Beauty is in the eye of the beholder

A study about the effect of (a)typical package design for non-alcoholic white wine

Master's thesis by Chris Boshuizen

UNIVERSITY OF TWENTE.

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Master's thesis

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Acknowledgements

This year I came in touch for the first time with non-alcoholic wine. I had never heard of it before and noticed around me how surprised most people were when I told them about the existence of non-alcoholic wine. I bought a bottle and tried it. It looked like wine, smelled like wine, but did not taste like wine. What is this product? I was fascinated. When I dived more into the topic of product - and package design, I stumbled upon atypicality. In my opinion a very interesting concept, and very trending when looking at new products that are launched weekly. I decided to combine the two topics and it formed the subject for this Master's thesis. I'm happy I was able to conduct a type of study I always wanted to do: a taste experiment, which would not have been possible without the help of Wiljan Dorrepaal from La Source. A big thank you for your enthusiasm, help, and support.

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Abstract

Aim — This study investigates whether (a)typical package design of non-alcoholic white wine can positively influence product evaluation which is measured by taste experience, attitude towards the product, and purchase intention. Many studies focus on the positive effects of atypical package design, specifically for new product design, because it is demonstrated that it surprises consumers, evokes interest, and attracts consumers. Since non-alcoholic wine is a rather new product that has not been categorized into a specific product category, it is expected that the benefits of atypicality will also apply to this study. The outcome of this study is of theoretical relevance since it builds to the existing packaging literature with a focus on a new product segment. The study is of practical relevance since it offers guidelines as to how to market the new product into supermarkets.

Method — *N* = 173. A 2 (*Bottle shape*: atypical vs typical) x 2 (*Label style*: atypical vs typical) between-subjects design was conducted to investigate the effect of (a)typical package design on attitude towards the product, surprise, taste experience, purchase intention, and perceived congruency. The experiment included a tasting of the product.

Results — Analysis of the results demonstrated that label style positively influenced the level of surprise, taste experience, and perceived congruency. A typical label style was preferred mostly over an atypical label style. The preference for bottle shape is divided, suggesting that bottle shape did not have much influence. It was found that congruent package design more positively influences product evaluation than incongruent package design, and typical congruent package design results in the most positive evaluations. Moreover, no difference between gender regarding product evaluation was found. Only the label style appeared to influence purchase intention when including gender in the analysis. Women preferred a typical label style and men preferred an atypical label style.

Conclusion — An atypical bottle shape or atypical label style separately did not have a more positive influence on product evaluation, but it was found congruent package design (atypical bottle with an atypical label or typical bottle with a typical label) does have a more positive influence as opposed to incongruent package design. Consequently, it was found that congruent typical package design results in the most positive product evaluation especially for taste experience. Therefore, it is advised to market non-alcoholic wine in congruent typical package design.

Keywords — Atypicality, package design, non-alcoholic wine, attitude towards the product, surprise, taste evaluation, purchase intention, congruency.

Table of content

1 Introduction

The 2019's supermarket landscape consists of hundreds of choices, thousands of brands, and multiple decision moments for the consumer. A relatively new product on the competing Dutch market is non-alcoholic wine. For red, white, and sparkling wines a specific process can be applied which derives alcohol out of wine and leaves a beverage based on the same ingredients as 'normal' wine, but without alcohol (Harte, 2017). Non-alcoholic wine can contain a maximum of 0.5% alcohol percentage, which offers possibilities for pregnant women, or consumers who cannot drink alcohol due to health-related, religious, or personal reasons (Husslage, 2019). Next to that, non-alcoholic wine contains 66% fewer calories and less sugar which makes it a healthier alternative to regular wine (La Source, 2019).

Popular initiatives such as Dry January increased the notion of non-alcoholic beverages. More consumers participate in the no-alcohol-month and become aware of their alcohol consumption. These movements positively contribute to the increasing awareness of the effects of alcohol (Miller, 2018). A wine report by Nielsen (2018) shows that there is a strong increase in the consumption of non-alcoholic beer and non-alcoholic wine in The Netherlands. Specifically, the report shows an increase of 37% of non-alcoholic wine consumption. This number is promising, but compared to the non-alcoholic beer-segment, the increase is not that much. The consumption of non-alcoholic beer is namely 15 times more compared to non-alcoholic wine. This means that there is a huge possibility for growth in the sales of non-alcoholic wines for supermarkets and distributors and that there is a need for improvement to further increase the consumption of non-alcoholic wine (Suurmeijer, 2019).

An important finding in the wine report by Nielsen (2018) is that the increase in consumption of non-alcoholic beverages is driven by the way the beverages are presented in the supermarket. This means that supermarkets and distributors should carefully think of how they offer non-alcoholic beverages on their store shelves. Nielsen (2018) suggests that the presentation of non-alcoholic wine bottles in the supermarket aisle of wines should be clearly visible and present, because the assortment of wine is quite large, and the bottles look very similar. Thus, recognizability and visibility of non-alcoholic wine bottles is an important element in the development of this product category and should be carefully thought of. The consumer must be able to easily find and recognize the non-alcoholic wine category to increase purchase intention (Suurmeijer, 2019).

This research is driven by the perception that non-alcoholic wine is a new product category as an alternative to 'normal' wine and should thus be clearly distinguished from other 'normal' wine bottles. A similar case of new product category positioning is the alternative for meat, such as 'pork sausages' or 'chicken' from the Vegetarische Slager that are made from plant-based ingredients. The products are positioned as look-a-likes from actual meat and have names that are derived from the name of meat. In this case, the new product (fake meat) is positioned as very similar to the typical product category (normal meat). Another possibility is to create a new product, such as the vegetable burger from Garden Gourmet, of which the packaging and name of the product do not refer to the meat category and this way is clearly distinguished as a new product category.

It is assumed that clearly distinguishing non-alcoholic wine from the 'normal' wine category is the best strategy to position it as a new product. A possible way to create this differentiation is by package design. A plethora of research focused on the elements of the package design of 'normal' wine (e.g. Cliff, 2001; Delwiche & Pelchat, 2002; Tang, Tchetchik, & Cohen, 2015; Venturi et al., 2016; Wan, Zhou, Woods, & Spence, 2015). Since it is almost impossible for consumers to taste a wine before purchase, consumers are obliged to make their decisions based on packaging and the

available information on the bottle (Tang, Tchetchik, & Cohen, 2015). Also, Barber and Almanza (2006) state that consumers shop with their eyes and therefore the visual aspects such as the label's layout, typography, and colors are of strong influence on purchase intention.

The current challenge is how to best position non-alcoholic wine in the supermarket to create a new product category and to further improve the sales or purchase intention of consumers. Studies show that when a new product is designed in an atypical way, meaning that the design of a new product deviates from the typical product design, it can help to differentiate the product from a certain category and increase positive consumer response (Jhang, Grant, & Campbell, 2012; Mugge & Dahl, 2013; Noble & Kumar, 2008; Schnurr, 2017). Possible ways of creating an atypical package design are by, for example, adjusting the color, texture, shape, or design of the package or product (Schnurr, 2017). Examples of atypical product designs are a curvy-shaped vacuum cleaner (Radford & Bloch, 2011) or a washing machine completely in black (Mugge & Schoormans, 2012), which both deviate from the typical product shape or color. When it comes to creating an atypical package design for non-alcoholic wine, altering the shape of the bottle or the design of the label are possible ways to achieve this. Looking at regular wine bottles, one can see that all bottles have a similar shape (De Wijnclub, 2018). Therefore, the concept of atypicality will be further examined in this research by adjusting the typical shape of the current wine bottle and experimenting with different kinds of label styles to investigate if this has a different influence on product evaluation.

This research will provide theoretical relevance because an atypical product or package design in the segment of (non-alcoholic) wine bottles has thus far not been researched. The outcome of this study will, therefore, contribute to current knowledge of atypical product design and help marketers to position non-alcoholic wine possibly more successful in supermarkets. This research will be conducted in cooperation with La Source, the first distributor of non-alcoholic wine to retailers in the Netherlands. Altogether, this research will aim to answer the following research question:

> *To what extent can (a)typical package design of non-alcoholic white wine influence product evaluation?*

2 Theoretical framework

In this section, an exploration of relevant literature will be discussed, and hypotheses will be presented. The central topic of this study is atypical package design. In the first section, important theories, concepts, and processes that are leading up to the concept of atypicality will be examined to understand where atypicality comes from. This first section focuses on the process of product categorization and different concepts that relate to product categorization. Then, this information is translated to package design and the levels of emotional consumer response that package design elicits. After this first section, the concept of atypicality will be further examined. The positive and negative effects of atypicality will be addressed and differences between gender will be explored. Lastly, the relevance of congruency relating to (a)typical package design will be investigated. The theoretical framework ends with a research model for this study.

2.1 Product categorization

When a new product is presented to a consumer, information processing is needed before any persuasion effect of package design can occur. The concept of information processing is in the literature referred to as 'categorization' (Rosch, 1978). During this process, consumers respond to the variety of newness in their environment and group new products based on perceived similarity and resemblance to other products in their respective categories. Research shows that the more visually typical a product is, the more quickly and favorably consumers respond to the question of whether the product belongs to a certain product category (Snelders, Hussein, & Webley, 1992). This is explained by the general assumption that a visually typical product associates stronger with a category and is therefore more quickly retrieved from memory compared to a visually atypical product. However, when consumers specifically are looking for variety, prestige, or scarcity, visually atypical products are the drivers of consumer preference (Ward & Loken, 1987).

Assimilation and contrast effects

During the categorization process of new, atypical products, consumers can use several strategies to understand the new product. These strategies are addressed in the Inclusion/Exclusion Model of social judgment (IEM), which highlights the antecedents and consequences of the categorization process (Schwarz & Bless, 1992). This model is driven by the perception that when individuals are asked to form a judgment about a new product, they need to retrieve some form of cognitive representation, which is often retrieved from external factors such as other products offered in the same category (Schwarz & Bless, 1992). Two types of effects can arise in this process. Either assimilation effects occur, in which a consumer judges other products in the category, makes inferences about this, and this way forms an evaluation of the new product. In this case, the consumer makes inferences about a product based on the other products in the environment (inclusion). When the inferences about other products are positive, they are transferred to the evaluation of the new product which is therefore similarly positive. Likewise, when negative inferences are drawn from the product category, the new product can be evaluated negatively. Or, when other products contain specific product attributes, the same associated product attributes are transmitted to the new product (Schwarz & Bless, 1992).

On the contrary, contrast effects occur when the new product is not evaluated based on the other products in the category but is compared as a contrast to other products and is this way distinguished within the category (exclusion). To illustrate the process of assimilation- and contrast

effects, imagine a consumer in a supermarket looking for biscuits. When the biscuits are located next to sweet, chocolatey, or unhealthy cookies, assimilation effects occur when the biscuits are therefore evaluated as less healthy as well. Similarly, when the biscuits are located next to whole-grain, low in sugar cookies, the biscuits are perceived as healthier due to assimilation effects. In another situation, when the biscuits are located among products that are not valued similarly to the biscuits, contrast effects occur. For example, when the biscuits are located next to chips, the consumer compares the product attributes of the biscuit with the product attributes of chips and evaluates the biscuits as a healthier option compared to the chips. This way, biscuits are distinguished as another product from chips. Thus, via assimilation- or contrast effects, a consumer can make inferences about a new product to categorize and understand the product.

Product differentiation and subtyping

To apply the theory of assimilation- and contrast effects to package design, Mugge and Dahl (2013) formulated two new strategy approaches; product differentiation and subtyping. The first approach focuses on product expansion in an existing product category, which relates to assimilation effects. The new product is recognized by consumers as a new product that shares product attributes with other products in the same category. The second approach focuses on new product branding that aims to be set apart from a general category, which relates to contrast effects (Mugge & Dahl, 2013). Thus, the underlying psychological processes of assimilation- and contrast effects, which relate to product differentiation and subtyping, can be applied in marketing and design practices to influence the categorization process. For this research, the strategy of subtyping, and thus contrast effects, will be applied. The aim is to create a new product category for non-alcoholic wine to clearly distinguish it from 'normal' wine. One way of distinguishing a product is with product or package design.

MAYA-principle

Many theories focus on the consumer's preference for typical product design. The preferences-for-prototypes theory states that consumers prefer the most typical examples of a category, because these are familiar, and consumers have been repeatedly exposed to them (Whitfield & Slatter, 1979). However, people have also always been attracted to new, unfamiliar and original things or products (Hekkert, 2006). Based on this concept, Loewy (1951) introduced the MAYA-principle, which stands for Most Advanced Yet Acceptable. The concept states that product or package design should push current, typical designs into a more unique, new design at a graduate pace. Many big companies, such as Apple, design their products according to the MAYA-principle. Consumers desire a slightly futuristic, new design, but often do not feel comfortable with the product when they are unable to categorize or understand it (ChengRuLi, 2019). Thus, new product design should integrate a new type of design that pushes the boundaries of the typical design but should still be recognizable to prevent negative consumer responses, such as incomprehensibility.

Levels of emotional consumer response

The understanding that products and product design elicit emotional consumer response has been well established in many studies over time. Research focuses on many types of emotional consumer response, which are categorized under the umbrella term 'affect' that describes the emotions, moods, and feelings that consumers may encounter (Norman, 2002). Desmet (2003) proposes five categories for consumer responses to product design; instrumental, aesthetic, social, surprise, and interest. An instrumental response relates to whether the consumer feels that the product is useful in achieving objectives. Aesthetic responses refer to the feeling of being attracted or not to the product design. Social-emotional responses relate to the extent to which the product complies with socially

determined standards. Surprise emotions arise when the design of the product is new, novel or atypical. Lastly, interest responses relate to emotions such as boredom or fascination after evaluating the product (Desmet, 2003). After these initial emotional consumer responses, behavioral actions can take place such as purchase intention (Desmet, 2003). Mainly the last two emotional responses, surprise and interest, are discussed in the literature concerning atypicality.

Interest

'Interest' is an emotion that attracts people to new, unfamiliar things, but people differ in what they find interesting. Classic theories on interest propose that objective stimulus features, such as novelty, complexity, uncertainty, and conflict, evoke feelings of interest (Silvia, 2008). The appraisal theory of emotions proposes that emotions come from subjective evaluations of events. People assess and evaluate an event's meaning which brings out certain emotions (Roseman & Smith, 2001). The appraisal theory suggests that 'interest' is the result of two types of appraisals (Silvia, 2008). First, the evaluation of an event's or product's novelty and complexity – which relates to surprising, unexpectedness, or mysteriousness – can cause interest (Berlyne, 1960). Second, the evaluation of an event's comprehensiveness stimulates interest. The latter is labeled as coping-potential appraisal, which means that people consider if they have the skills, knowledge, and resources to understand an event or product (Lazarus, 1991; Silvia, 2008). For example, when someone visits an art museum and views abstract paintings, the works can be perceived as new, different, or unusual. When they obtain knowledge about what the artist is trying to express, the artwork is understood. Therefore, the work is perceived as new and unusual, but also comprehensible and elicits interest. When it is not understood what the meaning of the painting is, it will be perceived as meaningless or confusing. Thus, when the painting is understood it can evoke interest (Silvia, 2008). Summarized, if an event or product is appraised as new and comprehensible, it will be perceived as interesting, but if the component of comprehensibility is missing the event or product will not evoke interest.

Surprise

The appraisal theory suggests that emotions are the result of a consumer's evaluation of events in the environment, such as product evaluation. Ludden, Schifferstein, and Hekkert (2009) found that the emotion of surprise upon seeing a product can be seen as the first stage of the process of evoking emotions. One strategy to create the surprise-effect is by designing incongruent products by, for example, incorporating visual-tactual incongruities. However, the degree of incongruity in product design can positively or negatively influence product evaluation. For example, Berlyne (1971) states that the relationship between incongruity and a pleasant product evaluation follows an inverted U-curve; a moderate degree of incongruity is evaluated as more pleasant compared to no incongruity (congruity). Consequently, a high degree of incongruity is perceived as less pleasant than moderate incongruity. Thus, to achieve a pleasant product evaluation, a moderate degree of incongruity is suggested (Berlyne, 1971).

When applying this to package design, researchers found that the degree of familiarity or prototypicality relates to (in)congruity. Prototypical product design can be seen as congruent because they confirm the consumer's expectation. Atypical product design is therefore often perceived as incongruent because the consumer's expectation of the product is not met (Ludden, Schifferstein, & Hekkert, 2012). This suggests that consumers might prefer typical product design since that will conform to their expectations. However, multiple studies found that incongruity between product design and consumers' expectations evoked a surprise reaction which was usually followed by positive emotions (Meyer, Reisenzein, & Schützwohl, 1997; Scherer, 1987). For example, Vanhamme and Snelders (2001) found that surprise is followed by satisfaction, Ludden, Hekkert, and Schifferstein

(2006) discovered in their study that consumer surprise is followed by amusement and fascination, and, similarly, Ludden, Schifferstein, and Hekkert (2009) reported that a surprise reaction was usually followed by amusement and interest. Derbaix and Vanhamme (2003) report that a surprising product is arousing and leads to more attention towards the product, which, in turn, leads to a greater product recall, recognition, and increased word-of-mouth. Next to that, a surprise effect requires a more effortful, conscious, and deliberate evaluation of the product since it attracts attention (Meyer, Reisenzein, & Schützwohl, 1997). However, some studies also report contradicting results in which negative emotions such as disappointment, indignation, irritation, or confusion were shown when consumers evaluated an incongruent product design (Ludden, Hekkert, & Schifferstein, 2006; Ludden, Schifferstein, & Hekkert, 2009).

2.2 Atypicality

Product design is an important strategy to differentiate products and has a strong influence on consumer response. A product's design can be typical or atypical (also often referred to as design newness or novelty), which relates to the degree to which a product's design is representative of a certain product category (Blijlevens, Gemser, & Mugge, 2012; Goode, Dahl, & Moreau, 2012). Examples of atypical product design are an angular-shaped wristwatch (Talke et al., 2009), a rounded toothbrush (Radford & Bloch, 2011), a triangular-shaped speaker or a color striped wetsuit (Schnurr, 2017). Furthermore, products can be typical or atypical on either a conceptual or perceptual level. On a conceptual level, typicality refers to the degree to which the semantic meaning of a product is in line with the expectation of the customer. For example, gin-tonic ice cream would be highly conceptually atypical, since the combination of the drink gin-tonic and ice cream deviates from the typical ice cream product (Noseworthy & Trudel, 2011; Schnurr, 2017). On a perceptual level, typicality refers to the degree to which the visual design of a product is in line with the customer's expectation, such as the shape or color.

To apply the appraisal theory of emotions to the concept of atypicality, it is suggested that consumers will appraise atypical products as more interesting than typical products when it is clear what the product's purpose is, or when the consumer is able to relate the product to a certain category (Schnurr, 2017). Next to that, atypical product design will more likely evoke the feeling of surprise, because the design of the product deviates from the consumer's expectation (Ludden, Schifferstein, & Hekkert, 2009). Since consumers are constantly exposed to different types of products, they create prototypes of product categories in their minds. In the literature, this process is named the association network theory (Anderson, 1983). When a consumer is exposed to atypical product design, they use these association networks in their mind to determine what the typical product of that category should look like. When the atypical design deviates too much from the typical design and becomes incomprehensible or confusing, it will lead to a lower appraisal of interestingness. Consequently, when an atypical design is perceived as new or complex and is still comprehensible, the appraisal theory predicts that the design will lead to a higher appraisal of interest.

2.2.1 Positive effects of atypicality

Several studies demonstrated the positive effects of atypical package design. For example, Garber (1995) found that when products are visually atypical for their product category, there is a greater likelihood of attention and consideration for purchase. Krippendorff (2005) explains that this is due to more information search for the product because the consumer's interest is aroused. Coates (2003) explains this further by stating that a novel, atypical package design causes contrast with

typical products in the same category and this contrast is the cause of arousal, surprise and interest. Next to that, when a package design is favorable in appearance, it will receive greater attention from consumers. This process is referred to as the self-perception process, which explains that consumers infer greater liking for products that gain more of their attention (Bem, 1972). Consequently, paying more attention to a product should lead to more favorable attitudes, because a greater elaboration of a positive feature takes place (Petty & Cacioppo, 1986; Shen & Sengupta, 2014). It has also been demonstrated by Radford and Bloch (2011) that consumers simply react with more emotional and aesthetic responses to atypical package design because there is more design newness compared to typical package design. This insight is not surprising, but Seifert and Chattamaran (2017) found that these emotional and aesthetic responses are not only more regarding atypical product design, the consumer responses were also found to be more positive. Lastly, Mugge and Schoormans (2012) demonstrated that the level of atypical product design positively affected the perceived performance quality of used products in their study. Based on these insights, it can be assumed that the level of atypicality in a package design can positively affect consumer response.

2.2.2 Negative effects of atypicality

However, some studies also show the negative effects of atypical package design. For example, Rindova and Petkova (2007) found that when consumers are uncertain about how to use the new product, they are less likely to understand the product and, therefore, value the new product more negatively. Noseworthy and Trudel (2011) argue that atypical package designs can be ambiguous, because they deviate from the typical product that a consumer is accustomed to and, therefore, a consumer might question its functionality (Noseworthy & Trudel, 2011). Moreover, Goode, Dahl, and Moreau (2013) explain that when the design of a new product differs significantly from known category products, the identifying process of the new product is more difficult or even impossible for consumers. The study shows that when consumers were unable to categorize the new product with certainty, the newness of the product was underappreciated (Goode, Dahl, & Moreau, 2013). Lastly, Schnurr (2017) adds that consumers might evaluate atypical products as less reliable because they are less familiar.

However, since many studies have shown positive effects for atypical product design when the product is newly launched on the market (e.g. Coates, 2003; Ludden, Schifferstein, & Hekkert, 2009; Radford & Bloch, 2011; Seifert & Chattamaran, 2017), this study will further investigate the concept of atypicality by designing an atypical package design for non-alcoholic wine. Possible ways of creating an atypical product design are by, for example, adjusting the shape, color, or size of the package (Schnurr, 2017). Therefore, for this research, it was chosen to adjust the shape of the bottle and the design of the label on the bottle to create an atypical design.

2.2.3 Atypicality and gender

Several studies demonstrated that men respond differently to (atypical) package design than women. For example, Moss and Colman (2001) found that men tend to have a more conventional approach towards design, whereas women are leaning more towards adventurous design with more colors. Next to that, men prefer sharp lines, hard, metallic and cool finishes, and are overall more concerned with the shape of the product and its function (Moss & Colman, 2001; Xue & Yen, 2007). It is suggested that women may reflect a greater interest to put aesthetic values over practical values, and that men have a preference for technicality and three-dimensionality in design due to greater visuospatial imagery compared to women (Gregory, 2015; Moss & Colman, 2001). Next to that, Xue and Yen (2007) found that men are more concerned with the overall form of the product, and women focus more on the details of the packaging. This finding is similar in the study of Moss, Gunn, and

Heller (2006) who investigated traditional and very novel website designs. Again, the male respondents leaned towards the traditional layout whereas female respondents preferred the new, more colorful designs. Moreover, Henry (2002) also discovered that male respondents in his study use more functional values to determine their purchase intention, and Williams (2002) supports this insight by explaining that quality, style and appearance were more important factors for female respondents in his study. Lastly, Creusen (2010) found similar results in her study when she investigated what demographical aspects influence the purchase intention for ten different package designs. Among other factors such as age and race, Creusen found that gender significantly influenced the purchase intention in such a way that female respondents attached greater importance to aesthetics than men. However, Celhay and Trinquecoste (2014) did not find such results in their study. They tested three wine label designs ranging from typical, moderately atypical to atypical. It was not found that men or women respond differently to the three designs, however, they found that the level of (a)typicality in the label designs was the most important influencer for purchase intention.

Hence, it would be interesting to investigate in the current study if male and female respondents respond differently towards the (a)typical package design. Since multiple studies show that women prefer aesthetic values more than men, it could be that the female respondents in the current study react differently towards the product evaluation. Therefore, a distinction between gender will be made during the analysis of the main study.

2.3 Bottle shape

Consumers use symbolic information from, for example, the packaging shape to estimate the intensity of flavor of the product's content. This process is particularly relevant when information on the product packaging is missing, or when the product is new (Becker, Van Rompay, Schifferstein, & Galetzka, 2011; Huber & McCann, 1982). Small adjustments in packaging can hereby influence consumers' taste and quality expectations. For example, Van Rompay and Groothedde (2019) have demonstrated that package design with a rough texture influences the salt perception of potato chips. Similarly, Van Rompay, Finger, Saakes, and Fenko (2017) investigated the influence of the design of the packaging shape on the taste experience. Respondents were shown two different 3D printed cups, an angular surface, and a rounded surface, filled with either coffee or chocolate milk. The results of this study show that when respondents drank coffee from the cup with an angular shape, the coffee tasted more intense and bitter. Likewise, the beverage drank from the rounded cup tasted sweeter and less intense. Van Rompay et al. (2017) explain that this is because angular shapes were perceived as more intense and sharper, whereas rounded shapes were perceived as softer and smoother which therefore influenced the taste evaluations.

Several conducted studies investigated the effects of glass shape on consumer response, which is particularly relevant for the wine category since it has been demonstrated that the shape of the wine glass influences the released aromas in wine, perceived odor and taste (e.g. Cliff, 2001; Cloake, 2012; Delwiche & Pelchat, 2002; Gawel, 2010; McCarthy, 2006). For example, Hummel, Delwiche, Schmidt and Hüttenbrink (2013) gave 200 participants a red and white wine to evaluate from one of four different wine glasses. The glasses differed slightly in shape but were all of the equal height. Participants had to rate the expected taste intensity by sniffing the odor and indicate how much they liked it. Next, they had to taste the wine and rate it again. The results of this study show that the wine in one type of glass, the bulbous glass, was significantly rated as a more intense taste. Participants were also asked how many different wines they tasted during the experiment. Most said two or three, while, interestingly, they all tasted the same wine (Hummel et al., 2013). Thus, this study shows that the shape of the glass can influence the taste evaluation.

However, most of this conducted research focuses on the shape of a wine glass while this research focuses on the effects of an (a)typical shape of the bottle. Since this topic is not investigated before, it will offer new theoretical insights that are particularly interesting for non-alcoholic wine branding. Most of the current wine bottles have rounded, soft shapes and differ slightly in terms of curviness (De Wijnclub, 2018). So far, none of the wine bottles have a very different shape, such as an angular shape or a shape that really deviates from the typical wine bottle shape. Therefore, it is assumed that non-alcoholic wine in an atypical bottle shape can positively influence product evaluation compared to the typical bottle shape that 'normal' wine bottles now have.

> ***H1:*** *An atypical bottle shape (as opposed to a typical bottle shape) positively influences product evaluation (taste experience (a), attitude towards the product (b), purchase intention (c)).*

2.4 Label style

According to Sherman and Tuten (2011), wine label designs can be categorized into three types: traditional (images of chateaus and vineyards), contemporary (focused on style and personality of the winemaker), and novelty (images of caricatured animals and focused on fun). Next to that, the name of a wine brand can be categorized into traditional (based on the winemaker), contemporary (modern and named after a critter) or novelty (focused on humor). To find out what the effect is of the type of label and brand name on wine perception and purchase intention, Sherman and Tuten (2011) exposed participants to a set of three labels containing one of the nine conditions. Results show that, despite the current popularity of novelty designs, traditional labels and brand names were preferred. Especially when the label design and brand name were congruent, meaning a traditional label and traditional name, the purchase intention was significantly highest. Sherman and Tuten (2011) explain this result by stating that traditional names and labels are associated with the adjectives 'good', 'desirable', 'high quality', and 'pleasant', whereas the novel and contemporary names and labels are associated with 'cheap'.

Tang, Tchetchik, and Cohen (2015) conducted a similar study in which Hong Kong Chinese wine consumers were asked, among other factors, to rate three types of label designs (traditional, modern and contemporary) and label colors on their liking. Results, similarly, show that the traditional label style was preferred over other label styles. This finding is also supported in a similar study by Boudreaux and Palmer (2007) who show that traditional designs with images of chateaux or grapes and colors such as burgundy or neutrals were rated as more successful, desirable, and expensive. The less traditional labels with colors such as green and red-orange were, however, rated as more exciting and imaginative (Boudreaux & Palmer, 2007).

Elliot and Barth (2012) wanted to research if the label design had different effects among a specific target group, namely millennials. 21 project groups consisting of four or five students designed their package design and wine label. After producing a prototype, each project group purchased three existing wine bottles and asked participants in the study to evaluate the set of four bottles on visual appearance. The package and label design differed from traditional to non-traditional in terms of colors and images shown on the label. The results of this study show that millennials prefer a non-traditional label style and package design, because the wine choice that millennials make is mostly based on extrinsic factors (such as the package and label design), rather than the characteristic elements of the product itself (such as winery or country of origin). Thus, for this age group the design elements appeared to be of greater influence and since non-traditional label styles focus more on the design of the label, Elliot and Barth (2012) explain that this is the reason why non-traditional labels were preferred.

To conclude, many studies show that a traditional label style is preferred over a non-traditional style, but, the younger generation prefers a non-traditional style. However, these findings are found in experiments with 'normal' wine. Since this research will focus on a new product category, non-alcoholic wine, and the concept of atypicality is central in this, it is assumed that the traditional (typical) label will not have the same strong effect on product evaluation as the non-traditional (atypical) label. Thus, concerning label style, it is assumed that:

> ***H2:*** *An atypical label style (as opposed to a typical label style) positively influences product evaluation (taste experience (a), attitude towards the product (b), purchase intention (c)).*

In general, the assumption for this study is that atypical package design will have a more positive influence on product evaluation compared to typical package design. It would be interesting to find out how the two variables interact with product evaluation. It could be that an atypical bottle shape in combination with a typical label style has a more positive influence compared to, for example, an atypical bottle shape with an atypical label style. Therefore, this study will address the following question as well:

> ***Question:*** *How do the bottle shape and label style interact on product evaluation?*

2.5 Congruency

When a new product is presented, it can be either congruent or incongruent with consumers' expectations of how the new product should look like and if it fits into an existing (mental) category. When this is not the case, it is perceived as an incongruity. When the new product does conform to consumers' expectations or fits into an existing product category held in memory, there is perceived congruency (Schoormans & Robben, 1997). According to Mandler (2000), visual appeal, package design, or new products can be perceptually or conceptually (in)congruent. Perceptual incongruity occurs via image schemas, which is a redescription of perceptual inputs. When the perceptual input (what a consumer sees) is not in line with expectation (what a consumer expects to see), Mandler (2000) suggests there is perceptual incongruity. On the contrary, conceptual incongruity relates to a new product concept that goes against normative standards, such as a cotton camera (Mandler, 2000; Noseworthy, Cotte, & Lee, 2011). Thus, perceptual incongruity can suppress categorization judgment and conceptual incongruity can discommode categorization judgment.

Next to perceptual and conceptual incongruity, Noseworthy, Cotte, and Lee (2011) propose product incongruity. When there is product incongruity, there is not a correct fit, or even a lack of fit, between a new product and its respective product category. This can be the case with for example triangular-shaped cameras or circular-shaped microwaves that deviate much from the typical designs of cameras and microwaves, and consumers are therefore struggling with categorizing the product.

For the subject of this research, it is assumed that there can be a combination of perceptual incongruity and a degree of product incongruity, because non-alcoholic wine is a new product that probably does not fit (yet) into a correct mental product category and the expectation of how non-alcoholic wine should look like can therefore differ. Hence, the level of perceived congruency will be a measured variable in this study which relates to the degree to which the product non-alcoholic wine and the package design conforms to the expectation of the respondent.

Mandler (1982) proposes that the amount of congruity between a new product and consumers' expectations of the product influences consumer response because individuals prefer products that conform to their expectations. This concept is described as the schema congruity effect

(Mandler, 1982). Hence, when there is extreme product incongruity, it can negatively affect consumers' evaluation of the product because they are unable to understand or categorize the product based on images of the product category held in memory (Noseworthy, Cotte, & Lee, 2011; Peracchio & Tybout,1996). When there is moderate product incongruity, consumers can still process the new product and fit it into an existing schema in memory. Mandler (1982) calls this latter process 'accommodation'.

Likewise, Brunner et al. (2016) advocate that consumers store information from previous experiences and encounters in their long-term memory. According to the SARA cognitive process model – selective activation, reconstruction, anchoring – these previous experiences form a set of images in a consumer's memory (Pohl, Eisenhauer, & Hardt, 2003). These images are structured based on similarity and can be recalled when a consumer sees a new product which he then tries to categorize based on the mental images. If a new product design is to a large degree incongruent with the typical product design, meaning that the consumer is unable to link the new product to existing categories in memory, they will encounter a state of cognitive dissonance (Brunner et al., 2016; Festinger, 1957). The consumer will feel mental discomfort when the new product contradicts existing images that the consumer is unable to understand (Brunner et al., 2016).

To summarize, the extreme incongruity between new product design and existing beliefs held about the typical product design leads to cognitive dissonance and negative evaluations. Thus, it is better to design a product that is moderately incongruent or congruent with consumers' expectations to prevent negative judgments (Berlyne, 1971). The literature on appraisal explains that a congruent product (design) is less likely to elicit interest and the surprise effect, because it is not 'new', and therefore a moderate incongruent product design is advised when a new product is introduced on the market in order to gain attention (Berlyne, 1971; Ludden, Schifferstein, & Hekkert, 2012; Silvia, 2008). Altogether, it is assumed that:

> ***H3:*** *Typical package design (typical bottle shape + typical label style) is congruent with respondents' expectations of non-alcoholic wine thus scores high on perceived congruency.*

> ***H4:*** *Atypical package design (atypical bottle shape + atypical label style) has a more positive effect on the level of surprise as opposed to typical package design (typical bottle shape + typical label style).*

Because non-alcoholic wine is a rather new product that is not yet being sold in many supermarkets, it is of interest to how participants in this study would categorize the product. Therefore, a third question that will be addressed in this study is:

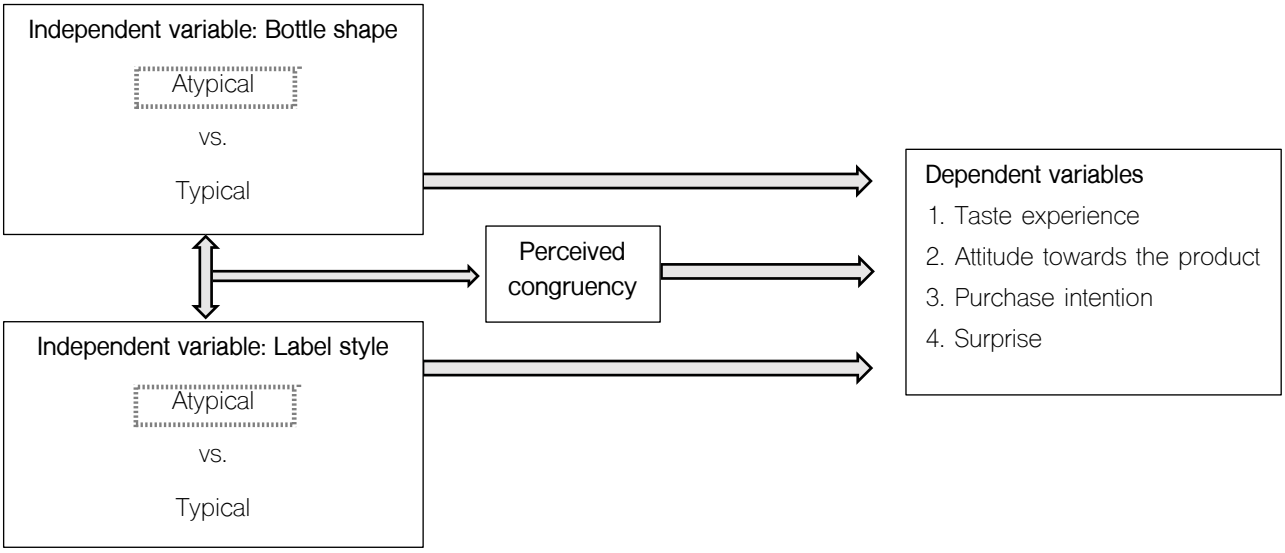
> ***Question:*** *How would respondents in this study categorize non-alcoholic wine?*

2.6 Research model

Consumers tend to make predictions about the taste of food or beverages before tasting it and whether or not one expects to like the taste experience. Consequently, these expectations anchor the tasting experience. If the expectation deviates too much from the actual taste experience, a negatively-valenced disconfirmation of expectations response occurs which influences the attitude one has towards a product (Piqueras-Fiszman & Spence, 2015). Expectations about taste and product quality are based on sensory and hedonic attributes, such as the color, shape, and material

of a product (Spence & Carvalho, 2019). The decision to purchase a product or not heavily relies on the expectations about taste and quality (Younus, Rasheed, & Zia, 2015).

This research aims to investigate if the atypical versus typical shape of the bottle and label style influence product evaluation. This overall evaluation will be measured with the dependent variables taste experience, attitude towards the product, and purchase intention. It will be investigated if respondents like the taste of the non-alcoholic wine, how they evaluate their attitude towards the product, and if they would purchase the product. The appraisal theory explains the importance of a surprise effect concerning atypicality, and therefore this element will also be measured. The following research model is designed for this study:



Questions

- How do the bottle shape and label style interact on product evaluation?
- How would respondents in this study categorize non-alcoholic wine?

3 Method

The aim of this study is to examine to what extent (a)typical package design can influence product evaluation. More specifically, it will be investigated how an atypical bottle shape and label style, as opposed to a typical bottle shape and label style, influence taste experience, attitude towards the product, and purchase intention, what the level of surprise is and perceived congruency.

3.1 Research design

Consequently, a 2 (*bottle shape:* atypical bottle shape (AB) vs. typical bottle shape (TB)) x 2 (*label style:* atypical label style (AL) vs. typical label style (TL)) between-subjects experimental design will be performed.

Table 1
Research design

	Atypical bottle shape (AB)	Number of respondents	Typical bottle shape (TB)	Number of respondents	Total number of respondents
Atypical label style (AL)	Condition 1	30	Condition 2	30	60
Typical label style (TL)	Condition 3	30	Condition 4	30	60
Total number of respondents		60		60	120

3.2 Pre-test

Before the main study could take place, a pre-test had to be conducted to determine which shape of bottle is perceived as atypical and typical, and which label style is perceived as atypical and typical in order to conduct a reliable, valid research. During the pre-test, a card sorting technique was used to find out which of the designs is seen as most typical or atypical. The card sorting technique followed the same structure as Q methodology, which are both used to discover what a stakeholder's opinion is of a certain issue. Thus, it is a qualitative research method to understand preferences and categorize individuals' viewpoints (Zabala, Sandbrook, & Mukherjee, 2018). During card sorting, participants order and rank cards based on appropriateness, liking, or any other opinion that is searched for. The sorting technique is usually combined with other qualitative methods, such as interviews, to discover the thinking process of the participant when sorting the cards (Zabala, Sandbrook, & Mukherjee, 2018).

3.2.1 Label style

The design of the labels was based on the study conducted by Elliot and Barth (2012), who categorize atypical (non-traditional) and typical (traditional) wine package characteristics according table 2:

Table 2

Differentiation between atypical and typical wine package characteristics adapted from Elliot and Barth (2012), p. 185.

	Atypical (non-traditional)	Typical (traditional)
Name	Non-wine or -winery related name, no association with chateaux, grapes, etc.	Wine or winery related name, association with chateaux, grapes, vineyards, wine family
Colors	Bright and/or vibrant (e.g. orange, lime green, pink, bright red)	Dark (e.g. burgundy, navy, red) or neutral (grey, brown, black)
Image or picture	Animal, bird, fish, non-wine or winery related	Chateaux, coat-of-arms, vineyard, grape
Design layout	Non-standard layout (e.g. split colors or mix of formats), modern typeface	White background or solid background of a traditional color, standard typeface, vintage style
Bottle shape	Non-symmetrical, elongated neck, odd shape	Standard shape of 750ml bottle

A fictitious wine brand (Noa) was chosen to avoid bias by recognition of the brand or flavor suggestion, which is suggested by Lick, König, Kpossa and Buller (2017). All the labels contain the same information; wine brand, year, type of 'wine', amount of cl, and country of origin. Also, the same font and size for the typical labels and the same font and size for the atypical labels was chosen to prevent any preference for font type. The design of the typical and atypical labels follows the suggested design elements according to Eger (2010). Next to that, the designs were reviewed by an expert in Industrial Design and finalized based on her feedback.

The card sorting technique was used in this pre-test to find out which type of label style the respondents value as most typical or atypical. The respondents were given five cards with traditional, typical label styles and five cards with non-traditional, atypical label styles. Then, the respondents were asked to rank the cards from (1) most (a)typical to (5) least (a)typical. When the respondents had laid down their personal ranking for the cards, they were asked to elaborate on their decision. The outcome of this was used to determine which of the five traditional labels will be used for the typical label condition, and which of the five non-traditional labels will be used for the atypical label condition. The images on the cards used to determine the typical and atypical label style are presented in image 1.

Image 1

Typical and atypical label styles for the pre-test

3.2.2 Bottle shape

There are two types of typical wine bottles that are mostly being sold in the supermarket (De Wijnclub, 2018); the Bordeaux and Bourgogne shape (image 2). Therefore, five types of typical bottle shapes were selected for the pre-test that look like the Bordeaux or Bourgogne shape. For the atypical bottle shape, respondents could sort five cards with images of different atypical bottle shapes. These bottles were selected from the liquor store based on their content capacity (75cl), shape (not too similar to a wine bottle), color of glass (transparent) and structure of glass (no logo imprinted in the glass). With these criteria, five bottles were chosen to participate in this pre-test. When all ten bottles were selected, high quality images of the bottles were imported to the design program Photoshop to remove the existing labels of the bottles. This way, the respondents in the pre-test were able to judge a bottle purely on bottle shape without being influenced by original labels or recognition of certain brands. This was also mentioned during the pre-test to only focus on the bottle shape.

Image 2

The two most common wine bottle shapes (De Wijnclub, 2018)

The same card sorting technique was used in the pre-test to determine which bottle shape is perceived as most atypical and which one as most typical. Therefore, several different cards with atypical and typical bottles were shown to the respondents. Again, they ranked the cards from (1) most (a)typical to (5) least (a)typical. The images on the cards used to determine the typical and atypical bottle shape are presented in image 3.

Image 3

Typical and atypical bottle shapes for the pre-test

3.3 Results pre-tests

The pre-test was filled out by 34 participants with a mean average of 30 (*M = 30.18, SD = 11.41)*. The youngest person to participate in the pre-test was 19 years old and the oldest person was 62 years old. 17 women (50%) and 17 men (50%) participated in the pre-test, which means that gender was equally distributed in the pre-test. After the respondents filled in the pre-test, it was calculated by a point-system which label style and which bottle shape was chosen the most times. The number that was put on the first place received 5 points, the second place received 4 points and the third place received 3 points. Then, for each category, the total was calculated. This way it was possible to correctly see which label style or bottle shape has the most preference without being biased how many times a number was put on the first place.

As can be seen in tables 3 and 4, the typical bottle shape that received the highest preference is bottle shape number 2 and the atypical bottle shape that was chosen most times is bottle shape number 3. Therefore, in the main study the typical bottle 2 and atypical bottle 3 will be used.

Table 3

Total score pre-test typical bottles

	First place (5 points)	Second place (4 points)	Third place (3 points)	Total
Typical bottle shape 1	5	40	42	87
Typical bottle shape 2	115	20	9	**144**
Typical bottle shape 3	5	4	21	30
Typical bottle shape 4	5	24	15	44
Typical bottle shape 5	40	48	15	103

Table 4

Total score pre-test atypical bottles

	First place (5 points)	Second place (4 points)	Third place (3 points)	Total
Atypical bottle shape 1	45	24	15	84
Atypical bottle shape 2	45	32	18	95
Atypical bottle shape 3	35	32	48	**115**
Atypical bottle shape 4	35	12	9	56
Atypical bottle shape 5	10	36	15	61

The typical label style that received the highest ranking was label style 1, as can be seen in table 5. The atypical label style that was preferred most was label style 4, closely followed by label style 3. After consultation with the supervisors it was, however, decided to choose label style 3 for the main study. The reason for this is that label style 4 might be leading to wrong impressions about the product such as a sparkling liquid or a heavy taste, because of the position of the whale on the label and the air bubbles. Therefore, with the input of the pre-test and the supervisors, the typical label style that will be used for the main study is number 1 and the atypical label style will be label number 3.

Table 5

Total score pre-test typical label styles

	First place (5 points)	Second place (4 points)	Third place (3 points)	Total
Typical label style 1	110	16	12	**138**
Typical label style 2	30	24	9	63
Typical label style 3	10	36	27	73
Typical label style 4	20	52	24	96
Typical label style 5	0	8	30	38

Table 6

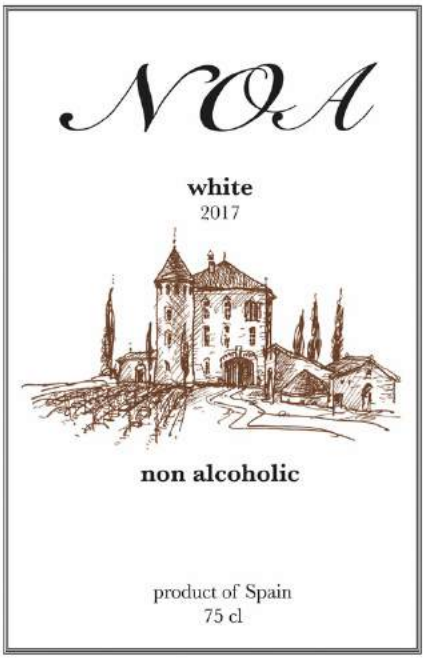
Total score pre-test atypical label styles

	First place (5 points)	Second place (4 points)	Third place (3 points)	Total
Atypical label style 1	20	16	33	69
Atypical label style 2	5	36	33	74
Atypical label style 3	35	44	15	**94**
Atypical label style 4	80	12	3	95
Atypical label style 5	30	28	18	76

To be able to use the typical and atypical label styles correctly in the main study, it was decided to design both labels in the same lay-out. The position and style of the text was adjusted to make both labels similar to each other. The title was centered, the type of wine (white) was changed into bold letters, no more capital letters, and lastly the word 'non-alcoholic' was separated from 'white'. Thus, the final labels that will be used in the main study are presented in image 4.

Image 4

Final labels for the main study



1. Typical label style

2. Atypical label style

3.4 Main study

The pre-test revealed which bottle shapes and label styles will be used for the main study. Before the experiment could take place, the bottles had to be made. To accomplish this, the chosen bottles were purchased in the supermarket and liquor store, cleaned, and stripped from their original labels. The bottles were filled with a liquid consisting of 95% water and 5% of clear apple juice. The color of the liquid closely resembles the color of white wine. Then, the caps of the bottles were painted in black. Next, a top coat was applied which had a mattifying purpose to create matte, black bottle caps. Lastly, the final labels were put on the bottles. The result of the final bottles that were used in the experiment are shown in image 5.

Image 5

Final bottles for all four conditions for the main study

Note. From left to right; (1) typical bottle shape with typical label style, (2) typical bottle shape with atypical label style, (3) atypical bottle shape with typical label style, and (4) atypical bottle shape with atypical label style

3.4.1 Procedure

The experiment took place in the café at the campus of the University of Twente, because this building serves as a place where people come to have a drink and talk. Therefore, it was assumed that this relaxed setting served as the best-suited environment to conduct this type of study. The experiment setting was suited to host three respondents at the same time. It combined a taste test with an online questionnaire on Qualtrics. The respondents were randomly approached and asked to participate in a taste test for Appèl, the catering company of the café. It was not disclosed prior to the experiment what kind of beverage they had to evaluate to prevent any bias. Once the respondent sat down and was presented either a laptop or tablet, the structure of the experiment was explained. They were told that they had to evaluate the bottle placed on the table, answer questions about the product, then taste a bit and afterward answer more questions. Then, the respondents could individually continue on the device which guided them further with the Qualtrics questionnaire. In the

questionnaire, a short summary of the goal of the experiment was explained. The respondents were told that Appèl was experimenting with new products and their input helps Appèl to decide on which products they should add to their assortment. A general explanation was given of what to expect, the anonymity of the results was guaranteed, and participation in the experiment was mentioned to be voluntary. The respondents were given the opportunity to exit the experiment at any time in the study without the needed explanation. Then, respondents were asked to give informed consent. After this, the actual experiment started.

The respondents were exposed to one of the four conditions of the experiment, which means that one of the four bottles were placed on the table. The researcher marked the number of respondents and after every tenth respondent, another bottle from a condition was placed on the table. This way it was assured to collect data for each condition in similar time frames and circumstances. After the respondents had given their informed consent, they were asked to take a look at one of the four bottles that was placed at the table. The first question was an open question which asked how the participant would categorize the product. Then, questions followed about their first impression and expectation of the product. The questions were formulated based on a 7-point bipolar scale.

Next, they were asked to take a sip of water and eat a small piece of toast to neutralize their taste. A carafe with water, plastic cups and a plate with pieces of toast were already placed on the table to ensure that each respondent could participate in the experiment at their own pace. Then, they were asked to taste the non-alcoholic wine. Each respondent was offered 80 ml of non-alcoholic wine from a 100cc transparent, plastic cup. The cups were filled with non-alcoholic wine behind the counter of the café, thus the participants were not able to see from which bottle they were actually tasting the product. Only if the participant asked if the sample cup was filled from the same bottle on the table, the researcher answered with yes. After they had tasted the product, they were again asked questions based on a 7-point bipolar. The questionnaire ended with a manipulation check and general demographical questions. When they filled in the questionnaire, respondents were thanked for their participation. After the respondent left the experiment setting, the amount of ml leftover of the tasting sample was measured and noted. After the experiments were conducted, the data were analyzed with SPSS. The questionnaire of the experiment can be found in Appendix I.

Image 6
Setting of the experiment

3.4.2 Questionnaire

This study focused on the dependent variables taste experience, attitude towards the product, purchase intention, surprise, and perceived congruency. The questionnaire consisted of 54 questions of which 49 items measured one of the dependent variables. The other 5 questions related to general information such as gender or occupation. All variables were measured based on 7-point bipolar adjectives and statements. The items for this experiment are based on existing scales from previously conducted studies (Arias-Bolzmann, Chakraborty, & Mowen, 2000; Bruner & Hensel, 1992; Bruner, 2009; Campbell & Goodstein, 2001; Fenko, Backhaus, & van Hoof, 2015; Fotopoulos, Krystallis, Vassallo, & Pagiaslis, 2009; Ludden, Schifferstein, & Hekkert, 2012; Machiels & Karnal, 2016; Mehrabian & Russell, 1974; Moorman, Neijens, & Smit, 2002; Spence, Velasco, & Knoeferle, 2014).

The structure of the main study questionnaire consisted of two parts. In the first part, respondents were asked several questions before tasting the product. In the second part, respondents were asked to taste the product and answer more questions. The questions were intentionally divided into pre-tasting and post-tasting to measure the attitude towards the product of the respondents before and after the tasting. This way, further analysis of this dependent variable could be divided into a pre-tasting attitude towards the product and post-tasting attitude towards the product. Also, the level of surprise was only measured pre-tasting since the items for this variable only focus on the package design and therefore tasting the product was not needed. The purchase intention and perceived congruency were only measured post-tasting.

The items for pre-tasting and post-tasting were randomly divided into the questionnaire. The questionnaire can be found in Appendix I. After the experiment was conducted, factor analysis was performed on all items to be able to form constructs that were needed for further data analysis. The consequence of the factor analysis meant that several items had to be deleted from the data set which could not be included in several constructs. Some items turned out not to correlate strongly to other items or to have very low reliability, which meant ultimately that they had to be deleted. From the 49 items relating to the dependent variables that were included in the questionnaire, eight items had to be deleted. This means that the final items that were analyzed in the results sections consisted of 41 items. The factor analysis helped to formulate two constructs pre-tasting that measure the level of surprise (5 items) and the attitude towards the product (11 items). The constructs formulated post-tasting are taste experience (3 items), attitude towards the product (11 items), purchase intention (3 items), and congruency (3 items). Next to that, several questions in the questionnaire focused on food neophilia (3 items) and taste ability (3 items). These questions were included in the questionnaire to find out if the respondents in the experiment were anxious about new food or not and if they were capable of evaluating taste.

After factor analysis was conducted and new constructs were formed, a reliability analysis was performed to see if the newly formulated constructs were measured reliable in this study. Table 7 gives an overview of the final constructs of this study, which will be analyzed in the results section, and the Cronbach's alpha. It can be concluded that six of the nine constructs are found to have a relatively high Cronbach's alpha, and two of the nine constructs are found to have a moderately reliable but acceptable Cronbach's alpha.

Table 7

Constructs and items in the main study with Cronbach's alpha

Construct	Item	Cronbach's alpha
Pre-tasting attitude towards the product (11)	It will taste nice	.87
	It looks good	
	It looks expensive	
	It looks beautiful	
	It looks enjoyable	
	It looks appealing	
	I like the shape of the bottle	
	I like the label on the bottle	
	I like it	
	It looks interesting	
	It looks exciting	
Surprise (5)	It looks like a new product	.72
	The packaging looks exactly as I expect the packaging of this product to look like	
	I am surprised about how this product looks	
	The product looks original	
	The product looks atypical	
Taste experience (3)	The product tastes nice	.69
	The product tastes fruity	
	The product tastes fresh	
Post-tasting attitude towards the product (11)	The product is of good quality	.78
	I like the product	
	I think of wine when I see the product	
	The product is similar to wine	
	I think of fruit juice when I see the product	
	The product is similar to fruit juice	
	I think the product is good	
	I think the product is pleasant	
	I like the way this product looks	
	I think the product is interesting	
	I think the product is surprising	
Purchase intention (3)	I would recommend this product	.92
	I would consider buying this product	
	I would buy this product	
Congruency (3)	The shape of the bottle is similar to wine	.66
	The label on the bottle is similar to wine	
	The match between the shape of the bottle and the label is good	
Food neophilia (3)	I like to try new things	.68
	If I don't know a product, I want to try it	
	At dinner parties, I will try new drinks	
Taste ability (3)	I consider myself good at recognizing different tastes	.76
	I consider myself an expert in describing taste	
	In comparison with my peers I have a good taste	

3.4.3 Descriptive statistics

Approximately 300 people were approached to participate in the experiment. Three people did not want to participate due to food neophobia and one person because of allergy restrictions. Approximately 119 people did not want to participate due to lack of time, deadlines or just no interest. In total, 177 did participate in the experiment. A chi-square test was performed to determine if gender was equally distributed over the four conditions. Results show that $X^2(3, N = 177) = 1.14$ with $p = .77$, which means that gender is indeed distributed equally. A chi-square test was also performed to determine if respondents in the four conditions score approximately equally on food neophilia and taste ability. Results show that for food neophilia $X^2(42, N = 177) = 40.23$ with $p = .55$ and for taste ability $X^2(51, N = 177) = 45.49$ with $p = .69$ which means that the respondents in all four conditions share the same level of food neophilia and taste ability. Therefore, the constructs food neophilia and taste ability will not be included in further analysis in the results section. A summary of important descriptive statistics of the sample is given in table 8.

Table 8

Descriptive statistics

Measure			Condition				Total
			1 *AL + AB*	2 *AL + TB*	3 *TL + AB*	4 *TL + TB*	
Respondents		N	41	47	45	44	177
		%	23.16	26.55	25.42	24.86	100%
Gender*	Male	N	18	25	22	24	89
		%	43.90	53.19	48.89	54.54	50.28
	Female	N	23	22	22	21	88
		%	56.10	46.80	48.89	47.72	49.72
	Total %		100%	100%	100%	100%	100%
Age		M	24.63	23.64	22.77	26.18	24.29
		SD	5.59	2.77	2.71	8.69	5.58
Food neophilia**		M	5.79	5.78	5.80	5.71	5.77
		SD	1.00	.94	1.16	1.05	1.03
Taste ability***		M	4.25	4.10	4.22	4.37	4.23
		SD	1.17	1.02	1.31	1.17	1.17

*Gender is equally distributed with $X^2(3, N = 177) = 1.14, p = .77$

**Food neophilia is equally distributed with $X^2(42, N = 177) = 40.23, p = .55$

***Taste ability is equally distributed with $X^2(51, N = 177) = 45.49, p = .69$

3.4.4 Analyses

Before the actual data analysis for the results section could take place, a few adjustments to the dataset were needed. The first question in the questionnaire was an open-ended question. Respondents could type in their answer to the question 'In your opinion, in what product category does this beverage fit?'. Therefore, the data set with 177 responses to this question needed coding. All answers were reviewed, and the named category was written down. Next, all mentioned categories were assigned numbers which resulted in 14 possible categories. For the respondents who did not have any idea in which category they would place the product, the assigned category was 15 which was 'no clue'. Consequently, all answers were categorized in category 1 to 15. This way, it was possible to create an overview of which categories were mentioned most in which conditions.

Because this study contains multiple outcome variables, a factorial MANOVA could be conducted. Before this analysis could take place, the nine assumptions of ANOVA had to be investigated if they were met which are further discussed in Appendix II (Field, 2015; Laerd Statistics, 2018). Two types of analyses were conducted to discover outliers in the dataset. The Mahalanobis distance analysis detected one outlier, because one response showed a *p*-value of less than .001 which is labeled as a multivariate outlier in this analysis. Next to that, an analysis with standardized residuals for all dependent variables was performed. When a standardized value is above +3 or below -3, it is seen as a multivariate outlier and has therefore to be removed (Field, 2015; Laerd Statistics, 2018). This analysis showed that three responses have standardized values below -3 (-3.71, -3.04 and -3.53). As a result, four responses from the dataset had to be removed which resulted in $N = 173$ for the actual data analysis. The elaborate review of the nine assumptions check is added to Appendix II.

Lastly, the possible differences between male and female respondents towards the product evaluation were investigated since theoretical exploration pointed out differences between men and women towards evaluating (atypical) package design. To perform this additional analysis, a factorial MANOVA was conducted again with gender included in the model as a third factor. The results for the interaction effect of gender were analyzed and will be discussed in the next chapter.

4 Results

In this section, the main and interaction effects for each dependent variable are investigated. First, the dependent variables pre-tasting are inspected followed by the dependent variables post-tasting. Next to that, the categorization process is examined. After that, additional analysis regarding the possible differences between gender is explored. The chapter concludes with an overview of the outcome of the hypotheses.

4.1 Dependent variables pre-tasting

A factorial between groups multiple analysis of variance (MANOVA) was performed to investigate the effect of the independent variables bottle shape and label style on the dependent variables pre-tasting attitude towards the product and the level of surprise (Wilk's Λ = .97). An overview of the mean scores, standard deviations, *F*-scores and *p*-values of the dependent variables is given in table 9. Box's test of equality was used to evaluate the assumptions of homogeneity of variance and normality, and neither were violated which means that the covariance across the four conditions was equal.

Attitude towards the product

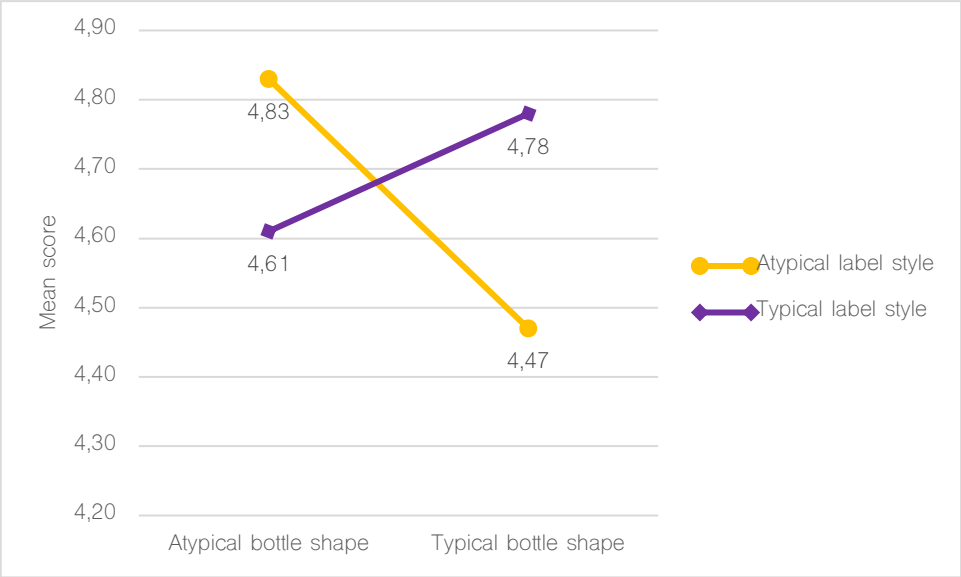
The non-significant **main effect of bottle shape on attitude towards product** leads to an F-score of $F(1,161) = .61$, $p = .41$, indicating no significant effect of the bottle shape on attitude towards the product between the respondents who had seen the atypical bottle shape ($M = 5.00$, $SD = .81$) and the respondents who saw the typical bottle shape ($M = 4.62$, $SD = .91$).

The **main effect of label style on attitude towards product** receives an F-score of $F(1,161) = .12$, $p = .73$, which means that there is also no significant main effect found for label style between the respondents who saw the atypical label style ($M = 4.62$, $SD = .91$) and the typical label style ($M = 4.69$, $SD = .80$).

Interestingly, a significant **interaction effect of bottle shape and label style on attitude towards product** was found ($F(1,161) = 4.21$, $p = .04$, with $\eta^2 = .03$). The plot of this interaction effect can be found in figure 1. As illustrated, the congruent conditions (an atypical bottle shape with an atypical label style ($M = 4.83$, $SD = .82$), and a typical label style on a typical bottle ($M = 4.78$, $SD = .85$)) both resulted in more positive attitudes towards the product compared to the incongruent conditions (atypical bottle shape with a typical label style ($M = 4.61$, $SD = .75$), typical bottle shape with an atypical label style ($M = 4.47$, $SD = .95$)).

Figure 1

Interaction effect of bottle shape and label style on pre-tasting attitude towards product



Surprise

A test of between-subjects was performed to investigate the level of surprise with an atypical and typical bottle shape and label style.

Again, the **main effect of bottle shape on surprise** yields a non-significant effect ($F(1,161) = 1.79$, $p = .18$), between the groups who saw the atypical bottle shape ($M = 3.79$, $SD = .98$) and groups who saw the typical bottle shape ($M = 3.56$, $SD = 1.20$).

However, the **main effect of label style on surprise** leads to a marginally significant main effect ($F(1,161) = 2.84$, $p = .09$), between the groups who saw the atypical label style ($M = 3.53$, $SD = 1.08$) and the groups who saw the typical label style ($M = 3.82$, $SD = 1.11$). The partial eta-squared (η^2) for this effect was .02.

The **interaction effect of the bottle shape and label style on surprise** shows an F-score of $F(1,161) = 2.11$, $p = .15$, indicating that no significant interaction effect was found between the groups who saw an atypical bottle shape and atypical label style ($M = 3.77$, $SD = .98$), an atypical bottle shape and typical label style ($M = 3.81$, $SD = 1.00$), a typical bottle shape typical label style ($M = 3.83$, $SD = 1.23$), and a typical bottle shape and atypical label style ($M = 3.30$, $SD = 1.23$).

4.2 Dependent variables post-tasting

A factorial between groups multiple analysis of variance (MANOVA) was performed to investigate the effect of the independent variables bottle shape and label style on the dependent variables taste experience, post-tasting attitude towards the product, purchase intention and perceived congruency (Wilk's $\Lambda = .97$). An overview of the mean scores, standard deviations, *F*-scores and *p*-values of these dependent variables is given in table 9. Box's test of equality was used to evaluate the assumptions of homogeneity of variance and normality, and neither were violated which means that the covariance across the four conditions was equal.

Taste experience

A test of between-subjects was performed to investigate the rating of taste experience with an atypical and typical bottle shape and label style.

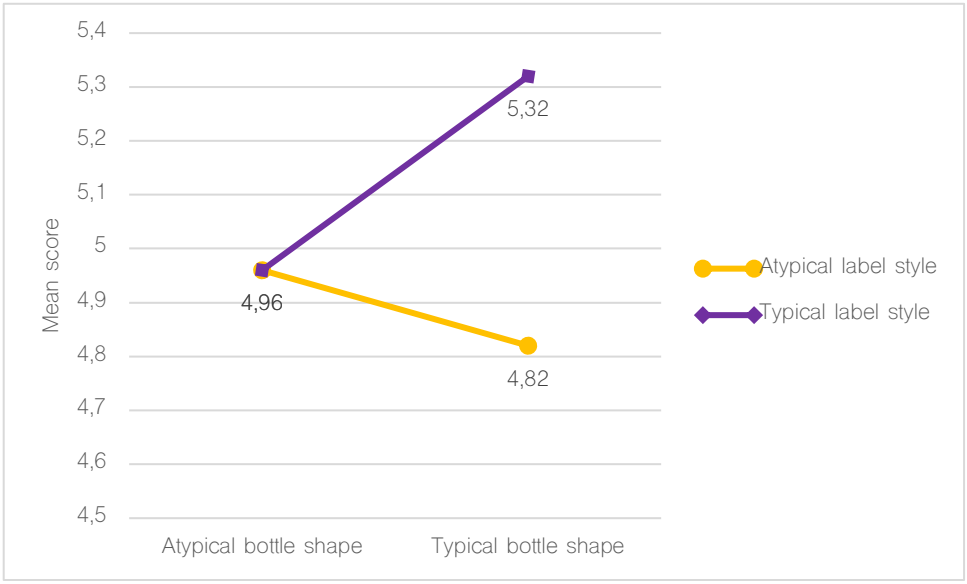
Results show a non-significant **main effect of bottle shape on taste experience** ($F(1,161) = .54$, $p = .46$), between the groups who saw an atypical bottle shape ($M = 4.98$, $SD = 1.00$) and typical bottle shape ($M = 5.07$, $SD = .93$).

However, the **main effect of label style on taste experience** results in a marginally significant main effect ($F(1,161) = 2.73$, $p = .10$), between the groups who saw an atypical label style ($M = 4.89$, $SD = 1.10$) compared to the typical label style ($M = 5.16$, $SD = .79$). The partial eta-squared (η^2) for this effect was .02.

The **interaction effect of bottle shape and label style on taste experience** yields an F-score of $F(1,161) = 2.70$, $p = .10$, showing that there was also a marginally significant interaction effect found on the taste experience. The partial eta-squared (η^2) for this effect was .02. The plot of this interaction is illustrated in figure 2. The plot shows that a congruent typical condition leads to the highest ranking of taste evaluation ($M = 5.32$, $SD = .72$). A typical label style combined with an atypical bottle shape lowers the rating of taste experience ($M = 4.96$, $SD = .83$) showing a similar mean score when an atypical bottle shape is combined with an atypical label style ($M = 4.96$, $SD = 1.17$). The lowest rating of taste experience is when a typical bottle shape is combined with an atypical label style ($M = 4.82$, $SD = 1.07$). These results show that to have the highest rating of taste experience, the congruent combination of a typical label style and typical bottle shape works best.

Figure 2

Interaction effect of bottle shape and label style on taste experience



Attitude towards product

A test of between-subjects was performed to investigate if the results of the post-tasting attitude towards the product changed compared to pre-tasting.

Again, results show that the **main effect of bottle shape on attitude towards product** post-tasting was non-significant ($F(1,161) = .02$, $p = .89$), between the groups who saw the atypical bottle

shape (*M* = 5.00, *SD* = .82) and the typical bottle shape (*M* = 4.96, *SD* = .82). This result is similar to the non-significant main effect of bottle shape on attitude pre-tasting.

The **main effect of label style on attitude towards product** post-tasting was non-significant as well (*F*(1,161) = 1.60, *p* = .21), between the groups who saw the atypical label style (*M* = 4.89, *SD* = .94) and the groups who saw the typical label style (*M* = 5.06, *SD* = .68). Again, this result is similar to the attitude pre-tasting.

Also, the **interaction effect of bottle shape and label style on attitude towards product** post-tasting was non-significant (*F*(1,161) = 2.22, *p* = .14), between the groups who saw an atypical bottle shape with atypical label style (*M* = 5.00, *SD* = .91), an atypical bottle shape with a typical label style (*M* = 4.97, *SD* = .75), a typical bottle shape with an atypical label style (*M* = 4.79, *SD* = .97), and a typical bottle shape with a typical label style (*M* = 5.15, *SD* = .61). This insight is interesting because the effect of congruent package design on attitude towards the product pre-tasting disappears after actually tasting the product.

Purchase intention

A test of between-subjects was performed to investigate what the effect of bottle shape and label style is on the purchase intention.

The **main effect of bottle shape on purchase intention** leads to a non-significant effect (*F*(1,161) = .16, *p* = .69), between the respondents who saw an atypical bottle shape (*M* = 3.90, *SD* = 1.52) and a typical bottle shape (*M* = 3.75, *SD* = 1.60).

Again, a non-significant **main effect of label style on purchase intention** (*F*(1,161) = 1.03, *p* = .31) was found between respondents who saw an atypical label style (*M* = 3.72, *SD* = 1.66) and the typical label style (*M* = 3.93, *SD* = 1.42).

Similarly, a non-significant **interaction effect of bottle shape and label style on purchase intention** was found (*F*(1,161) = .76, *p* = .39), between the groups who saw an atypical bottle shape with an atypical label style (*M* = 3.88, *SD* = 1.66), an atypical bottle shape with a typical label style (*M* = 3.91, *SD* = 1.43), a typical bottle shape with typical label style (*M* = 4.02, *SD* = 1.40), and a typical bottle with an atypical label (*M* = 3.57, *SD* = 1.73).

Congruency

A test of between-subjects was performed to discover if bottle shape or label style has a significant effect on the perceived congruency. A high level of perceived congruency means that it conforms to the respondent's expectation of the product non-alcoholic wine and how it should look like.

Again, no significant **main effect of bottle shape on congruency** was found (*F*(1,161) = 2.27, *p* = .14), between the respondents who saw an atypical bottle shape (*M* = 5.75, *SD* = 1.05) and the typical bottle shape (*M* = 5.96, *SD* = 1.00).

Interestingly, a significant **main effect of label style on congruency** was found (*F*(1,161) = 9.96, *p* = < .001), between the respondents who saw an atypical label style (*M* = 6.10, *SD* = .90) compared to the typical label style (*M* = 5.62, *SD* = 1.09). The partial eta-squared (η^2) for this effect was .06.

However, a non-significant **interaction effect of bottle shape and label style on congruency** was found (*F*(1,161) = .46, *p* = .50), between the respondents who saw an atypical bottle shape with atypical label style (*M* = 5.89, *SD* = .95), an atypical bottle shape with typical label style (*M* = 5.50, *SD* = 1.11), a typical bottle shape with typical label style (*M* = 5.63, *SD* = 1.08), and a typical bottle shape with atypical label style (*M* = 6.23, *SD* = .85).

Table 9

Overview of mean scores, standard deviations, F-values, and p-values of all dependent variables

Dependent variables		Bottle shape				Label style				Bottle shape * label style	
		Atypical	Typical	*F*	*p*	Atypical	Typical	*F*	*p*	*F*	*p*
Pre-tasting attitude towards product	*M*	5.00	4.62			4.62	4.69				
	SD	.81	.91			.91	.80				
				.61	.43			.12	.73	4.21	.04*
Surprise	*M*	3.79	3.56			3.53	3.82				
	SD	.98	1.20			1.08	1.11				
				1.79	.18			2.84	.09†	2.11	.15
Taste experience	*M*	4.98	5.07			4.89	5.16				
	SD	1.00	.93			1.10	.79				
				.54	.46			2.73	.10†	2.70	.10†
Post-tasting attitude towards product	*M*	5.00	4.96			4.89	5.06				
	SD	.82	.82			.94	.68				
				.02	.89			1.60	.21	2.22	.14
Purchase intention	*M*	3.90	3.75			3.72	3.93				
	SD	1.52	1.60			1.66	1.42				
				.16	.69			1.03	.31	.76	.39
Congruency	*M*	5.75	5.96			6.09	5.62				
	SD	1.05	1.00			.90	1.09				
				2.27	.14			9.96	.00**	.46	.50

* Significant at alpha level of .05

** Significant at alpha level of .01

† Marginally significant at alpha level of .10

4.3 Categorization of non-alcoholic wine

A sub research question to the main research question was formulated how the respondents would categorize the product non-alcoholic wine. To be able to answer this question, the experiment included an open-ended question in which this was asked to the respondent. After coding the responses, an overview of all the mentioned categories was made. Table 10 shows which categories were mentioned, how often, and in which condition each category was mentioned.

Table 10

Overview of categorization non-alcoholic wine

Category		Condition				Total
		1 *AL + AB*	2 *AL + TB*	3 *TL + AB*	4 *TL + TB*	
Wine	N	11	21	14	12	58
	%	28.2	45.7	31.8	27.3	33.5%
Alcoholic drinks	N	5	5	10	8	28
	%	12.8	10.9	22.7	18.2	16.2%
Non-alcoholic wine	N	4	5	7	7	23
	%	10.3	10.9	15.9	15.9	13.3%
Non-alcoholic drinks	N	9	7	4	9	29
	%	23.1	15.2	9.1	20.5	16.8%
Soda	N	5	2	2	4	13
	%	12.8	4.3	4.5	9.1	7.5%
Cocktails	N	1	0	1	0	2
	%	2.6	0.0	2.3	0.0	1.2%
Lemonade / syrup	N	0	1	0	0	1
	%	0.0	2.2	0.0	0.0	0.6%
Strong liquor	N	1	1	1	0	3
	%	2.6	2.2	2.3	0.0	1.7%
Non-alcoholic strong liquor	N	1	2	0	0	3
	%	2.6	4.3	0.0	0.0	1.7%
Radler	N	0	0	0	2	2
	%	0.0	0.0	0.0	4.5	1.2%
Aperitif	N	0	1	0	0	1
	%	0.0	2.2	0.0	0.0	0.6%
Champagne / sparkling cider	N	0	0	1	1	2
	%	0.0	0.0	2.3	2.3	1.2%
Non-alcoholic champagne / sparkling cider	N	0	1	1	0	2
	%	0.0	2.2	2.3	0.0	1.2%
Juice	N	1	0	2	1	4
	%	2.6	0.0	4.5	2.3	2.3%
No idea	N	1	0	1	0	2
	%	2.6	0.0	2.3	0.0	1.2%
Total	N	39	46	44	44	173
	%	100%	100%	100%	100%	100%

Overall, the category ‘wine’ was mentioned most times (58 times out of 173 valid responses). The second most mentioned category is ‘non-alcoholic drinks’ (29 times out of 173 valid responses), closely followed by ‘alcoholic drinks’ (28 times out of 173 valid responses) and ‘non-alcoholic wine’ (23 times out of 173 valid responses). It is interesting to note that the respondents in the second condition, a typical bottle shape with atypical label style, mentioned the wine category most. It is also interesting to mention that the juice category was only mentioned by four respondents, which suggests that few people relate the product to the juice category.

4.4 Additional analysis

The analysis of the data was taken one step further by looking if there were significant interaction effects when gender was included, which was discussed in the theoretical framework. A factorial

MANOVA was performed again with gender as a third factor. An overview of the *F*-value and *p*-value for the interaction effects on all dependent variables with this new model is shown in table 11 for gender and bottle shape, table 12 for gender and label style, and table 13 for gender, bottle shape and label style. Again, the two dependent variables pre-tasting will be discussed first followed by a discussion of the four dependent variables post-tasting.

4.4.1 Dependent variables pre-tasting including gender

An additional factorial MANOVA was performed to investigate any interaction effects between gender, bottle shape and label style on pre-tasting attitude towards the product and the level of surprise (Wilk's Λ = .99). Box's test of equality was used to evaluate the assumptions of homogeneity of variance and normality, and neither were violated.

As the results in table 11 show, the **interaction effect of bottle shape and gender** was not significant for attitude towards the product ($F(2,162) = .75$, $p = .39$) and surprise ($F(2,162) = .29$, $p = .59$).

There was also no significant **interaction effect between label style and gender** found for attitude towards the product ($F(2,162) = .15$, $p = .70$) and surprise ($F(2,162) = 1.52$, $p = .22$).

Lastly, also no significant **interaction effect between bottle shape, label style and gender** was found for attitude towards product ($F(2,162) = .44$, $p = .57$) and surprise ($F(2,162) = 1.17$, $p = .28$).

4.4.2 Dependent variables post-tasting including gender

An additional factorial MANOVA was performed to investigate any interaction effects between gender, bottle shape and label style on taste experience, post-tasting attitude towards the product, purchase intention, and the level of congruency (Wilk's Λ = .99). Box's test of equality was used to evaluate the assumptions of homogeneity of variance and normality, and neither were violated.

Again, a non-significant **interaction effect of bottle shape and gender** was found on taste experience ($F(2,162) = .50$, $p = .48$), attitude towards the product ($F(2,162) = .64$, $p = .42$), purchase intention ($F(2,162) = .65$, $p = .42$), and congruency ($F(2,162) = .16$, $p = .69$).

Interestingly, a marginally significant **interaction effect of label style and gender** was only found on purchase intention ($F(2,162) = 2.67$, $p = .10$). As the plot in figure 3 shows, female respondents showed a higher purchase intention for a typical label style ($M = 4.32$, $SE = .25$) compared to an atypical label style ($M = 3.64$, $SE = .24$). For male respondents this difference was smaller, but, interestingly, a higher mean score is found for the atypical label style ($M = 3.82$, $SE = .25$) compared to the typical label style ($M = 3.70$, $SE = .24$). No other significant interaction effects of label style and gender were found on the other dependent variables taste experience ($F(2,162) = 1.71$, $p = .60$), attitude towards the product ($F(2,162) = 2.37$, $p = .13$), and congruency ($F(2,162) = .28$, $p = .57$).

Lastly, again a non-significant **interaction effect between bottle shape, label style and gender** was found for taste experience ($F(2,162) = .03$, $p = .87$), attitude towards the product ($F(2,162) = .61$, $p = .44$), purchase intention ($F(2,162) = .741$, $p = .39$), and congruency ($F(2,162) = 1.15$, $p = .28$).

Figure 3

Interaction effect of label style and gender on purchase intention illustrated by mean scores of male and female respondents for an atypical and typical label style

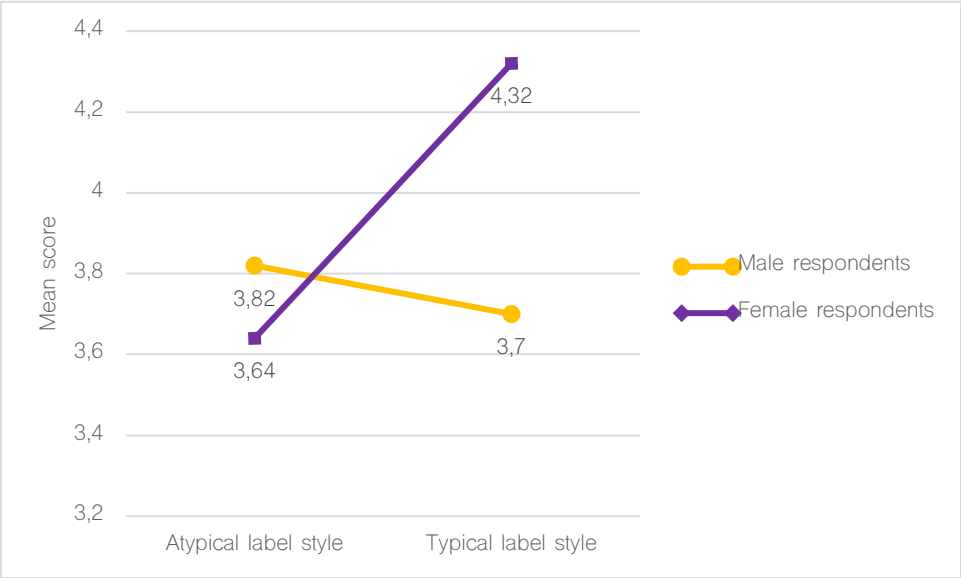


Table 11

Overview of mean scores, standard errors, F-values, and p-values of all dependent variables for the interaction effect of bottle shape and gender

Dependent variables		Male		Female		Gender * bottle shape	
		Bottle shape		Bottle shape			
		Atypical	Typical	Atypical	Typical	*F*	*p*
Pre-tasting attitude towards product	*M*	4.65	4.67	4.78	4.58		
	SE	.13	.13	.14	.13		
						.75	.39
Surprise	*M*	3.73	3.45	3.78	3.68		
	SE	.17	.17	.17	.16		
						.29	.59
Taste experience	*M*	5.00	5.21	4.95	4.94		
	SE	.15	.15	.16	.15		
						.50	.48
Post-tasting attitude towards product	*M*	4.95	5.01	5.07	4.93		
	SE	.13	.13	.13	.13		
						.64	.42
Purchase intention	*M*	3.73	3.78	4.15	3.81		
	SE	.24	.24	.25	.24		
						.65	.42
Congruency	*M*	5.74	6.04	5.66	5.84		
	SE	.15	.16	.16	.15		
						.16	.69

Table 12

Overview of mean scores, standard errors, F-values, and p-values of all dependent variables for the interaction effect of label style and gender

Dependent variables		Male		Female		Gender * label style	
		Label style		Label style			
		Atypical	Typical	Atypical	Typical	*F*	*p*
Pre-tasting attitude towards product	*M*	4.61	4.71	4.68	4.68		
	SE	.14	.12	.13	.14		
						.15	.70
Surprise	*M*	3.35	3.83	3.69	3.76		
	SE	.18	.16	.16	.18		
						1.52	.22
Taste experience	*M*	5.08	5.13	4.72	5.16		
	SE	.16	.15	.15	.16		
						1.71	.19
Post-tasting attitude towards product	*M*	4.99	4.97	4.81	5.19		
	SE	.13	.13	.12	.14		
						2.37	.13
Purchase intention	*M*	3.82	3.70	3.64	4.32		
	SE	.25	.24	.24	.25		
						2.67	.10†
Congruency	*M*	6.09	5.68	6.04	5.46		
	SE	.16	.15	.15	.16		
						.28	.60

† Marginally significant at alpha level of .10

Table 13

*Overview of F-values and p-values of all dependent variables for the interaction effect of bottle shape * label style * gender*

Dependent variables	Bottle shape * label style * gender	
	F	*p*
Pre-tasting attitude towards product	.44	.51
Surprise	1.17	.28
Taste experience	.03	.87
Post-tasting attitude towards product	.61	.44
Purchase intention	.74	.39
Congruency	1.15	.28

4.5 Overview hypotheses

In the theoretical framework, four hypotheses were formulated for this study. As a result of the MANOVA, hypotheses can be rejected or supported.

Hypothesis 1 states: An atypical bottle shape (as opposed to a typical bottle shape) positively influences product evaluation (taste experience (a), attitude towards the product (b), purchase intention (c)). As the MANOVA shows, the highest mean for attitude towards the product both before and after the tasting is found for an atypical bottle shape. However, this effect is not significant. For purchase intention, the atypical bottle shape also received the highest mean and, again, this result is

not significant. As for taste experience, on the contrary, the typical bottle shape leads to the highest mean. This result is also not significant. Based on these results, hypothesis 1 can be partly supported only when looking at the mean scores. There is not a significant effect of bottle shape on the dependent variables attitude towards the product, taste experience and purchase intention. To conclude, hypothesis 1 is partly supported.

Hypothesis 2 states: An atypical label style (as opposed to a typical label style) positively influences product evaluation (taste experience (a), attitude towards the product (b), purchase intention (c)). Looking at the results of the MANOVA, it becomes clear that for all dependent variables, the highest mean was found for the typical label style. Only for the taste experience, a significant effect was found from the label style. With this information, it can be concluded that an atypical label style does not lead to a higher rating of attitude towards the product, taste experience and purchase intention. As a result, hypothesis 2 can be rejected.

Hypothesis 3 states: Typical package design (typical bottle shape + typical label style) is congruent with respondents' expectations thus scores high on perceived congruency. The combination of package design with the highest level of congruency will mean that this combination conforms most to the respondent's expectation and thus perceived congruency. The results of the MANOVA show that the combination of a typical bottle shape with atypical label style has the highest mean. Since the hypothesis states that a typical bottle shape with a typical label style should receive the highest mean, the hypothesis cannot be fully supported. Only the typical bottle shape showed a higher mean score, but not in combination with a typical label style but rather an atypical label. That means that half of the hypothesis is supported based on the mean scores. Thus, hypothesis 3 can be partially accepted.

Hypothesis 4 states: Atypical package design (atypical bottle shape + atypical label style) has a more positive effect on surprise as opposed to typical package design (typical bottle shape + typical label style). The interaction analysis between bottle shape and label style shows that an atypical bottle shape and atypical label style leads to a lower mean score compared to the combination of a typical bottle shape typical label style. It becomes clear that the latter combination leads to the highest mean for the dependent variable surprise. As a result, hypothesis 4 can be rejected because an atypical label style on an atypical bottle shape does not lead to the highest level of surprise.

Table 14
Outcome of hypotheses

Hypothesis	Outcome
1: An atypical bottle shape (as opposed to a typical bottle shape) positively influences product evaluation (taste experience (a), **attitude towards the product (b)**, **purchase intention (c)**).	Partially accepted
2: An atypical label style (as opposed to a typical label style) positively influences product evaluation (taste experience (a), attitude towards the product (b), purchase intention (c)).	Rejected
3: Typical package design (**typical bottle shape** + typical label style) is congruent with respondents' expectations thus scores high on perceived congruency.	Partially accepted
4: Atypical package design (atypical bottle shape + atypical label style) has a more positive effect on surprise as opposed to typical package design (typical bottle shape + typical label style).	Rejected

Note. The (in)dependent variables in bold for hypothesis one and three means that this part of the hypothesis is accepted and the dependent variables in regular means that these are not accepted.

5 Discussion

In this section, the results of the study are evaluated, practical implications are discussed, limitations of the study and suggestions for future research are presented. The chapter ends with a conclusion on this study.

5.1 Discussion of results

The aim of this study was to investigate the effect of (a)typical package design on the overall product evaluation of non-alcoholic white wine. It was investigated if an (a)typical bottle shape with an (a)typical label style positively influences attitude towards the product, the level of surprise, taste experience, purchase intention and perceived congruency. Next to that, it was investigated if there are any differences between gender regarding product evaluation.

The presented findings indicate that the expected positive effects of atypical package design did not have similar positive results in the current study. Especially looking at label style, it becomes clear that a typical label style more positively influences attitude towards the product, level of surprise, purchase intention and, specifically, taste experience compared to an atypical label style. This finding is interesting as it was expected that the typical label style would not be evaluated more positively. However, this finding is similar to earlier conducted studies by Sherman and Tuten (2011), Tang, Tchetchik, and Cohen (2015), and Boudreaux and Palmer (2007) who all demonstrated a preference for typical, traditional label styles as opposed to new and novel styles.

The presented findings concerning bottle shape indicate that bottle shape did not have an effect on product evaluation, and that preferences are divided between an atypical and typical bottle shape. This suggests that an atypical bottle shape did not have the expected strong effect which undermines the literature concerning atypicality. However, a pattern was observed in the presented findings. It was, interestingly, found that congruent package design (atypical bottle shape with an atypical label style, and typical bottle shape with a typical label style) was rated more positively for attitude towards the product both pre- and post-tasting, the level of surprise, taste experience, and purchase intention, as opposed to incongruent package design. This finding was found to be of particular strong influence on taste experience, showing that typical congruent package design was rated significantly more positive compared to incongruent (atypical) package design.

This pattern suggests that, even though an atypical bottle shape or atypical label style separately did not have the strongest influence, congruent (a)typical package design has a more positive influence on product evaluation as opposed to incongruent package design. Looking at the presented findings, it can be assumed that congruent typical package design has the most positive influence on product evaluation compared to congruent atypical package design. This also answers the sub-question formulated in the theoretical framework regarding the interaction of bottle shape and label style which is that synergy of both elements leads to a stronger effect and this effect is strongest with a typical label style on a typical bottle shape.

An unexpected finding is that the difference in product evaluation between gender was not that strong. Only concerning purchase intention, an influence from label style and gender were found. It is interesting to observe that the typical label style was preferred female respondents, whereas male respondents preferred an atypical label style. This contradicts studies by, for example, Moss and Colman (2001), but reinforces the finding by Celhay and Trinquecoste (2014) who also did not find gender differences regarding package design evaluation.

In the theoretical framework, the strategy of subtyping was discussed which aims to create a new product category. An open-ended question in the main study focused on the strategy of subtyping by asking how respondents would categorize the product, which was earlier formulated as a sub-question to the main research question. With the presented findings, a reasonable answer to this sub-question can be given. The discussed results show that most respondents would still categorize the product into the wine category, which suggests that these respondents did not create a new mental product category. However, the second most mentioned category was non-alcoholic drinks which could be seen as a new product category to the existing categories of beverages. The assumed strategy of subtyping was thus not achieved successfully since the most mentioned category is still wine. However, an interesting thought to take on in the future is to create a non-alcoholic drinks category in supermarkets in which non-alcoholic wine could be placed.

Still, the outcome of the study contradicts the expected success of atypicality. In the next paragraphs, five possible explanations by literature are given for the surprising results of the study.

Negative learning-cost inferences

A possible explanation for this contradicting outcome is that atypical product design is highly dependent on if the innovation is incremental or radical (Mugge & Dahl, 2013). An incremental innovation is one that improves a current technology or an existing product, which includes a minor adjustment such as an update on software. A radical innovation, which is the case in the current study, is a new technological development that enables consumers to perform new things or try products that they have not tried before. In this case, a new product category can be created which can be derived from existing mental product categories (Moreau, Markman, & Lehmann, 2001). Because a new technology had to be created to be able to produce non-alcoholic wine, the product falls under radical innovations.

A good example of successful atypical package design for radical innovation to demonstrate that atypicality can be beneficial is the Dyson Supersonic hair dryer. James Dyson, named the 'Steve Jobs of household products', tackled a daily problem in common life; blow-drying hair (Paton, 2016). He defined what the negative aspects were of regular blow dryers and invented a new technological product that tackles these topics. The Supersonic hair dryer was introduced in such a new design that it was not instantly recognizable for what it is (Rhodes, 2016). No blades, donut-shaped and less noise. However, it was marketed as the newest technology for healthier, more beautiful, and more quickly dried hair due to its product design (Cao, 2016; Paton, 2016). Due to the established brand recognition and high consumer trust in the brand Dyson from its previously launched vacuum cleaners, innovation became a big success (Cao, 2016). Because of the distinguished atypical product design, the blow dryer was perceived as superior to other brands (Rhodes, 2016; Paton, 2016). In this example, atypical product design helped set the Supersonic hair dryer apart and highlighted the new technology of the hairdryer even more.

The Dyson example shows that even though an innovation is radical, atypicality can positively contribute which suggests that atypicality for non-alcoholic wine could have worked as well. However, the cost-benefit framework plays an important role in this process. Consumers will form their judgment about a new product based on their positive and negative inferences about the product (Payne, 1982). These inferences are formed by value inferences, which are the perceived benefits of the product, and learning-cost inferences, which are the perceived cognitive efforts to be able to understand or use the new product (Mugge & Dahl, 2013; Mukherjee & Hoyer, 2001). When an innovation is perceived as ambiguous, difficult, uneasy to use or is just not understood at all, negative value and learning-cost inferences are made.

Because a radical innovation is different from existing mental product categories, learning-cost inferences already play a bigger role in the evaluation process. If a consumer is unable to understand the new product, negative inferences are made (Hoeffler, 2003; Rindova & Petkova, 2007). A radical innovation can be designed in an atypical way and still be positively valued if the consumer is able to understand the new product such as the Dyson Supersonic hair dryer, thus a radical innovation does not necessarily mean that negative learning-cost inferences are made. A radical innovation is only evaluated negatively when a consumer thus experiences negative inferences (Mukherjee & Hoyer, 2001).

It is possible that respondents encountered negative learning-cost inferences because they, for example, were not able to understand how the product would be used in their daily lives. Non-alcoholic wine is a rather new product that has not been given much attention in supermarkets so far. Therefore, the benefits or exact content of the product are not widely known yet.

However, more media have been given the product attention this year. For example, a well-known Dutch newspaper 'de Volkskrant' published an article about the process of making non-alcoholic wine (Kleyn, 2019). The Dutch lifestyle magazine 'JAN' discussed different non-alcoholic wine brands in their summer issue (JAN Magazine, 2019). Lastly, the Dutch national news NOS discussed the topic of non-alcoholic wine in their broadcast last December in which they also interviewed Wiljan Dorrepaal from La Source, the contributor of this study (NOS Journaal, 2019). This attention in the media could help in the future to reduce negative learning-cost inferences by spreading knowledge about the product. However, for the current study the missing knowledge about the product and its benefits could be a reason for negative learning-cost inferences and therefore no significant effects were found. This leads to the second explanation for the contradicting results which closely follows learning-cost inferences.

Product ambiguity

It could be that the product non-alcoholic wine was perceived as an ambiguous product. Many respondents mentioned afterward to have never heard of non-alcoholic wine before and asked how the product was made, what exactly the ingredients are of the product, or what the product in essence is. These questions raise the general question if non-alcoholic wine was perceived as a vague product to the respondents in this study. Respondents were not given any information about the product, they were only told they had to taste a beverage. Only by closely looking at the label on the bottle, the respondent could read 'non-alcoholic wine' but no other information about the beverage itself was given, which could have negatively influenced the ambiguity of the product. This might also explain why the atypical package design did not have a more positive influence on the dependent variables, because greater negative value and learning-cost inferences were made by the respondents. If the respondents did not know what the benefits are of non-alcoholic wine or what it exactly is, then an atypical package design did not help them in understanding the product.

This might also explain why typical package design positively influenced the taste evaluation because respondents were offered a frame of reference to understand the taste (Moreau, Markman, & Lehnmann, 2001). With atypical package design they were uncertain what to expect which resulted in lower ratings of taste evaluation. As the literature suggests, insecurity about a radical innovation leading to negative learning-cost inferences results in negative evaluations (Mugge & Dahl, 2013) because consumers cannot recognize the functionalities of the product (Person, Schoormans, Snelders, & Karjalainen, 2008). Many studies stress that when a consumer is unable to make sense of a product or struggles to do so, their evaluation tends to turn into a less favorable one (Aggarwal & Goodstein, 2007; Campbell & Goodstein, 2001; Jhang, Grant, & Campbell, 2012; Noseworthy, Murray, & Di Muro, 2018). This might also explain why the bottle shape or label did not have any

effect on purchase intention, because their attitude possibly was leaning towards negative due to product ambiguity.

Different value transfer

It is also possible that typical package design led to a more positive rating for most of the dependent variables because this type of design is perceived as having more value for fulfilling a goal. After all, other known products in the same product category also serve that goal. For example, a bottle of wine is quickly associated with social interaction (Silva et al., 2016). Thus, because other products in the same perceived categories are known by the consumer, it helps to understand the new product. Loken and Ward (1990) showed in their study that the degree of typicality in product design has a positive influence on package evaluations and overall product evaluations. They demonstrated that the degree of category resemblance positively influenced the evaluation of the product (Loken & Ward, 1990). It could be that, because respondents in this study categorized non-alcoholic wine in the wine category, the typical package design positively influenced the overall evaluation of the product because the respondents used their general inferences from the wine category. The atypical package design did not help these respondents in drawing inferences, because the packaging resembled no existing product category.

Uncertainties in new product adoption

Multiple studies have focused on new product adoption and different types of uncertainties related to this process. Wright and Weitz (1977) discovered that when consumers have to make a behavioral decision towards a new product in the near future, they become more aware of the negative aspects of the new product. Next to that, Hoeffler (2003) explains that uncertainties play a big role in new product adoption which might prevent successful adoption of the new product or might cause negative evaluations. Uncertainties such as performance uncertainty (how will the product work), utility uncertainty (how useful will the product be), beneficial uncertainty (what are the benefits of the new product), and symbolic uncertainty (is the new product socially desirable and appropriate) might arise. Also, uncertainties about how easy it is to adopt or use a new product have a high influence on behavior (Hoeffler, 2003). Especially learning-cost uncertainties and emotional uncertainties as to how the new product would fit into one's life or how to make one feel were found to be important influencers for product adoption in the near future (Castaño, Sujan, Kacker, & Sujan, 2008). Thus, it could be that the product non-alcoholic wine raised uncertainties as to how this would fit into the life of the respondent. For example, during what occasion the beverage would be served or what others might think of the product. These uncertainties might have negatively influenced the attitude towards the product or purchase intention and resulted in no significant effects.

Gender differences in sensitivity to design

In the presented findings it was found that gender did not influence product evaluation, only label style and gender appeared to influence purchase intention. A study by the Wine Market Council (2006) shows that 80 percent of American citizens that purchase wine are women and most of these purchases are in supermarkets (Nigro, 2005). Also, Atkin, Nowak, and Garcia (2007) found that labels and shelf tags are more of an influence on the purchase decision for female consumers. Male consumers appeared to rely more strongly on the pricing of wine (Atkin & Sutanonpaiboon, 2007). Because purchasing wine is perceived as a high-risk product, Mueller et al. (2009) explain that consumers rely strongly on the information offered on the bottle itself which influences their purchase decision. Elements such as brand name and country of origin on the label assist consumers in evaluating the wine prior to purchase (Mueller et al., 2009). Since the label was the only source of

information in the experiment setting, it could be that this is why respondents relied more on this than the bottle shape. This might explain why only the label style showed to have an influence on purchase intention when gender was included in the model. However, it is interesting to note that female respondents preferred the typical label style which includes fewer colors compared to the atypical label style which contradicts findings by, for example, Creusen (2010), Henry (2002), and Williams (2002) whom all found that women prefer more colorful and adventurous designs. It could be that this design preference perception is more valid for other types of designs such as websites, and not for high-risk products such as wine. It has, namely, been demonstrated in earlier studies that typical label styles tend to increase purchase intention instead of very novel label styles (Sherman & Tuten, 2011; Tang, Tchetchik, & Cohen, 2015). However, this does not explain why female respondents prefer a typical label style and male respondents an atypical label style. This will, therefore, remain unanswered.

5.2 Research question

With the presented findings and possible explanations with literature, an answer to the main research question can be given. It becomes clear that (a)typical package design can only significantly influence pre-tasting attitude towards the product, the level of surprise, taste experience, and perceived congruency. When including gender, it becomes clear that purchase intention can also be influenced. However, it was not found that atypical package design influences product evaluation more positively as opposed to typical package design. Therefore, the positive effects of atypicality are not supported by the current study. However, an interesting answer to the research question is that congruent package design influences product evaluation more positively than incongruent package design, and this effect is even stronger with congruent typical package design, especially for the taste experience.

5.3 Practical implications

Noseworthy, Murray and Di Muro (2018) investigated how a negative evaluation of an atypical product could be improved. First of all, they found that an extremely atypical product caused a misunderstanding of the product, especially when the product was completely new as well. They demonstrated this finding in their study with coffee drinkers. Respondents were shown two atypical new products; vitamin-enriched coffee and green coffee. For both products, the evaluations were negative because respondents appeared to struggle with the concept of both coffee types. However, when the two coffee types where combined, a green vitamin-enriched coffee, the evaluation was more positive. Noseworthy, Murray and Di Muro (2018) explain that the negative evaluation was improved because respondents were given a second enabler to make sense of the product. Because the green color associated with a vitamin-enriched beverage, the combination made sense. Thus, the authors suggest using enablers to help consumers make sense of incongruent, new, or atypical products which is also a suggestion for the marketing of non-alcoholic wine.

It is suggested that atypical package design for non-alcoholic wine could be used as long as there is a second enabler to help consumers understand the new product and to improve the overall evaluation (Noseworthy, Murray, & Di Muro, 2018). It should be a goal to minimize negative learning-cost inferences and product ambiguity which was possibly a reason for the contradicting results of the current study, and this can be achieved when it is clear what the benefits of the new product are (Mukherjee & Hoyer, 2001). Therefore, it is suggested that the benefits and exact product

information of non-alcoholic wine are communicated on the bottle or on the shelve where it is sold. This way, it is prevented that preexisting mental categories and aspects from that category are activated so that consumers will not fail to comprehend the benefits of the new product (Creusen & Schoormans, 2005; Rindova & Petkova, 2007).

It is important for marketers and new product development managers to bring the benefits and suggestions for usage of non-alcoholic wine to attention either by package design, store design or advertising (Mugge & Dahl, 2013). For non-alcoholic wine this would mean that it should be more clearly communicated on either the bottle or on the shelf what exactly the content of the product is and what the benefits are. A suggestion could be "100% grape juice derived from authentic wine, 0% alcohol" or "no alcohol, less sugar, fewer calories". Previously conducted research showed that consumers who value health benefits, a healthy/healthier product, or who have dietary restrictions are more likely to use and read (nutrition) labels on products and that this information is valued on wine labels (Annunziata, Pomarici, Vecchio, & Mariani, 2016; Visschers, Hess, & Siegrist, 2010).

5.4 Limitations

This research comes with a few limitations which need to be addressed. Firstly, the respondents in this study were mainly students. Therefore, the results of this study cannot be easily generalized. It could be that consumers from older age or in a different life phase, such as young urban professionals or married couples, respond differently to the stimulus material which could mean that the results of this study might vary (Ellioth & Barth, 2012). It could be that students are not prioritizing non-alcoholic drinks yet which could mean that their purchase intention or attitude towards the product would be in general low or negative to any non-alcoholic drink. Students are in a different life phase in which going to clubs and having a drink plays a bigger role than consumers that are a bit older. Therefore, it might be that a different target group would have a more positive attitude towards non-alcoholic wine in general.

Next to that, this study did not make a distinction between wine experts and non-wine drinkers. Escandon-Barbosa and Rialp-Criado (2019) demonstrated that experts and non-experts pay a kind different of attention to wine bottles when tasting the product and evaluating the overall product. For example, they found that expert wine drinkers pay more attention to the content on the wine label while this did not matter to non-experts. Because this study did not make a distinction between expertise, the results of the importance of bottle shape or label style could differ when a specific type of target group was used as a sample. It could be that the label style has significant effects on all dependent variables when an expert group of wine drinkers was used.

Another limitation worth mentioning is that this study was conducted in December, the month preceding Dry January in which participants drink no alcohol at all. Therefore, non-alcoholic drinks could be more of a 'hot topic' than it normally would be. If the study would be conducted in, for example, June, the results could be different because drinking no alcohol would be less of a priority.

A difference in the subject of this study is that both the product non-alcoholic wine and the chosen fictitious brand name do not have established brand recognition, product recognition or brand trust yet which the brand Dyson, for example, does have. It could be that an established brand name would lead to different results because respondents are able to draw inferences from their brand knowledge (Cao, 2016). This study used a fictional brand name for a rather new product. Maybe a well-known beverage brand name for a rather new product would have made a difference for the results.

Lastly, this study only compared atypical to typical package design. Therefore, there was no possibility to investigate the effects of a moderately atypical product design which might have been preferred most out of the three designs. A reason for this assumption is that a moderate atypical design might be moderately congruent to consumers' expectations, which could still positively influence the level of surprise while also positively influence the attitude towards the product which turned out not to be the case in the current study (Ludden, Hekkert, & Schifferstein, 2006; Mugge & Dahl, 2013).

5.5 Future research

The current study used white non-alcoholic, but it would be interesting to investigate if the results would be different for red non-alcoholic wine. Red wine does not have to be stored in a fridge, which might mean that outer appearances of the bottle design might play a bigger role compared to white wine that can just 'stay in the fridge'. Next to that, a different target group would be highly recommended to conduct a similar study again since this study mainly focused on students. It is advised to conduct market research to grasp the exact target group of non-alcoholic wine drinkers and conduct a similar study amongst them. This way, it is possibly more accurate to investigate if the bottle shape or label style can influence product evaluation.

The biggest question that this study raises is why atypical package design did not have the expected positive effects. Possible explanations by literature are given, so it is recommended for similar future research to implement the practical suggestions concerning the reduction of learning-cost inferences and product ambiguity. It could, for example, be helpful to conduct the same taste experiment but instead of just placing a bottle on the table, also place a small sign next to it with information about the product and its content. Possibly, the effect of atypicality can this way be measured better.

The second big question that this study raises is if the results would be the same with an existing beverage. Because non-alcoholic wine is a fairly new product, it is suggested as future research to investigate an existing product with the same independent variables (bottle shape and label style). If a product is chosen, for example apple juice, that already has an existing mental schema, the true effects of (a)typical package design can be better researched. Another possibility is to conduct the same study again with a non-food product, such as a clothing piece or backpack. These types of products are hedonic products, which have been demonstrated in previously conducted research to be more likely influenced by atypical package design compared to utilitarian products (Liu, Zhu, Chen, & Li, 2020).

5.6 Conclusion

This study aimed to answer the question if non-alcoholic white wine in an atypical package design can positively influence product evaluation. An experiment with package design for this product has not been conducted before. Therefore, the outcome of this study adds to the current package design literature in a new context. The outcome of this study is also of practical relevance, with concrete advice formulated on how to improve the overall product evaluation of non-alcoholic wine.

Based on the conducted analyses, it can be concluded that atypical package design does not necessarily have a more positive influence on product evaluation (taste experience, attitude towards the product, and purchase intention) than typical package design. Looking at the presented findings of bottle shape separately, it can be concluded that the bottle shape did not have any effect on product evaluation. It was found that the preference for an atypical or typical bottle shape is divided. Thus, atypicality concerning bottle shape has not been of a more positive influence compared to a typical bottle shape. The results of the label style separately showed that it can influence product evaluation, but only for the level of surprise, taste experience, and perceived congruency. Interestingly, it became clear that a typical label style is preferred mostly. Thus, atypicality concerning label style also has not been of a more positive influence on product evaluation compared to a typical label style. However, an unexpected but interesting finding is that congruent package design (atypical bottle with an atypical label and typical bottle with a typical label) in general led to a more positive product evaluation compared to incongruent package design. Thus, an atypical bottle shape is best to be combined with an atypical label style and a typical bottle shape with a typical label style. Interestingly, the results of this study demonstrated that congruent typical package design led to a slightly more positive rating overall compared to congruent atypical package design. Specifically, when it comes to taste experience, congruent typical package design had a significantly more positive influence.

The study further investigated if there were any differences between male and female respondents towards the product evaluation. The presented findings indicate that, contrary to what was theorized, gender did not influence the product evaluation. Only for purchase intention, it was found that gender and label style were of influence. Specifically, female respondents preferred a typical label style and male respondents preferred an atypical label style.

A general conclusion that can be drawn on this study is that as long as package design combines congruent elements, the evaluation of the product is more positive compared to incongruent combinations and the product evaluation is most positive with the congruent typical package design. The concept of atypicality proved not to have the expected positive influence on product evaluation. Thus, for non-alcoholic wine, it is better to market the product in congruent typical package design.

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Appendix I Main study questionnaire

Dear participant,

You are about to participate in a taste test in order to find out which product is liked or not to broaden the assortment of beverages offered at the campus. For this experiment, you will examine a beverage and you will be asked questions regarding the taste, the product, and your liking. Thank you in advance for participating. Please know that your participation is voluntarily, and the results will be analyzed confidentially. You may quit the taste test at any given time without needed explanation. Filling out this survey will take approximately 5 minutes. Your participation is highly appreciated and is approved by the Ethical Committee. For any questions regarding this study, please contact c.s.boshuizen@student.utwente.nl.

I am willing to participate in this study and hereby give my consent that the results of this study will be used for analysis.
Yes □ No □

Take a look at the bottle placed in front of you.

1. In your opinion, in what product category does this beverage fit?
_____ (open question)

The next questions are regarding your first impression of the beverage. Please tick the box which resembles your thoughts or feelings.

2. My first impression of the product is that:

I like it	□ □ □ □ □ □ □	I dislike it
It looks good	□ □ □ □ □ □ □	It looks bad
It looks beautiful	□ □ □ □ □ □ □	It looks ugly
It looks enjoyable	□ □ □ □ □ □ □	It does not look enjoyable
It looks appealing	□ □ □ □ □ □ □	It does not look appealing
It looks exciting	□ □ □ □ □ □ □	It does not look exciting
It looks like a new product	□ □ □ □ □ □ □	It does not look like a new product
It looks expensive	□ □ □ □ □ □ □	It does not look expensive
It looks interesting	□ □ □ □ □ □ □	It does not look interesting
It will taste nice	□ □ □ □ □ □ □	It will not taste nice

3. My first impression of the design of the product is that:

The product looks familiar	□ □ □ □ □ □ □	The product does not look familiar
The product looks original	□ □ □ □ □ □ □	The product does not look original
The product looks atypical	□ □ □ □ □ □ □	The product looks typical
The product looks usual	□ □ □ □ □ □ □	The product looks unusual

The packaging looks exactly as I expect the packaging of this beverage to look like	□ □ □ □ □ □ □	The packaging does not look exactly like how I expect the packaging of this beverage to look like
I am surprised about how this product looks	□ □ □ □ □ □ □	I am not surprised about how this product looks
I like the shape of the bottle	□ □ □ □ □ □ □	I do not like the shape of this bottle
I think the shape of the bottle fits the product	□ □ □ □ □ □ □	I do not think the shape of the bottle fits the product
I like the label on the bottle	□ □ □ □ □ □ □	I do not like the label on the bottle
I think the label on the bottle fits the product	□ □ □ □ □ □ □	I do not think the label on the bottle fits the product

Please take a bite of the toast placed in front of you and take a sip of water. This will help to neutralize your taste. You may now taste the beverage from the sample cup presented to you.

Please answer the following questions regarding your thoughts and feelings about the taste of the product and tick the box that resembles your opinion best.

4. I would evaluate the product as follows:

The product tastes nice	□ □ □ □ □ □ □	The product does not taste nice
The product tastes fruity	□ □ □ □ □ □ □	The product does not taste fruity
The product tastes fresh	□ □ □ □ □ □ □	The product does not taste fresh
The product taste intense	□ □ □ □ □ □ □	The product does not taste intense
The product is of good quality	□ □ □ □ □ □ □	The product is not of good quality
I like the product	□ □ □ □ □ □ □	I do not like the product
I like the way this product looks	□ □ □ □ □ □ □	I do not like the way this product looks
I would recommend this product	□ □ □ □ □ □ □	I would not recommend this product
I would consider buying this product	□ □ □ □ □ □ □	I would not consider buying this product
I would buy this product	□ □ □ □ □ □ □	I would not buy this product
The taste of this product matches my expectation	□ □ □ □ □ □ □	The taste of the product does not match my expectation
The product tastes like wine	□ □ □ □ □ □ □	The product does not taste like wine
I think of wine when I see the product	□ □ □ □ □ □ □	I do not think of wine when I see the product
The product is similar to wine	□ □ □ □ □ □ □	The product is not similar to wine
The product tastes like fruit juice	□ □ □ □ □ □ □	The product does not taste like fruit juice
I think of fruit juice when I see the product	□ □ □ □ □ □ □	I do not think of fruit juice when I see the product

The product is similar to fruit juice	□ □ □ □ □ □ □	The product is not similar to fruit juice

Please indicate your attitude towards the product now that you have tasted it.

5. I think the product is:

Good	□ □ □ □ □ □ □	Bad
Pleasant	□ □ □ □ □ □ □	Unpleasant
Interesting	□ □ □ □ □ □ □	Uninteresting
Surprising	□ □ □ □ □ □ □	Unsurprising

6. General questions:

If I don't know a product, I want to try it	□ □ □ □ □ □ □	If I don't know a product, I do not want to try it
I like to try new things	□ □ □ □ □ □ □	I do not like to try new things
At dinner parties, I will try new drinks	□ □ □ □ □ □ □	At dinner parties, I will not try new drinks
I consider myself good at recognizing different tastes	□ □ □ □ □ □ □	I do not consider myself good at recognizing different tastes
I consider myself an expert in describing taste	□ □ □ □ □ □ □	I do not consider myself an expert in describing taste
In comparison with my peers I have a good taste	□ □ □ □ □ □ □	In comparison with my peers I do not have a good taste

7. Demographical questions:

I am	□ a male	□ a female	□ prefer not to say
I am	□ a student	□ working	□ other
I am	_____ years old		

8. Control questions

The bottle shape of the beverage is similar to:

Wine	□ □ □ □ □ □ □	Fruit juice

The label on the bottle is similar to a label from:

Wine	□ □ □ □ □ □ □	Fruit juice

The match between the shape of the bottle and label is:

Good	□ □ □ □ □ □ □	Bad

You have now completed the questionnaire. Thank you for your participation in this study. Your cooperation is highly appreciated.

Appendix II Assumptions check for MANOVA

The scope of this study contains multiple outcome variables, continuous outcomes and two categorical predictor variables which means that factorial MANOVA's could be conducted. Before any analysis could take place, it had to be assured that the nine assumptions for this analysis were met (Field, 2015; Laerd Statistics, 2018). Up next, the nine assumptions formulated by Laerd Statistics (2018) and Field (2015) of a factorial MANOVA are discussed and tested.

> ***Assumption 1:*** *The two or more dependent variables should be measured at interval or ratio level; thus, they should be continuous.*

> ***Assumption 2:*** *The two independent variables should consist of two or more categorical, independent groups.*

> ***Assumption 3:*** *There should be an independence of observation, thus there should be no relationship between the observations in each group or between the groups themselves.*

> ***Assumption 4:*** *There should be an adequate sample size; there should be more cases in each group than the number of dependent variables that are analyzed.*

Assumption one to four are met, because there are two dependent variables that are continuous. Also, the independent variables consist of more than two categorical groups. Next to that, there is no relationship between the participants in each condition since every respondent only participated once. Lastly, the same size is adequate enough (N = 177) since it contains more than the number of dependent variables.

> ***Assumption 5:*** *There are no univariate or multivariate outliers.*

Assumption five requires that there are no univariate or multivariate outliers. In order to meet this assumption, multivariate outliers were identified with the Mahalanobis Distances Analysis. This analysis requires that every item with a p-value lower than .001 needs to be removed. In this sample, only one response was identified as an outlier (respondent number 63). Therefore, it was decided to remove this respondent from the sample. Also, an analysis with standardized residuals for all dependent variables was performed. When a response has a value of lower than -3 or higher than +3, it is detected as a multivariate outlier. This analysis showed that three responses contained values lower than -3, which means that these responses had to be removed. As a result, four responses which were multivariate outliers had to be deleted from the dataset.

> ***Assumption 6:*** *There is multivariate normality.*

As for assumption six, the sample size is bigger than 50 which means that the assumption of normality is met (N = 173).

> ***Assumption 7:*** *There is a linear relationship between each pair of dependent variables for all combinations of groups of the two independent variables.*

Assumption seven requires that there is a linear relationship between each dependent variable. To investigate this assumption, a scatterplot matrix for all combinations of variables was made. Figure 1 to 4 show that there is a linear relationship between each dependent variable in all four conditions. Thus, assumption seven is met.

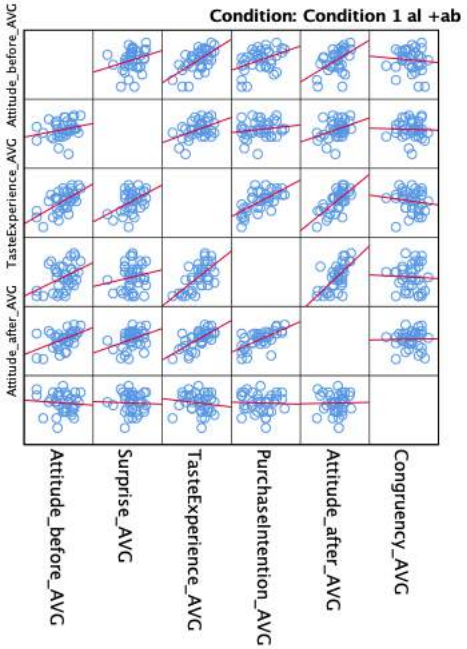

Figure 6: Scatterplot matrix condition 1

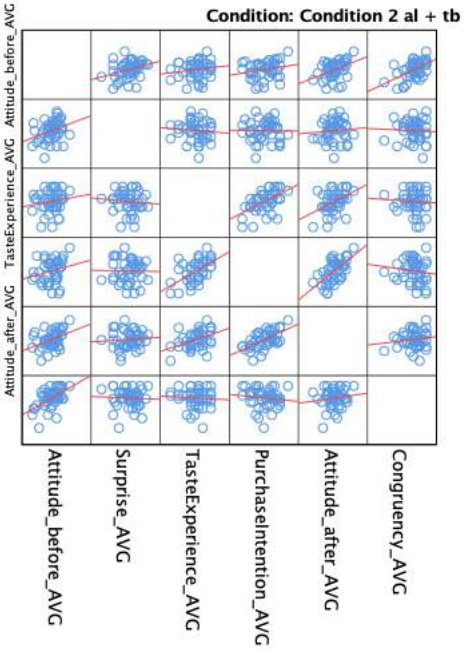

Figure 7: Scatterplot matrix condition 2

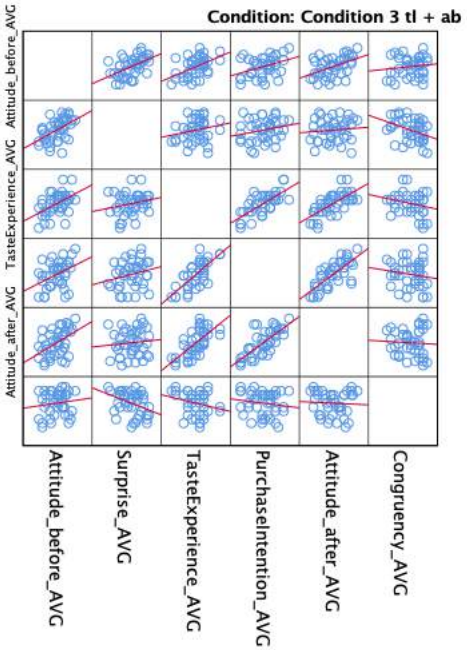

Figure 8: Scatterplot matrix condition 3

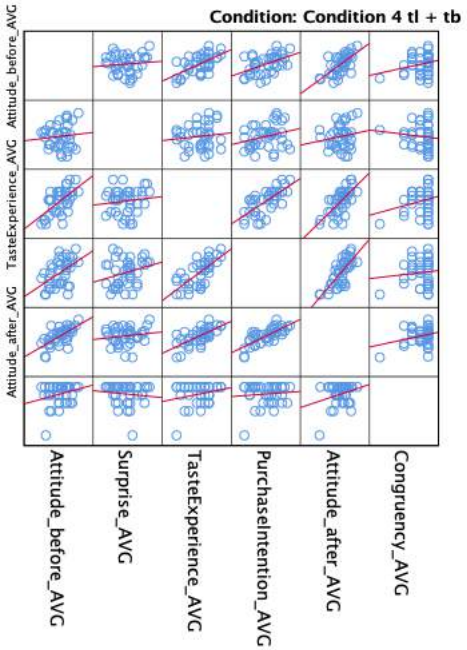

Figure 9: Scatterplot matrix condition 4

Assumption 8: *There is homogeneity of variance-covariance matrices.*

Assumption eight requires that there is a homogeneity of variance-covariance matrices. The Box's M Test of Equality of Covariance Matrices shows that (p = .150) which means that the observed covariance between all conditions is equal. Therefore, assumption eight is met.

Table 15
Box's Test of Equality of Covariance Matrices

Box's M	168,890
F	1,126
df1	135
df2	55730,056
Sig.	,150

Assumption 9: *There is no multicollinearity.*

Assumption nine requires that there is normal correlation between the dependent variables. First, a correlation analysis is performed to see the overall correlation between the dependent variables. An overview is summarized in table 16. It is interesting to notice that taste experience had a strong correlation with all other dependent variables, except for surprise (typicality). Respondents who thought the product tasted nice appeared to also have a higher purchase intention and bigger interest in the product. The outcome of the analysis means that there is a normal correlation between all the variables.

Table 16
Correlation analysis
N = 173

Variables	1	2	3	4	5	6
1. Attitude before tasting	-					
2. Surprise	.26**	-				
3. Taste experience	.49**	.09	-			
4. Purchase intention	.37**	.08	.66**	-		
5. Attitude after tasting	.51**	.09	.66**	.71**	-	
6. Congruency	.22**	.31**	.06	.02	.16*	-

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

Next, a correlation analysis of all four conditions separately is conducted to investigate if the correlation within each condition is also normal. In table 17 to 20 the results are presented from which can be concluded that also in all four conditions there is normal correlation. With this insight, assumption nine can be met. This also means that all nine assumptions in order to perform MANOVA are met which leads to further execution of a factorial MANOVA.

Table 17

Correlation analysis condition 1 (ab + al)

N = 173

Variables	1	2	3	4	5	6
1. Attitude before tasting	-					
2. Surprise	.21	-				
3. Taste experience	.63**	.40*	-			
4. Purchase intention	.44**	.15	.66**	-		
5. Attitude after tasting	.51**	.35*	.69**	.66**	-	
6. Congruency	.06	-.07	-.02	.04	.09	-

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Table 18

Correlation analysis condition 2 (tb + al)

N = 173

Variables	1	2	3	4	5	6
1. Attitude before tasting	-					
2. Surprise	.32*	-				
3. Taste experience	.15	-.09	-			
4. Purchase intention	.21	-.02	.54**	-		
5. Attitude after tasting	.39**	.08	.42**	.61**	-	
6. Congruency	.52**	-.04	-.05	-.12	.15	-

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

Table 19

Correlation analysis condition 3 (ab + tl)

N = 173

Variables	1	2	3	4	5	6
1. Attitude before tasting	–					
2. Surprise	.47**	–				
3. Taste experience	.46**	.20	–			
4. Purchase intention	.31*	.20	.71**	–		
5. Attitude after tasting	.46**	.08	.68**	.74**	–	
6. Congruency	.16	–.33*	–.18	–.17	–.03	–

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Table 20

Correlation analysis condition 4 (tb + tl)

N = 173

Variables	1	2	3	4	5	6
1. Attitude before tasting	–					
2. Surprise	.13	–				
3. Taste experience	.61**	.13	–			
4. Purchase intention	.46**	.16	.69**	–		
5. Attitude after tasting	.64**	.11	.68**	.76**	–	
6. Congruency	.18	–.20	.19	.14	.28	–

** Correlation is significant at the 0.01 level (2-tailed).