Tower Chicken Logo A	Tower Chicken Logo B	Statistically Significant?	
Mean Rating = 4.85	Mean Rating = 5.99	Yes, X <sup>2</sup> test for independence yielded p<.05	
Moolk Logo A	Moolk Logo B	Statistically Significant?	
Mean Rating = 5.29	Mean Rating = 6.72	Yes, X <sup>2</sup> test for independence yielded p<.05	
Coook!e Logo A	Coook!e Logo B	Statistically Significant?	

Table 1. Mean Rating of Logo Preferences Based on Chi-Square Tests



Mean Rating = 5.61	Mean Rating = 6.35	Yes, X <sup>2</sup> test for independence
		yielded p<.05

### Discussion

The purpose of this study was to determine consumer preferences with respect to logos from four different aspects. It was hypothesized that people would prefer logos that were red over green, analogous over complementary, with words over without, and circular over rectangular (refer to hypotheses section for more detail). Below is a table summarizing whether the original hypotheses about each condition were validated.

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Condition & Brand Name	Logo A	Logo B	Supports Hypothesis?
Color 1 - Cindy's Candy	Mean rating = $6.31$ # preferred <sup>1</sup> = $267$	Mean rating = 5.53 # preferred = 181	Yes.
Color 1 - Sam's Salad	Mean rating = 6.08 # preferred = 274	Mean rating = 5.38 # preferred = 174	Yes.
Color 1 - Tower Chicken	Mean rating = 4.85 # preferred = 66	Mean rating = 5.99 # preferred = 382	No.
Color 2 - Coook!e	Mean rating = 5.61 # preferred = 118	Mean rating = 6.35 # preferred = 330	Yes.
Color 2 - Sam's Salad	Mean rating = 6.08 # preferred = 274	Mean rating = 5.38 # preferred = 174	No.
Words - Better Burger	Mean rating = 5.35 # preferred = 69	Mean rating = 7.00 # preferred = 379	Yes.
Words - Moolk	Mean rating = 5.29 # preferred = 49	Mean rating = 6.72 # preferred = 399	Yes.
Shape - Boss Boba	Mean rating = 6.32 # preferred = 371	Mean rating = 5.24 # preferred = 131	Yes.
Shape - Wow Bao	Mean rating = 5.31 # preferred = 67	Mean rating = 6.36 # preferred = 381	No.

In summary, out of the four conditions, one hypothesis was supported (H3), one hypothesis was partially supported (H1), and two hypotheses were neither supported nor rejected (H2 and H4).

<sup>&</sup>lt;sup>1</sup> The number of people who chose this logo over the other in the logo set.



### H1: Partially Supported—Color 1: Red Vs. Green

Most of the survey responses confirmed that participants preferred red logos over green, as hypothesized, in most cases (2/3). However, in the case of Tower Chicken, more participants unexpectedly preferred the green logo. Perhaps, participants responded to the green logo more positively in the attractiveness rating and logo preference because its novelty sparked interest.

H2: Neither Supported nor Rejected—Color 2. Complementary (Colors That Are Opposite from Each Other On the Color Wheel) Vs. Analogous (Colors That Are Next to Each Other On the Color Wheel)

There were two sets of logos for comparing complementary colored food logos vs. analogous colored food logos. One set confirmed the original hypothesis, whereas the other did not. Therefore, it is ambiguous whether complementary and analogous colors in food logos affect consumer preferences. A reason for this could be that consumers are gravitated towards different colors instead of evaluating logos based on complementary vs. analogous color schemes.

H3: Supported—Words—Containing Brand Name Vs. Not Containing

All logo sets in this study confirm that food logos containing brand names are preferred over ones without any words.

H4: Neither Supported nor Rejected—Color 2: Logos with Round Edges (E.G. Circle, Oval) Vs. Angular Edges (E.G. Rectangle, Square)

Half of the logo sets comparing round vs. angular-edged food logos confirmed the original hypothesis, whereas the other half did not. Therefore, whether consumers prefer food logos with round edges or logos with angular edges remains unclear in this study. This could be because subtle differences in overall logo shapes are difficult to observe. Additionally, the edges of food logos may not affect consumers' preferences/purchase intent about the food.

# Conclusion

Information and results obtained from this study offer insights into food logo preferences regarding four different conditions. The study reveals that logos with red as their primary color are preferred over logos that feature green, while logos with brand names are preferred over logos without them. However, whether complementary/analogous color schemes and circular/angular shapes affect purchasing decisions remains unclear in the study. Future studies could clarify consumer preferences between complementary and analogous food logos, as well as round-edged and angular-edged food logos.

Logos can benefit brands in many ways (Luffarelli et al., 2019). Thus, research on logos contributes to the overall well-being of brands. This study explored an area of marketing psychology that contributes to the scope of logo research. In future studies, differences in food logo preferences based on age, gender, and ethnicity could be explored.



# Limitations

The results of this study are subject to limitations that future research should address. These include, but are not limited to, the environment participants are in, the devices and device displays of participants, and the differences in survey format. In future studies, there could be more consistency in the way participants completed the surveys. Due to time restraints, all surveys were accessed online through WenJuanXing. Consequently, how respondents completed the survey is unknown. All participants in the study most likely had varying devices, resulting in differences in screen sizes and conditions, which could have caused inaccurate decisions. For example, someone who took the survey on a cracked iPhone 6 might not have seen the same details (regarding logo images and instructions) that a brand-new MacBook Pro user saw. Moreover, the display settings on all devices are arguably different, which may result in different perceptions and impressions of logo images. For example, dark mode is believed to improve visual acuity (Kim & Lim, 2019), therefore creating more contrast than light mode. However, no participants contacted the research team to report issues; therefore, we cannot consider this a major issue at this time. In the future, it may be prudent to include a question to check participants' devices. Future studies on this topic can also improve by recruiting participants to take the same survey, in the same environment, on the same device, and in person.

Another major limitation of this study is present in its construction. Due to an even number of food logo sets for most conditions, clear results could not be obtained in some cases (e.g. complementary vs. analogous and round edges vs. angular edges). This limitation can be avoided in future studies by incorporating an odd number of sets for all conditions, preferably three or more.

Lastly, the accuracy of logos could be improved. Because all logos were hand-drawn, two logos within a set might not be equivalent without differing elements (refer to Appendix B). Although all logos were constructed to be as exact as possible by hand, it may be more plausible to render logos using digital software to achieve the highest similarity possible before adding differing elements.

### Acknowledgments

I would like to thank my advisor for the valuable insight provided to me on this topic.

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