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The Double-Edged Effects of Visualizing Wine Style: Sweetness Scale on Wine Label

Abstract

Purpose – A visual sweetness scale with an arrow pointing to a specific sweetness level is now required on all labels of AOC Alsace. The sweetness scale makes it easier for consumers to understand what is in the bottle. What is less clear, however, is whether such labeling is always effective. To fill this gap, the current research aims to examine the positive and negative effects (double-edged effects) of a visual sweetness scale and identify the boundary condition.

Design/methodology/approach – Two studies were conducted using a 2 (cue type: scale vs. text) by 2 (consumer type: novices vs. experienced wine consumers) between-subjects, quasi-experimental design.

Findings –The double-edged effects are only significant among wine novices. Specifically, though wine novices are more likely to purchase wine with a sweetness scale (vs. text) due to perceived diagnosticity (Study 1), they are unwilling to pay more due to low perceived quality (Study 2).

Practical implications – The study findings provide practical implications for wine producers, marketers, and restaurants regarding when and how to use the sweetness scale on wine labels and wine service.

Originality/value –To the best of our knowledge, this research is the first to reveal the impact of visualizing wine style on wine labels. More importantly, while most previous research demonstrates the positive effects of using visual cues, this research sheds light on its drawbacks and examines the underlying mechanisms.

Keywords: Wine label, Visual cue, Purchase intention, Willingness to pay (WTP), Wine consumers

1. Introduction

Wine consumers typically rely on wine labels to get information while making purchase decisions (Barbierato et al., 2023; Esau, 2019; Sherman & Tuten, 2011; Thomas & Pickering, 2003). Labels are used not only to provide necessary information such as region, vintage, or variety but are also increasingly used as a marketing tool by providing additional information and cool designs (Annunziata et al., 2016; Barbierato et al., 2023; Gmuer et al., 2015; Mann et al., 2012). For US-made wines, ‘Reserve’, ‘Riserva’, or ‘Reserva’ on the wine label doesn’t technically mean anything but is used as a marketing gimmick. Some wine producers provide food pairing suggestions or use images of exotic-looking animals on wine labels to attract consumers. Recently, winemakers have been required to use a new sweetness scale (a visual scale with sweetness levels and an arrow pointing to a specific level; see Appendix for examples) on all labels of AOC Alsace, starting with wines produced from the 2021 harvest (Boiling, 2022). Compared to traditional texts indicating wine style and a sweetness level (e.g., Semi-Dry, Brut), the sweetness scale makes it easier for consumers to understand what is in the bottle (Barth, 2022). Previous research shows that when consumers perceive wine labels or information as easy to understand, they will evaluate the wine positively (Croijmans & Wang, 2022; Gmuer et al., 2015; Karnal et al., 2014). What is less clear, however, is whether such effects are always positive. To bridge this gap, the main purpose of this study is to examine the double-edged effects of visualizing sweetness on wine labels. We argue that the sweetness scale can assist consumers and increase their purchase intention (positive effect), but it may also backfire regarding quality perceptions and willingness to pay (negative effect).

Visual cues are perceived as more helpful and diagnostic than verbal cues, leading to positive consumer responses such as purchase intention (Dens et al., 2011; Rebollar et al., 2017). However, previous research indicates that consumers perceive premium and expensive products as exclusive and less accessible to general consumers (Fuchs et al., 2013; Khoi & Le, 2022; Lee & Cho, 2022; Park et al., 2020). The easily understandable sweetness scale can make the wine appear inclusive and produced for the masses, giving the perception that the wine is of low quality and thus reducing consumers’ willingness to pay. Based on the Stereotype Content Model (SCM) (Fiske et al., 2007) and the compensation effect of warmth and competence (Kim & Ball, 2021), we, therefore, propose that though the sweetness scale might enhance purchase intention through its diagnosticity (i.e., warmth), it can decrease consumers’ willingness to pay due to lower perceived quality (i.e., competence). We also identify consumer type (novice vs. experienced wine consumers) as a theoretical and practical boundary condition.

This research contributes to the literature by addressing several gaps. First, previous research on wine labels mainly focuses on the type of information provided on the label. It compares the influence of intrinsic wine attributes (attributes that are related to wine characteristics, such as varietal and region) to extrinsic wine attributes (attributes that are irrelevant to wine characteristics but can influence consumers, such as label color, label style, imagery) (Celhay & Remaud, 2018; Laeng et al., 2016; Lunardo & Rickard, 2019; Pickering et al., 2022; Popovich & Velikova, 2023), but overlooks the presentation format of intrinsic attributes. The current research enriches research on wine labels by investigating the influence of label presentation style of an intrinsic attribute (i.e.,

sweetness) on consumer responses. Second, while previous research in sensory marketing has examined the positive effects of visual cues in label designs and advertising (Choi et al., 2020; Tang et al., 2004), their drawbacks have received scant attention. This research extends prior work by examining both the positive and negative effects of using visual cues (i.e., visualizing the sweetness level on wine labels). In addition, the current study reveals consumer type (novices vs. experienced wine consumers) as the boundary condition, showing that visualizing the sweetness level has minimal effect among experienced wine consumers. Third, while most previous research indicates a positive relationship between purchase intention and willingness to pay (Barber et al., 2012; Bougenvile & Ruswanti, 2017; Bower et al., 2003), this research shows that the two constructs don't always work in tandem. Lastly, this research provides guidance to wine producers, marketers, and restaurants regarding when and how to use the sweetness scale on wine labels and wine services.

2. Literature Review

2.1 Verbal and Visual Cues

According to the Dual-Coding Theory, information can be represented using visual and verbal cues (Paivio, 1990, 1991). Wine label designers use verbal and visual cues to communicate messages to consumers to attract them (Barbierato et al., 2023; Liu et al., 2022; Ouyang & Sharma, 2019; Rebollar et al., 2017). Examples of verbal cues include the region name, brand name, alcohol content, wine style, and varietal, clearly displayed in text form. Images of chateaux or vineyards, label colors, and typefaces are examples of visual cues. Previous research shows that visual and verbal cues elicit different responses. Visual cues (e.g., color, imagery, form, scale) trigger unconscious, unintentional responses and require lower cognitive effort than verbal cues (Ro et al., 2009; Underwood & Klein, 2002).

In addition, previous research demonstrates the superior effect of visual cues on consumer responses over verbal cues. Presenting information visually, like using a graph or image, enhances clarity and information processing, leading to positive consumer responses (Butcher & Pecot, 2022; Choi et al., 2020; Dens et al., 2011; Rebollar et al., 2017). For example, consumers perceive potato crisps as more crunchy and healthier when seeing an image of an oil cruet (vs. a text saying "with olive oil"), leading to a stronger purchase intention (Rebollar et al., 2017). In the context of wine consumption, Laeng et al. (2016) used eye-tracking to investigate the influence of visual and verbal cues on consumer responses. They find that visual cues on the wine label, such as the pictorial graphics of the front label, capture more attention than verbal cues, such as the winemaker's name (Laeng et al., 2016). These results indicate the superiority of using visual cues. However, intrinsic wine attributes that are related to the wine's characteristics (Quester & Smart, 1996), such as varietal, wine style, alcohol content, and region, are typically depicted in "verbal" form on wine labels (e.g., using text: Brut, Grand Cru). Considering the superiority of visual cues, we examine whether visualizing intrinsic attributes on wine labels could also help or backfire. To that end, we consider the tradeoff between warmth and competence.

2.2 Tradeoff Between Warmth and Competence

The Stereotype Content Model (SCM) suggests that people tend to judge others based on warmth and competence (Fiske et al., 2007; Septianto et al., 2022). Warmth embodies friendliness, helpfulness, and approachability, while competence emphasizes capability and performance (Fiske et al., 2007). While these two dimensions are essential in interpersonal interactions and applicable to brand and product perceptions, a growing body of research has identified the inverse relationship between perceived warmth and competence, known as the compensation effect (Holoien & Fiske, 2013; Kim & Ball, 2021). There is an inherent tradeoff between warmth and competence, whereby a decrease in competence perception accompanies an increase in warmth perception and vice versa (Kim & Ball, 2021). For example, nonhumanoid robots are generally perceived as more competent but less warm than humanoid robots (Choi et al., 2021). Brands perceived as warm are viewed as inclusive, accessible, and designed for the masses but raise doubts regarding quality and diminishing perception of value (Fuchs et al., 2013; Park et al., 2020). Specifically, Fuchs et al. (2013) show that being “close” to users by labeling a product as a user (vs. company) designed has a negative impact on perceived quality. Park et al. (2020) indicate that a luxury brand is signaling friendliness to consumers on social media by responding to consumers’ comments with emojis, which results in lower value perceptions, leading to the dilution of brand competence.

Given the tradeoff between warmth and competence, prior studies have investigated conditions where warmth or competence holds greater significance. For example, perceived competence is more important for services that offer care for people (e.g., medical services) (Güntürkün et al., 2020). Warmth (vs. competence) perceptions are more important when there is a process service failure or when people care more about the service process (Choi et al., 2021; Güntürkün et al., 2020). Therefore, enhancing warmth or competence does not always lead to favorable outcomes. For example, Hess and Melnyk (2016) indicate that when the product is recommended by a highly credible source, increasing warmth perceptions by using feminine cues such as pink color and round shape can enhance consumers’ purchase intention. However, increasing perceived competence is more important when a source with low credibility recommends the product. Consequently, employing feminine cues that enhance perceived warmth while diminishing perceived competence leads to lower purchase intentions (Hess & Melnyk, 2016). In a similar vein, we argue that the sweetness scale, serving as a warmth cue that makes it easier for consumers to understand what is in the bottle (i.e., perceived diagnosticity), may elicit positive responses. However, there is a potential downside as the sweetness scale may undermine perceived competence (i.e., perceived quality). Specifically, we argue that the sweetness scale has a positive impact on perceived diagnosticity (warmth perception), increasing purchase intention. On the other hand, it may hurt perceived quality (competence perception), lowering willingness to pay.

2.3 Positive Responses through Warmth Perception: Perceived Diagnosticity and Purchase Intention

Perceived diagnosticity plays an essential role in the purchase process, as consumers tend to use easy-to-process cues to infer product attributes (Steenkamp, 1990; Van Ooijen et al., 2017). Perceived diagnosticity refers to consumers' perceptions of the sufficiency and helpfulness of information that can assist them in evaluating the product and making decisions (Jiang & Benbasat, 2004). Previous research has demonstrated a positive

relationship between perceived diagnosticity and purchase intention (Cheng et al., 2022; Liu & Yu, 2022; Liu et al., 2023; Uhm et al., 2022). For example, consumers are more likely to purchase the product when the influential streamer (Liu & Yu, 2022), the product presentation video (Cheng et al., 2022), or Augmented reality (AR) technology (Uhm et al., 2022) provides sufficient and helpful product information. As discussed previously, visual cues enable consumers to understand the product more vividly and quickly than verbal cues (Rebollar et al., 2017; Underwood & Klein, 2002). Therefore, showing a visual scale with sweetness levels with an arrow pointing to a specific level seems more informative than simply stating “Semi-Dry”. However, such a positive effect on purchase intention through perceived diagnosticity may depend on consumers' expertise level.

2.4 Wine Novices vs. Experienced Wine Consumers

Wine novices drink wine infrequently, don't include wine as part of their lifestyle, and spend less time searching for information about wine (Barber et al., 2007; Latour & Deighton, 2019). Due to the lack of extensive knowledge of wines, wine novices prefer information that does not require technical knowledge and rely on explicit cues such as price and label design to make purchase decisions (Agnoli et al., 2016; Charters & Pettigrew, 2006; Mueller et al., 2010; Pecotich & Ward, 2007; Windsor et al., 2023). In addition, they tend to rely on risk-reduction strategies to assist their decision-making processes; therefore, clearly presenting information is critical (Agnoli et al., 2016; Barber et al., 2007). For wine novices, showing a visual scale with sweetness levels and an arrow pointing to a specific sweetness level seems more informative than textual information (e.g., Semi-Dry), increasing purchase intention. In contrast, it is easy for experienced wine consumers to make assumptions about the wine using complex cues such as “Semi-Dry”, “Brut” and “Grand Cru” (Barber et al., 2007; Langner & Krengel, 2013). With extensive knowledge, experienced wine consumers tend to make their purchase decisions based on their own preference, past experiences, and their evaluation of specific wine attributes (Agnoli et al., 2016; Czellar & Luna, 2010; Oyinseye et al., 2022; Pedroza & Herrell, 2022). Consequently, the superiority of visual cues (i.e., the sweetness scale) on purchase intention through perceived diagnosticity should be attenuated among experienced wine consumers. Thus, we propose the following:

H1: The sweetness scale (vs. text) will increase wine novices' purchase intention. However, such an advantage will be attenuated among experienced wine consumers.

H2: For wine novices, perceived diagnosticity will mediate the impact of the cue type (scale vs. text) on purchase intention, such that the sweetness scale will be perceived to be more diagnostic, leading to higher purchase intention. Such a mediation will be attenuated among experienced wine consumers.

While we propose the positive effects of visualizing sweetness on purchase intention among novices through the warmth perception (i.e., perceived diagnosticity), we also consider its negative influence on willingness to pay through the diminished competence perception (i.e., perceived quality).

2.5 Negative Responses through Competence Perception: Perceived Quality and Willingness to Pay

Due to the tradeoff between warmth and competence, friendliness can reduce perceived competence and value for products and brands. According to Kim and Dempsey (2019), brand acronyms that are easy for users to pronounce are perceived as less competent than those that are difficult to pronounce. When product information is easy to process, it diminishes the sense of exclusivity, leading to lower perceptions of competence and value (Pocheptsova et al., 2010). That is because ease of processing can shorten perceptions of psychological distance (Alter & Oppenheimer, 2008). As an attribute closely associated with psychological distance, perceptions of competence tend to be lower when individuals experience ease in information processing, negatively influencing their evaluation of product competence aspects such as quality and performance (Chu et al., 2021; Kim & Dempsey, 2019; Pocheptsova et al., 2010). In our case, compared to traditional sweetness information such as “Semi-Dry” or “Demi-Sec” on the wine label, a visual sweetness scale with an arrow pointing to a specific level is easier to understand, especially friendly and helpful to wine novices who have limited wine knowledge to understand the terms. It makes the wine more inclusive, accessible, and produced for the masses, reducing psychological distance. Therefore, building on previous work on the tradeoff between competence and warmth (Kim & Ball, 2021), we argue that using an easy-to-understand sweetness description may hurt perceived quality (i.e., one of the competence aspects), lowering willingness to pay.

Different from purchase intention, willingness to pay refers to the maximum amount of money a consumer is willing to pay and reflects the value that a consumer assigns to the product (González-Rodríguez et al., 2019; Homburg et al., 2005; Zemke et al., 2015). The perceived quality of wine can positively influence consumers' willingness to pay. Consumers are usually willing to pay premium prices for organic wines due to higher quality perceptions (Gassler et al., 2019). When it comes to low-alcohol wines, consumers are less likely to pay premium prices due to lower quality perceptions (Bucher et al., 2020). Therefore, if the sweetness scale hurts perceived quality, as discussed above, it may lead to a lower willingness to pay. Moreover, as we have previously theorized, compared to wine novices, experienced wine consumers are less likely to be influenced by the label presentation style of an intrinsic attribute (i.e., sweetness). Thus, we propose the following:

- H3: The sweetness scale (vs. text) will lower wine novices' willingness to pay. However, such a disadvantage will be attenuated among experienced wine consumers.
- H4: For wine novices, perceived quality will mediate the impact of the cue type (scale vs. text) on willingness to pay, such that the sweetness scale will lower the perceived quality, leading to lower willingness to pay. Such a mediation will be attenuated among experienced wine consumers.

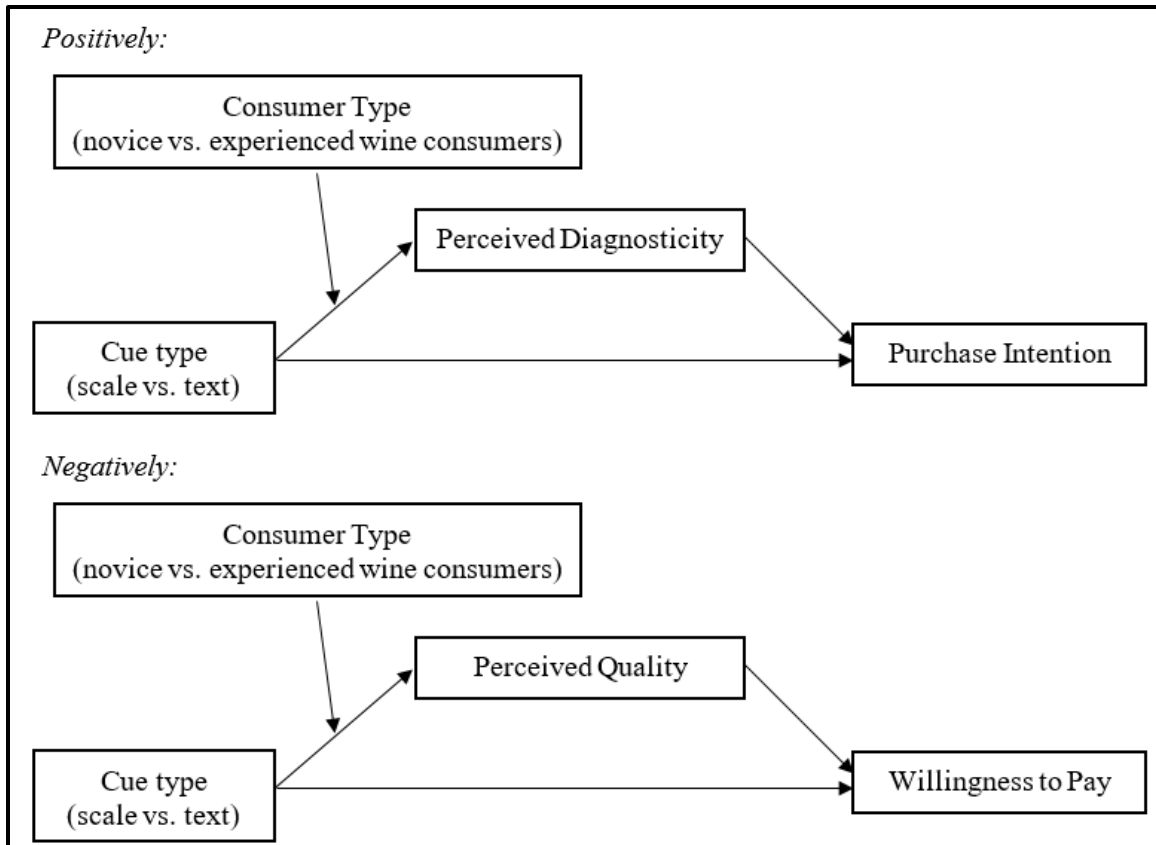


Figure 1. Conceptual framework

3. Empirical Overview

Two studies were conducted to test our theorizing (see Figure 1 for the conceptual framework). Study 1 investigates the positive effect of visualizing the sweetness level on purchase intention via perceived diagnosticity and demonstrates consumer type based on wine consumption frequency as the theoretical and practical moderator (H1 and H2). Study 2 investigates the negative effect of visualizing the sweetness level on willingness to pay via perceived quality and considers consumer type as the moderator (H3 and H4). Considering perceived diagnosticity and perceived quality as one aspect of warmth and competence, these two studies systematically examine the double-edged effects of using the sweetness scale on wine labels based on the tradeoff between competence and warmth.

4. Study 1. Positive Effect of Visualizing the Sweetness Level

4.1 Design and Participants

To test H1 and H2, Study 1 employed a 2 (cue type: scale vs. text) by 2 (consumer type: novices vs. experienced wine consumers) between-subjects, quasi-experimental design. A total of 200 US adults (at least 21 years old) were recruited through Prolific. Among participants, 39.5% were male, 83% were between 21 and 49 years old, 66% had a college degree or above, and 75.5% had an annual income of more than US\$40,000.

4.2 Procedure and Stimuli

Participants were randomly assigned to one of the two versions of the wine label for a demi-sec sparkling wine. The brand name, region, and other information were the same on both versions of the wine label. The only difference was the presentation of the sweetness level. ‘Demi-Sec’ was used on one label, while a visual scale with sweetness levels and an arrow pointing to ‘Medium Sweet’ was used on the other. After their exposure to the wine label, participants were asked to indicate their purchase intention (Lunardo & Rickard, 2019) (1=very unlikely; very impossible; very improbable; 7=very likely; very possible; very probable; $\alpha=.96$). Two items were used to measure the perceived diagnosticity of the sweetness description (e.g., “To what degree was the sweetness description on the label helpful?”; 1=not at all, 7=very much; $r=.94$) (Qiu et al., 2012) To assess the realism of our stimuli, we asked participants to rate the realism of the wine purchase scenario (1=highly unrealistic, 7=highly realistic). Lastly, they finished a battery of questions, including wine consumption and preferences, followed by demographic questions.

4.3. Results

Based on previous wine research (D’Alessandro & Pecotich, 2013; Latour & Deighton, 2019), we define wine novices as those who consume wine infrequently and experienced wine consumers (e.g., enthusiasts and experts) as those who consume wine frequently. Participants who indicated that they consumed wine infrequently (never, seldom, or occasionally) represented novices, while those who consumed wine frequently (about half the time¹, usually, very often, always) represented experienced wine consumers. Scenarios were perceived as realistic ($M=5.24$) and didn’t vary by condition ($F(1, 196)=1.88, p>.05$).

Purchase Intention. To test H1, a two-way ANCOVA on purchase intention was conducted with the liking of sparkling wines as a covariate. The results showed that there was a significant interaction of consumer type and cue type ($F(1, 195)=4.68, p<.05$). As visualized in Figure 2, novices exhibited a higher purchase intention for sparkline wines using the sweetness scale (vs. text) on the label ($M_{\text{scale}}=4.85, M_{\text{text}}=4.32; F(1, 195)=4.94, p<.05$). However, such a difference didn’t surface among experienced wine consumers ($M_{\text{scale}}=4.2, M_{\text{text}}=4.69; F(1, 195)=1.47, p>.05$). Therefore, H1 is supported.

¹ To determine consumption frequency, “about half the time” is commonly used in previous research as the cut-off point for determining whether certain consumptions or behaviors are frequent or infrequent (Mair et al., 2013; Rossow et al., 2014; Single & Wortley, 1993).

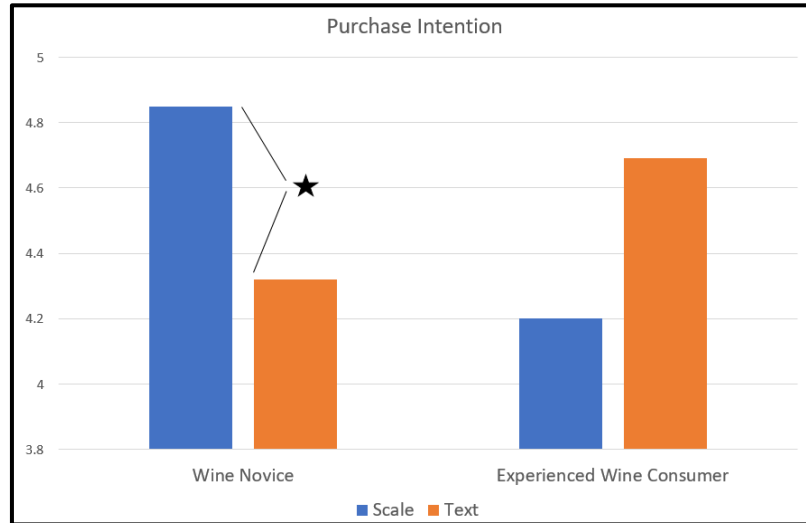


Figure 2. Purchase intention as a function of consumer type and cue type

Moderated Mediation. To test H2, PROCESS Model 8 (Hayes, 2017) was used with cue type as the independent variable, consumer type as the moderator, perceived diagnosticity as the mediator, and purchase intention as the dependent variable. The moderated mediation by perceived diagnosticity was supported (index of moderated mediation=1.04, SE=.28, 95% CI=[.541, 1.626]). Specifically, perceived diagnosticity mediated the impact of cue type on purchase intention among wine novices (indirect effect=-1.36, SE=.21, 95% CI=[-1.786, -.957]). However, such mediation was insignificant among experienced wine consumers (indirect effect=-.32, SE=.20, 95% CI=[-.726, .082]). Thus, H2 is supported.

5. Study 2. Negative Effect of Visualizing the Sweetness Level

5.1 Design and Participants

To test H3 and H4, Study 2 employed a 2 (cue type: scale vs. text) by 2 (consumer type: wine novices vs. experienced wine consumers) between-subjects, quasi-experimental design. A total of 200 US adults (at least 21 years old) were recruited through Prolific. Among these participants, 43% were male, 91% were between 21 and 49 years old, 67.5% had a college degree or above, and 75.5% had an annual income of more than US\$40,000.

5.2 Procedure and Stimuli

Similar to Study 1, participants were randomly assigned to read one of the two versions of the wine label for a semi-dry Riesling. The brand name, variety, region, and vintage were the same on both versions of the wine label, and the only difference was the form of the sweetness level (sweetness scale vs. text). Then, participants were asked to rate the expected quality of the wine and indicate the price they were willing to pay. We set \$30 as a reference price and limited the price range from \$15 to \$45. The reference price was based on the price threshold used in previous wine studies (Bekkerman & Brester, 2019), and according to the report of the Wine Market Council (2015) showing that most wine consumers (around 95%) in the U.S. purchase wine at or less than \$30 per

bottle. To assess the realism of our stimuli, we asked participants to rate the realism of the wine purchase scenario (1=highly unrealistic, 7=highly realistic). Lastly, they finished a battery of questions, including wine consumption, preferences, and demographic questions.

5.3 Results

Same as Study 1, participants who indicated that they consumed wine infrequently (never, seldom, or occasionally) represented novices, while those who consumed wine frequently (about half the time, usually, very often, always) represented experienced wine consumers. Scenarios were perceived as realistic ($M=5.5$) and didn't vary by conditions ($F(1, 196)=.001, p>.05$).

Willingness to pay. To test H3, a two-way ANCOVA on willingness to pay was conducted with the liking of Riesling wines as a covariate. The interaction effect was significant ($F(1, 195)=6.05, p<.05$). Specifically, novices exhibited lower willingness to pay for the wine with the sweetness scale (vs. text) ($M_{\text{scale}}=24.15, M_{\text{text}}=26.94; F(1, 195)=9.28, p<.05$). However, such a significant difference was not observed among experienced wine consumers ($M_{\text{scale}}=25.07, M_{\text{text}}=21.47; F(1, 195)=2.22, p>.05$). Therefore, H3 is supported.

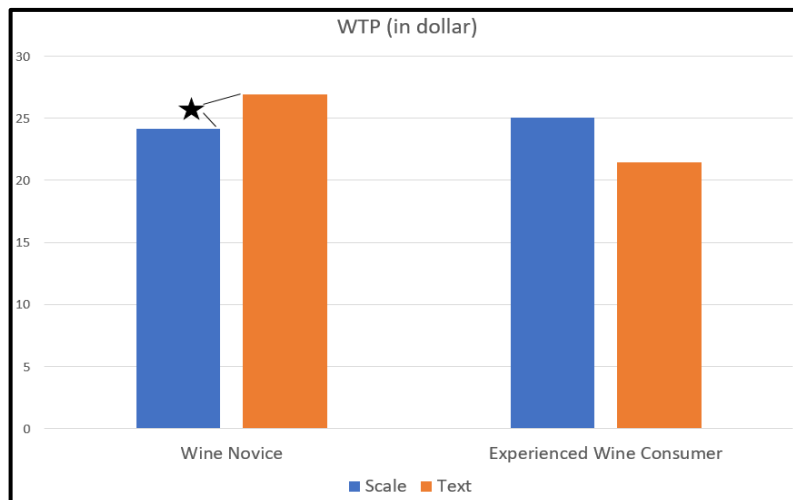


Figure 3. Willingness to pay as a function of consumer type and cue type

Moderated Mediation. To test H4, PROCESS Model 8 (Hayes, 2017) was used with cue type as the independent variable, consumer type as the moderator, perceived quality as the mediator, and willingness to pay as the dependent variable. The moderated mediation by perceived quality was supported (index of moderated mediation=-2.31, $SE=1.29, 95\% CI=[-5.009, -.005]$). Specifically, perceived quality mediated the impact of cue type on willingness to pay among wine novices (indirect effect=.90, $SE=.48, 95\% CI=[.064, 1.932]$). However, such mediation was insignificant among experienced wine consumers (indirect effect=-1.41, $SE=1.15, 95\% CI=[-3.759, .699]$). Thus, H4 is supported.

6. General Discussion

The current research shows the positive and negative effects of using a sweetness scale on wine labels. Consistent with previous research demonstrating the superior effect of visual cues on consumer responses (Choi et al., 2020; Dens et al., 2011; MacInnis & Price, 1987; Rebollar et al., 2017), this research demonstrates that signaling the sweetness level by a sweetness scale (vs. “Semi-Dry” or “Demi-Sec”) can be diagnostic, increasing consumers’ purchase intention. However, this superiority effect only exists among wine novices. More interestingly, using the sweetness scale might backfire in terms of willingness to pay, especially among wine novices. They tend to perceive the wine with a sweetness scale (vs. “Semi-Dry” or “Demi-Sec”) as being of lower quality, reducing their willingness to pay. In addition, considering perceived diagnosticity and perceived quality as one aspect of warmth and competence, the research findings align with previous research demonstrating the tradeoff between competence and warmth. While the sweetness scale might be diagnostic for wine novices (i.e., more warmth), they perceive the wine with such scale as low quality (i.e., less competence), leading to higher purchase intention but lower willingness to pay.

6.1 Theoretical Implications

This research makes several theoretical contributions. First, it provides new insights into wine label research by shedding light on the influence of presentation style of intrinsic wine attributes. Previous research has focused more on the influence of extrinsic attributes such as image, color, layout, design genre, and label font on consumer perceptions of the wine (Lunardo & Rickard, 2019; Barbierato et al., 2023), purchase decisions (Lunardo & Rickard, 2019; Sherman & Tuten, 2011) and tasting evaluations (Gmuer et al., 2015). However, only a handful of studies have investigated how to display intrinsic wine attributes on wine labels. Liu et al. (2022) have considered displaying country of origin information as a symbol. They use eye-tracking techniques to compare consumers’ visual attention, tasting perceptions, and emotional responses to the labels with a piece of the country-of-origin information in the textual form (i.e., New Zealand) and the form of a symbol (i.e., fern-a well-known logo in New Zealand). Similarly, the current research examines an alternative way to display wine style using a sweetness scale instead of a textual form. However, it diverges from the work of Liu et al. (2022) by investigating purchase behaviors, specifically purchase intention and willingness to pay. Moreover, the current research examines the benefits and drawbacks of visualizing intrinsic attributes and considers the influence of individual differences in wine experience.

Second, this paper enriches research on sensory marketing by demonstrating the double-edged effects of visualizing sweetness level and revealing consumer type as the boundary condition. On the one hand, consistent with previous sensory marketing research on visual cues (Dens et al., 2011; MacInnis & Price, 1987; Rebollar et al., 2017), our research demonstrates that a visual sweetness scale is perceived as helpful, enhancing purchase intention, but such a positive effect depends on consumer type. A visual sweetness scale is more effective among wine novices than their more experienced counterparts. On the other hand, while previous research has mainly emphasized the superior effects of visual cues in label designs and advertising (Choi et al., 2020;

MacInnis & Price, 1987; Tang et al., 2004), little is known about the drawbacks of using visual cues. To address this gap, this research examines the negative impact of using visual cues. Specifically, a visual sweetness scale undermines wine novices' willingness to pay. Wine novices are less likely to pay more for wine with a sweetness scale because they perceive it as low quality.

Third, unlike previous research considering different situations, this research enriches the literature on the tradeoff between warmth and competence by demonstrating the double-edged effects of visualizing sweetness levels on different consumer responses (i.e., positively influencing purchase intention but negatively influencing willingness to pay). Previous research has investigated how the tradeoff between warmth and competence influences the same consumer responses differently in different situations. For example, employees wearing conspicuous items are perceived as more competent but less warm (Scott et al., 2013). Therefore, in exchange (communal) relationships that emphasize competence (warmth), consumers have more positive (negative) attitudes and favorable (unfavorable) behavior intentions when they are served by employees wearing conspicuous items (Scott et al., 2013). Similarly, utilizing feminine cues increased perceived warmth while having the opposite effect on competence. Therefore, utilizing feminine cues (e.g., pink color, round shape) enhances purchase intentions when consumers place less emphasis on competence but undermines purchase intentions when consumers highly value competence (Hess & Melnyk, 2016). Instead of examining the same consumer responses in different situations (e.g., in exchange or communal relationships), our research extends previous work by examining how the tradeoff between warmth and competence influences different consumer responses. Specifically, visualizing sweetness on wine labels enhances perceived warmth while lowering perceived competence (i.e., high perceived diagnosticity but low perceived quality), increasing purchase intentions but decreasing willingness to pay, especially among wine novices.

Fourth, this research shows a potential contradiction between purchase intention and willingness to pay. Purchase intention and willingness to pay are commonly measured to understand consumers' purchase behaviors and are usually positively correlated (Barber et al., 2012; Bougenvile & Ruswanti, 2017; Bower et al., 2003). However, some studies reveal that they are not always directly related because financial constraints influence the willingness to pay, whereas purchase intention simply indicates an inclination or interest to buy a particular product or service (Bougenvile & Ruswanti, 2017; Febryan, 2010; Liu et al., 2018). A consumer may have a strong intention to purchase a product but may be unwilling to pay a high price due to low income (Zhang et al., 2018). In line with prior research indicating a potential contradiction between purchase intention and willingness to pay, the current research offers further insights to elucidate this. Besides financial restrictions, our findings suggest that clearly showing information without technical knowledge requirements can undermine the monetary value consumers assign to the wine, especially among novice consumers. Wine novices are more likely to purchase wine with a sweetness scale on the label, but they may believe that the wine using such a scale targets entry-level consumers. Consequently, they infer low quality, leading to a lower willingness to pay. In contrast, traditional sweetness information such as "Semi-Dry" labels is hard for novices to understand, thus lowering their purchase intention.

However, they perceive such labels as signaling high quality, leading to a higher willingness to pay.

Lastly, this research enriches our understanding of how different market segments respond to wine labels with easy-to-understand information. Consistent with previous research showing that wine novices (vs. experts) are more likely to be influenced by attributes or signals not requiring technical knowledge (Agnoli et al., 2016; Carsana & Jolibert, 2017), our findings demonstrate that wine novices (vs. experienced wine consumers) are more likely to be influenced by the presentation style on wine labels. They react more favorably in terms of purchase intention but unfavorably in terms of willingness to pay when the sweetness level is indicated clearly by a sweetness scale rather than a traditional text such as “Semi-Dry”. However, while previous research has emphasized the importance of reducing complexity and enhancing the ease of information processing to increase positive responses (e.g., satisfaction and purchase intention) among novices (Agnoli et al., 2016; Langner & Krengel, 2013), the current study challenges this notion by showing that a sweetness scale on wine labels can negatively influence the perceived quality and consumers’ willingness to pay. These findings reveal the drawbacks of using easy-to-understand information on wine labels, which has received limited attention in previous research on wine labels.

6.2 Practical Implications

This research provides several practical implications. First, wine producers and marketers should carefully consider using the sweetness scale on their wine labels. In addition, policymakers and regulators should carefully develop and revise policies and regulations related to visualizing the intrinsic attributes of wine labels. Visualizing the intrinsic attributes (e.g., use of the sweetness scale) may not always result in positive outcomes such as a higher willingness to pay. We show that wine novices are not likely to pay more for wine with a sweetness scale on the label but are more likely to pay more for wine using traditional texts such as “Semi-Dry” to describe wine style and sweetness level. Therefore, wine producers and marketers should keep using traditional wine attributes such as “Semi-Dry” on wine labels for high-priced wines. In addition, policymakers and regulators may consider relaxing the requirements of visualizing the intrinsic wine attributes for high-quality and priced wines.

However, our results also indicate that wine novices are more likely to purchase wine with a sweetness scale on the label. To counter the contradiction between purchase intention and willingness to pay, wine producers and marketers might use the sweetness scale for low-priced wines to satisfy wine novices' need for easy-to-understand information and encourage wine consumption among general consumers. Additionally, this initiative has the potential to positively impact public health and well-being, as research has consistently demonstrated the potential health benefits of consuming wine in low to moderate amounts (Hrelia et al., 2022). These benefits include but are not limited to a decreased risk of cardiovascular disease, lowered glucose levels, and a reduced incidence of diabetes (Da Luz et al., 2014; Levantesi et al., 2013).

In addition, previous research on visual perception reveals that elements located in different areas are considered independent, and the relationship between these elements is attenuated (Burris & Branscombe, 2005; Hou et al., 2018). For example, there is a

psychological contagion effect when displaying a menu item next to a picture of a negative source item, such as smelly tofu. People evaluate the menu item negatively because it is categorized into the same group as the negative source item. However, separating these two items using dashed lines or different color backgrounds reduces the psychological contagion effect (Hou et al., 2018). Similarly, sweetness scales on wine labels are perceived as part of the wine product, influencing consumer evaluations. Therefore, to attenuate this relationship, wine producers and marketers can display sweetness scales on store shelves or online shopping websites instead of wine labels, especially for high-priced wines. In this way, they can satisfy consumers' need for easy-to-understand wine information, increasing purchase intention and avoiding the negative influence on willingness to pay.

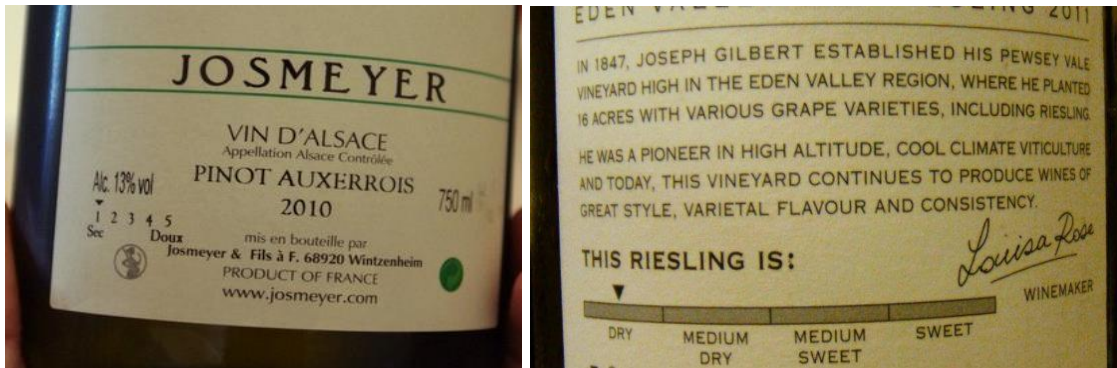
Besides, our findings provide implications for restaurant wine service. When consumers order a bottle of wine, the sommelier or the server shows the wine label to consumers. Therefore, restaurants should carefully consider placing high-priced wines with a sweetness scale on the wine list. In addition, when consumers ask sommeliers for wine recommendations, sommeliers should try to avoid recommending high-priced wines with a sweetness scale, as consumers asking for recommendations are usually wine novices (Dodd et al., 2005). Moreover, though restaurants cannot change wine labels, they can provide additional information, such as the sweetness scale on wine menus, to assist wine novices and increase orders.

6.3 Limitations and Future Research

Several limitations of this research point to future research. First, the study was conducted in an experimental setting. Though participants perceived the stimuli as realistic, a field study or secondary data examining consumer responses to the sweetness scale and actual price would add value. Second, in the current research, wine novices and experienced wine consumers were defined based on wine consumption frequency. However, there are many ways to evaluate consumer experiences. Future research can consider other ways (e.g., self-report, a wine quiz) to define novices and experienced wine consumers to enhance the generalizability of our findings. In addition, future research may consider including wine experts and comparing their responses to the sweetness scale on wine labels with novices and experienced wine consumers. Third, our research focused on the front label. Future research can explore whether displaying sweetness scales on the front or back label makes a difference. Lastly, to demonstrate the tradeoff between competence and warmth, the current research measured perceived diagnosticity to represent warmth perception and perceived quality to represent competence perception. Future research can measure the overall perceptions of warmth and competence in a single study and see how using a sweetness scale on wine labels influences consumers' overall perceptions of warmth and competence, affecting their purchase behaviors.

Appendix

Examples of Sweetness Scale



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