

GO FOR
NOTHING LESS
THAN

GOLD?!

THE ADDED VALUE OF A VISUAL METAPHOR IN
COMMUNICATING LUXURY PERCEPTIONS OF COFFEE

MARLOES FOLSCHÉ | S1882104 | MASTER COMMUNICATIES STUDIES
MARKETING COMMUNICATIONS | FACULTY OF BEHAVIOURAL MANAGEMENT
AND SOCIAL SCIENCES

SUPERVISORS: DR. J.J. VAN HOOF AND DR. T.J.L. VAN ROMPAY
UNIVERSITY OF TWENTE
APRIL 2018

UNIVERSITY OF TWENTE.

*“The added value of a visual metaphor in
communicating luxury perceptions of coffee.”*

Abstract

Background: The package design of a product is a commonly used marketing tactic to influence consumer responses. Especially, when considering food products, extrinsic product characteristics, like the package design, seem to strongly influence consumer's food perception. More traditional ways of communicating product attributes, by means of textual cues, is an extensively studied research topic that has been proven to be effective. However, recently, research suggests that a more symbolic or metaphorical way of communicating, using visual metaphors, offers new opportunities to signal product attributes. Despite the central role of visual metaphors in modern day advertising, academic research on this topic has been relatively sparse. Therefore, the objective of this study was to examine the added value of a visual metaphor in communicating specific product attributes such as luxury and quality, and how this interacts with textual cues in the form of a brand frame.

Methods: This study used a 2 (visual metaphor; no metaphor vs. metaphor) x 2 (brand frame; basic vs. exclusive blend), experimental-between-subject design with Need for Cognition as a moderating variable, resulting in four manipulated conditions. An overall multivariate analysis and separate univariate analyses were used to examine whether a visual metaphor and brand frame influenced luxury perceptions of a coffee product in terms of taste experience, quality perception and ultimately purchase intention.

Results: Findings of this research show that, among 120 students, a visual metaphor appeared to have a significant main effect on *taste luxury*, *taste intensity*, *taste liking* and *quality perception*. Moreover, a marginally significant main effect was found on *purchase intention*. The more traditional way of communicating by means of a brand frame showed less effect. However, a significant main effect was found on *taste luxury* and *quality perception*, a marginally significant effect was found on *purchase intention*. This study provides no evidence for the interaction between a visual metaphor and a brand frame; both factors do not strengthen, nor reduce, each other's effects. Nonetheless, a significant interaction effect was found effect between Need for Cognition and a visual metaphor. In this study, the role of cognition appeared to moderate the effect of a visual metaphor on *quality perception*. Lastly, according to a stepwise multiple regression analysis, *quality perception* and *taste consequences* together predict almost 33% of the *purchase intention*.

Conclusions: The outcomes of this research provide evidence that especially visual metaphor use on a product package offers opportunities to positively influence consumer responses. In this study, the inclusion of a visual metaphor referring to luxury seemed to provoke a certain marketing placebo effect on luxury, making the product appear more luxurious than it actually was. The use of a brand frame has again proven to be effective, however, it appears that it signals only what is specifically stated, namely luxury and quality.

Table of Contents

Abstract	3
1. Introduction	5
2. Theoretical Framework	7
2.1 The influence of visual metaphors	7
2.2 The influence of brand frames	9
2.3 Need for Cognition	10
2.4 Taste Experience	11
2.5 Quality Perception	12
2.6 Purchase Intention	13
3. Method	14
3.1 Design of the research	14
3.2 Pre-study	15
3.2.1 Visual metaphor	15
3.2.2 Brand frame	16
3.3 Stimulus material	17
3.4 Main study	18
3.4.1 Procedure	18
3.4.2 Measures	18
3.4.4 Participants	19
4. Results	20
4.1 MANOVA	20
4.2 Visual metaphor effects	20
4.3 Brand frame effects	22
4.4 Interaction effects	23
4.5 Regression effects	24
4.6 Overview of hypotheses	25
5. Discussion	26
5.1 Discussion of results	26
5.2 Implications	29
5.3 Limitations and recommendations for future research	29
5.4 Conclusion	30
References	31
Appendices	35
Appendix A – Pre-test: Questionnaire	36
Appendix B – Pre-test: Outcomes	38
Appendix C – Main study: Questionnaire	40
Appendix D – Main study: Items per scale and scale reliability	44
Appendix E – Main study: Outcomes	45
Appendix F – Main study: Experimental Setting	46

1. Introduction

Imagine you are getting your daily take-away coffee from your favourite brand, presented in a nicely designed cup with the brand logo you are used to. You are full of expectations about the taste and presumably it tastes delicious, just like any other day. However, the other day, unbeknown to you, you are offered the exact same coffee, but now without any information, presented in a completely plain cup, and without a recognizable brand logo. Presumably, your expectations about this product dropped immediately after receiving it, and perhaps even your desire for the coffee reduced. Most likely, you will evaluate this coffee as less tasty than your favourite coffee product, since it is not giving you any indications on what to expect. Accordingly, the appearance, or in this case lack of, recognizable information about the product affected both your general perception of the product as well as the overall taste experience, and created a so-called marketing placebo effect (Shiv, Carmon, Ariely, 2005).

As illustrated, consumers prefer the more attractive package design or pick the packaging that is most clear in communicating the benefits of the product (Creusen & Schoormans, 2005). In essence, many consumers frequently base their product choices on the aesthetic product design (Creusen & Schoormans, 2005). However, nowadays, consumers can barely stroll around in a supermarket without seeing a plethora of available products; all presented with their own aesthetic package designs. Consequently, the influence of packaging designs remains a popular research topic in consumer behavior. On the other hand, for companies, it is an ever-growing and essential challenge to break through the advertising clutter by creating a product design that stands out from the crowd. Previous research on the effect of package designs already showed that package designs could generate specific expectations and illusions that change both product experience and product evaluation (e.g. Becker, Van Rompay, Schifferstein, & Galetzka, 2011; Lee, Frederick & Ariely, 2006). Driven by the assumption that consumers make shopping decisions based on certain cues, researchers have been striving to identify how these cues influence the decision-making process. Accordingly, Krutulyte, Costa, and Grunert (2009) explain that all products have intrinsic quality cues, which include all physical characteristics of the product, and extrinsic quality cues, which include all intangible product attributes.

However, how consumers experience food products is not solely determined by the intrinsic characteristics such as the ingredients, extrinsic product characteristics like package design and brand information seem to strongly influence consumer's food perceptions (e.g. Becker et al., 2011; McDaniel & Baker, 1977; Rao & Monroe, 1989; Piqueras-Fiszman & Spence, 2015). The effects of a more traditional way of communicating extrinsic quality cues, for instance by using brand frames, are supported in several researches. As an example, Bogue and Ritson (2004) demonstrated that dairy products lower in fat are seen as more appealing when labelled "good for you" or "natural" rather than "light" or "low-fat". Likewise, in a study by Lee, Frederick and Ariely (2006), respondents tasted a regular beer, and a 'special brew', implying that framing the product as 'special' changed the consumption experience itself. These examples show consumers' remarkable high reliance on external cues and product claims, implying that descriptions, as well as frames, do not only bias consumers' self-reports, but that they change sensory representations of food products (Plassmann et al. 2008; De Araujo et al. 2005; Grabenhorst, Rolls and Bilderbeck 2007), suggesting that marketing actions influence how consumers enjoy the food (Chandon and Wansink 2012).

In like manner, researchers recently seem to consider package design as a marketing action, or branding instrument, that can signal product attributes by communicating attributes in an unobtrusive, symbolic or metaphorical way (Van Ooijen, 2016). The use of visual metaphors seems to make a contribution in creating product differentiation and brand identity by offering possibilities to express certain product attributes in a symbolic way. Research proposes that visual metaphors draw consumers' attention, and seem particularly suitable for communicating product and brand benefits (Van Rompay & Veltkamp, 2014). Metaphors are not only linked to words, but likewise to a wide range of thoughts, therefore metaphorical images can potentially represent these thoughts (Forceville, 2002). In advertising, for instance, Grolsch depicted a beer bottle as lying in a cooler. Since coolers are normally used for champagne, and beer bottles are normally not kept in coolers, there is an abnormality in this image that invites for metaphorical interpretation.

In this case, a visual metaphor is used to trigger associations with *luxury* with the underlying purpose to increase consumer appreciation. Especially this proposed luxury association seems to make a considerable contribution to value creation for the concerning products.

Accordingly, the value creating potential of visual metaphors is particularly interesting since in recent years, an ever-increasing number consumers attempt to distinguish themselves by means of conspicuous consumption. A phenomenon that can be described by the spending of money on luxury goods to publicly display one's wealth (Bagwell & Bernheim, 1996; Kapferer & Bastien, 2009). Interestingly, consumers seem to believe that luxury goods communicate certain symbolic elements that offer them personal and interpersonal benefits such as status (Audrin, Brosch, Chanal and Sander, 2017). Seemingly, consumers seek for distinctive products that communicate not only product and brand benefits, but also provide more abstract benefits like luxury, quality or even status, offering a great opportunity for the use of visual metaphors. However, despite the central role of visual metaphors in modern day advertising, academic research on this topic has been relatively sparse, since the understanding of how consumers process advertising practices is predominantly based on studies using verbal stimuli. This leaves an important gap in literature and provides opportunities, as well as the motivation, for the present study. Consequently, this study tests a new combined researched in which as well the visual metaphor and a brand frame are considered.

Previous research already indicated that marketing actions concerning intangible attributes appeared to adjust consumption experiences of otherwise identical products, provoking a so-called marketing placebo effect (Enax & Weber, 2015). The responses to contextual marketing cues indicated remarkable effects on consumer behaviour, ranging from increased taste pleasantness (Wansink, Payne, and North 2007) to enhanced cognitive performances (Shiv, Carmon, and Ariely, 2005). This study strives to discover if the same principle holds for the use of a visual metaphor and a brand frame in packaging designs. The effectiveness of both an indirect message (visual metaphor) and a more direct message (brand frame), as well as a their joint effect on consumer responses will be considered. The design will be applied to the product coffee, aiming at providing more insights in the effects of metaphors and brand frames on consumer evaluations. Moreover, the role of cognition will be considered. To achieve this goal, a main research question has been set:

“What is the added value of a visual metaphor in communicating luxury perceptions of coffee compared to a more traditional way of communicating luxury by means of a brand frame?”

2. Theoretical Framework

Each year, advertisers spend millions of dollars on marketing actions with the sole purpose of positively influencing consumer evaluations to improve their connected brand image. Jacoby, Olson, and Haddock (1971) explain this brand image as “the subjective, emotional cluster of meaning and symbols that the consumer attributes to a particular brand” (p. 571). At the same time, advertisers are facing the challenge to fulfil the consumer’s increasing demand for high quality products. As a result, the question arises if symbols that contribute to the brand image, such as a visual metaphor and a brand frame on a package design, can be used in order to make products appear more, or less, attractive to the consumer. In this theoretical framework, the influence of a ‘visual metaphor’ and a ‘brand frame’, as well as the role of cognition, on taste experience, quality perception and purchase intention will be discussed on the basis of studies that were conducted in the past years.

2.1 The influence of visual metaphors

Only recently, researchers seem to consider packaging design as a branding instrument that can signal product attributes, such as quality, by communicating these attributes in an unobtrusive, symbolic or metaphorical way (Van Ooijen, 2016). Especially this unobtrusive, metaphorical approach is considered as an interesting and appealing marketing action that offers possibilities to express product features. According to Lakoff and Johnson (1980, p. 195) a metaphor “involves conceptualizing one kind of object or experience in terms of a different kind of object or experience”. In other words, the essence of a metaphor is understanding, or perceiving, one kind of thing in terms of another kind of thing (Lakoff & Johnson, 1980, Forceville, 1994). Visual metaphors are amongst the most well-known forms of rhetorical figures applied in advertising (Mohanty & Ratneshwar, 2015; Phillips, 2003), however despite the fact that visual metaphors have turned into an essential part of modern advertising and their central role in modern communications (Philips, 2003), research on this topic has been relatively sparse.

Visual metaphors seem to make a contribution in creating product differentiation and brand identity by offering possibilities to express certain product attributes. In addition to pursuing product differentiation and drawing consumers’ attention through intrinsic product attributes, research proposes that the use of visual metaphors likewise draws consumers’ attention, and is particularly suitable for communicating symbolic product and brand benefits (Van Rompay & Veltkamp, 2014). Although, according to van Rompay and Veltkamp (2014), the former strategy stems from the idea that consumer attention may be drawn through sensory (over) stimulation, the latter draws consumer attention by presenting “a puzzle to be solved”, and thus occurs on a more cognitive level (Kardes, 1988).

Metaphors have first and foremost been studied in its verbal variants. However, Lakoff and Johnson (1980) indicate that a metaphor is primarily a matter of thought and only derivatively a matter of language. Accordingly, Forceville (1994) introduces visual metaphors as metaphors consisting of two different images that are visualized in a non-literal but in a ‘is’ or ‘is like’ way, replacing an expected image by an unexpected one. A metaphor, then, occurs predominantly on the level of cognition, and can be revealed at both pictorial as well as verbal level (Forceville, 1994). Cognitive elaboration is considered as a critical aspect contributing to the positive effects of metaphor use (Kardes, 1988, Ortony, 1979) since visual metaphors require at least some cognitive interpretation. Visual metaphors, which can be characterized as implicit argumentations, are likely to enhance consumers’ cognitive elaboration when processing the message, which may lead to greater persuasion (Jeong, 2008). According to Sopory and Dillard (2002), visual metaphors, overall, increase attitude change due to cognitive processes (e.g. elaboration of thoughts, organization of information, and mobilization of cognitive resources).

Metaphors are not only linked to words, but likewise to a wide range of thoughts, therefore metaphorical images can potentially represent these thoughts (Forceville, 2002). In advertising, for instance, Grolsch beer comprised a billboard in which the beer bottle is depicted as lying in a cooler. Since a cooler is normally used for champagne, and beer bottles are normally not kept in coolers, there is an abnormality in this image that invites for metaphorical interpretation. In this case, a metaphor is used to trigger associations with *luxury*, *high quality*, or *exclusiveness* (constructs associated with champagne) with the underlying purpose to increase enthusiasm and consumer appreciation of the product and brand.

Likewise, Heinz Tomato Ketchup designed a print ad, in which French fries (a complementary food to tomato ketchup) are presented as a necklace on a red velvet necklace bust display. The communication objective is to change the attitude of the consumer by making ordinary goods (French fries) 'extra ordinary goods' by simply adding Heinz Tomato Ketchup. Again, there is an abnormality in this image that requires metaphorical thinking. Normally, French fries are not used as a necklace, and not presented on a red velvet bust display. The consumer might now consider the ketchup as a more *refined* and *high-quality* product since the depiction of the red velvet bust with necklace triggered associations with *luxury*.

This form of indirect persuasion, thus, relies on consumer inference, by going beyond what is explicitly stated (Johar, 1995). Various researchers argue that specifically this openness makes the advertising attempt persuasive. Visual metaphor use thus offers obvious possibilities for advertising. Williamson (1978) argues that a visual metaphor "borrows" characteristics and affective values from existing, more or less structured domains of human experience, called referent systems, and transfers these to the advertised products. Then, according to Schröder and Vestergaard (1985), the challenge is to get the consumer to associate the product with the desired image or quality by depicting the product with an object or a person whose possession of quality is already obvious to the reader. Thus, there must be a match between the elements from the source (e.g. Grolsch beer) and target (e.g. champagne) domains, as well as the projected features (e.g. high quality). However, the similarity between those elements is not necessarily pre-existent, but is often created by the metaphor itself.

Moreover, in terms of packaging design, Fenko, De Vries and Van Rompay (2018) for instance, conceptualized the concept of strength by a representation of a lion ('as strong as a lion') on coffee packaging. According to Fenko, De Vries and Van Rompay (2018) a lion depicted on coffee packaging triggered associations with strength, resulting in a stronger perceived taste experience of the product, even though the coffee was not a specifically strong coffee. A visual metaphor is naturally irreversible (Forceville, 2002), in this case the lion can symbolize strong coffee, but strong coffee cannot symbolize a lion. In line with the above, research has already shown that visual metaphors have the power to create a specific product experience (Forceville, 2002; Karnal, Machiels, Orth & Mai, 2016; Fenko, De Vries and Van Rompay (2018). Nevertheless, McQuarrie and Phillips (2005) consider a few important features of visual metaphors empathizing the importance of research on this topic. For instance, the researchers state that a metaphor should be relevant to the product category for it to be effective since the chance exists that the image does not portray the right meaning otherwise. Likewise, it should be represented clearly and in an easy interpretable manner in order to be successful.

However, while the number of research on metaphors on product packaging is increasing, less or no research has been conducted on visual metaphors referring to luxury on taste experience and especially quality perception. This creates a research gap and therefore offers an opportunity for new research. Possibly, a metaphor for luxury depicted on a coffee package can give an impression of a high quality coffee, and hence influence the taste experience and the quality perception. This research tests if a metaphor related to luxury on a coffee package has a significant influence on these sensory evaluations. Based on the abovementioned findings, the following hypotheses are formulated to guide the research:

- **H1a/b/c/d/e:** Coffee packages containing a luxury metaphor positively influence the
a) *taste luxury* b) *taste intensity* c) *taste complexity* d) *taste liking* e) *taste consequences* of coffee.
- **H2:** Coffee packages containing a luxury metaphor positively influence the *quality perception* of coffee.
- **H3:** Coffee packages containing a luxury metaphor positively influence the *purchase intention* of coffee.

2.1 The influence of brand frames

Consumers' food choices are influenced by both individual (e.g. taste preferences) and contextual factors (e.g. shopping setting). Therefore, Enax & Weber (2015) describe the importance of *framing* a product. To illustrate, in a study by Lee, Frederick and Ariely (2006), respondents tasted a regular beer, and a 'special brew'. Results indicate that simply framing the product as 'special' changed the consumption experience itself, respondents preferred the 'special' brew over the regular brew. Likewise, when orange juice is framed as 'organic', as opposed to normal orange juice, it appears to evoke a better taste evaluation (Fillion & Arazi, 2002). Similarly, Bogue and Ritson (2004) demonstrated that dairy products are seen as more appealing when labelled "good for you" or "natural" rather than "light" or "low-fat". These examples show consumers' remarkable high reliance on external product cues, implying that framing, does not only bias consumers' self-reports, but changes sensory representations of food products (Plassmann et al. 2008; de Araujo et al. 2005; Grabenhorst, et al., 2007), suggesting that marketing actions influence how consumers enjoy the food (Chandon and Wansink 2012).

As cited by Caswell & Padberg (1992): "Food labels play important third-party roles in the food marketing system through their impact on product design " (p. 460). Consequently, because packaging reaches the consumer at the critical moments of purchase and consumption, it has become an important marketing tool for food companies. Package design can therefore be seen as a form of advertising since it contains certain strategic messages with the main purpose of persuading the consumer. Accordingly, consumers can determine the product's attributes by simply reviewing the claims (e.g. frames) that are displayed. This 'discovering process' is interesting, since companies are still providing complete and accurate information without limiting themselves. However, it requires that consumers make specific assumptions, that they are aware of the claims being made, that the claims will be truthful, and that any product not making the claim must be of low(er) quality (Caswell & Padberg, 1992).

As the abovementioned examples show, food packaging frequently contains claims that communicate product attributes that are supposed to be persuasive, and in turn seem to be effective (Enax & Weber, 2015). Particularly, when consumers get involved in heuristic processing, such claims affect product evaluation (van Ooijen et al., 2016). Since most consumers use brand names as heuristics (mental shortcuts) to make a purchase decision, brand frames that correspond with the brand image may have great influential power. Consequently, food packaging generally contains framed word-level descriptions corresponding with the product such as "original", "great taste" and "rich structure" (van Ooijen et al., 2016). Those simple word-level frames regarding the quality of a product appear to have the power to change hedonic representations of flavour and taste (Grabenhorst, Rolls and Bilderbeck 2007). Although the visual elements of food packaging are largely considered in research on package design, verbal word-level cues should not be disregarded. A textual cue can induce different interpretations of a product since it has the potential of elaborating on what is visually presented, contributing to a higher perceived attractiveness and quality perception (Mueller & Lockshin, 2008; Machiels & Karnal, 2016).

In like manner, a textual cue can be used to support the message of a visual metaphor by giving the right meaning to the image. Since a visual metaphor can be open to interpretation (McQuarrie & Phillips, 2005; van Rompay & Velkamp, 2014), providing context by means of a textual cue may lead to less misinterpretations of the intended message. Accordingly, following the Dual Coding Theory (Paivio, 1990), combining a visual cue with a verbal cue should increase the recognition and retention of the presented product information. Conversely, Machiels and Karnal (2016), show different outcomes on the joint effectiveness of combining a textual cue and a visual cue, indicating that further research on this topic is required. Based on this, the following hypotheses are formulated:

- **H4a/b/c/d/e:** A coffee product that is framed as being exclusive, positively influences the a) *taste luxury* b) *taste intensity* c) *taste complexity* d) *taste liking* e) *taste consequences* of the product.
- **H5:** A coffee product that is framed as being exclusive, positively influences the *quality perception* of the product.
- **H6:** A coffee product that is framed as being exclusive, positively influences the *purchase intention* of the product.
- **H7:** A combination of a metaphor related to luxury and an exclusive brand frame will have a stronger influence on the evaluation of the coffee, compared to when the two elements are presented separately.

Moreover, previous research has shown that consumers have a better attitude towards the product when product cues are presented in a congruent way (Malhotra, 1981; Russell, 2002). Non-congruent product cues however, result in negative product evaluations since consumers perceive them as meaningless information (d'Astous & Seguin, 1999). In line with the congruity theory (Sirgy, Johar, Samli, & Claiborne, 1991), a more consistent message is communicated when there is congruence between product cues. This congruency seems to ensure for a more persuasive message and consequently influences product evaluation. Based on the abovementioned, congruency between the product cues (i.e. brand frame and visual metaphor) will be examined in an explorative manner in this research.

2.3 Need for Cognition

Prior research suggests that the effect of a metaphor does not happen at the surface level of representation, but rather at the level of cognitive thought (Forceville, 1994; Hitchon, 1997; McQuarrie & Phillips, 2005). In support of this line of reasoning, indirect persuasion efforts, like metaphor use, can be favourable since consumers must self-generate the implicitly expressed statement. Likewise, consumers have to engage in a rather extensive level of mental processing in order to process the symbolism (Peracchio & Meyers-Levy, 2005; Van Rompay, Pruyn & Tieke, 2009). However, as envisaged by Cacioppo & Petty (1982), there are considerable differences in the extent consumers engage in and enjoy information processing, which reflects consumers' *need for cognition*.

Need for cognition is primarily a motivational factor. People with a high need for cognition intrinsically enjoy thinking, whereas people with a low need for cognition tend to avoid effortful cognitive thinking (Cacioppo and Petty, 1982). Cacioppo & Petty (1982) developed the need for cognition personality variable to explain individual differences in processing motivation in persuasion attempts. Consumers who have a high need for cognition are likely to process product information in a thoughtful and extensive way, while consumers with a low need for cognition usually process information less carefully and, hence, are arguably less sensitive to very indirect and implicit persuasion efforts (Peracchio & Meyers-Levy, 2005). Consequently, consumers in low need for cognition tend to rely on heuristic cues (e.g. quality claims, brand frames) that require no effortful thinking.

In spite of the fact that need for cognition has been distinguished as influential in metaphor advertising (Phillips & McQuarrie, 2004), there is an absence of confirming empirical data from which to draw inferences. However, the Elaboration Likelihood Model (Petty, Cacioppo, and Schumann, 1983; Petty & Cacioppo, 1986) provides a framework, which helps to understand metaphor's persuasive effects and the role of need for cognition (Chang & Yen, 2013). Consumers in high need for cognition have a tendency to follow the so-called *central route* to persuasion, developing attitudes on rational evaluations of the message (Haugtvedt, Petty, and Cacioppo 1992). Although pictures are frequently considered as heuristic cues (Petty and Cacioppo 1986) that prompt *peripheral route* processing (i.e. processing the message without any active thinking about the attributes), visual metaphors present arguments visually related to a central message which may lead to systematic processing (Jeong, 2008). The complexity of a visual metaphor may attract individuals in high need for cognition, since those complex visuals are challenging to understand (Petty and Cacioppo 1986; Phillips and McQuarrie 2004). On the contrary, consumers in low need for cognition frequently fail to understand the meaning of a complex message (Frey & Eagly, 1993; Chang & Yen, 2013), and therefore are less likely to comprehend the actual message of the metaphor. Altogether, consumers in high need for cognition should comprehend visual metaphors on package design better than their low need for cognition counterparts. Based on this, the following hypotheses are formulated:

- **H8a:** Consumers with a low need for cognition, as opposed to consumers with high need for cognition, are more likely to be affected by a high quality brand frame in terms of taste experience, quality perception and purchase intention.
- **H8b:** Consumers with a high need for cognition, as opposed to consumers with low need for cognition are more likely to be affected by a visual metaphor in terms of taste experience, quality perception and purchase intention.

2.4 Taste Experience

Humans have the capability to discern between five tastes: sweet, sour, salty, bitter and umami (i.e. “tasty” or “delicious” (Ikeda, 2002)). Yet, despite the fact that food is consumed repeatedly, it is challenging to distinguish between these five specific tastes relying solely on one’s sense of taste (Krishna, 2012). Therefore, something “tasty” might as well be influenced by other senses.

Generally, taste is observed as a sensory experience caused by food consumption, which can be evaluated solely through self-report. However, sensory consumption experience is rather subjective since it can be influenced by various factors, such as memories, beliefs and expectations (Enax & Weber, 2015). Likewise, consumers’ taste experience and product evaluation is reliant on the physical appearance of the product (Mantonakis, Cardwell, Beckett, Newman & Garry, 2014). Taste experience appears to be susceptible to several physical product attributes such as package design and brand (e.g. Allison & Uhl, 1964; Piqueras-Fiszman & Spence, 2011). Accordingly, previous research demonstrates that people subconsciously make links between different sensory domains, in other words, they tend to match attributes from one modality (e.g. package design) with attributes from another modality (e.g. product taste). The created association between the modalities vision and taste is called *cross-modal correspondence* (e.g., Schifferstein & Spence, 2008). As an example, it appears that the use of angularity in packaging design affects the taste intensity, as well as the overall experience of the food. Becker, Van Rompay, Schifferstein and Galetzka (2011), for instance, show that the taste of a yoghurt product is perceived as more intense when presented in an angular package compared to a round package.

However, people’s experience when they use and consume products, is not static, but it changes over time since product packaging influences how food products are perceived and experienced throughout buying, usage and consumption (Schifferstein et al., 2013). Consumers have to make certain taste assumptions at the critical point of purchase when they have no real experience with the taste of the product yet, and can only make these assumptions based on the physical properties such as the packaging (Cardello, 1994; Schifferstein et al., 2013). Accordingly, by considering the text, colour and images on a package, to give a few examples, consumers create certain taste expectancies (Deliza, MacFie and Hedderley, 2003). Lee, Frederick and Ariely (2006), demonstrated that food packaging alone influences consumers’ taste experience, and that the actual taste of the product can confirm already made taste expectations. Therefore, the actual taste experience is of great importance, since this determines whether the consumer is satisfied with its purchase decision or not. Thus, although the product package serves as an extrinsic product cue, the product package is not capable of influencing the actual taste, it only changes the perception.

Nowadays, most taste related research centres around the haptic sensations of food packaging relative to taste experiences (e.g. Becker et al., 2011; Van Rompay et al., 2016). The latter, for example, indicates that the texture of a coffee cup influences the perceived sweetness or bitterness of coffee. Nonetheless, it has been proven that textual claims about the taste as well have to potential to create a certain taste experience and expectation. For example, Shankar, Levitan, Prescott and Spence (2009), demonstrated that M&M’s are evaluated as having a more “chocolaty” taste when they were labeled as ‘dark chocolate’ instead of ‘milk chocolate’. Likewise, claiming a product to be “extra tasty” actually causes consumers to perceive the product as more tasty (Grabenhorst, Schulte, Maderwald, Brand, 2013).

Besides these direct and obvious product cues, product properties regarding taste can be signalled in a more subtle way by giving symbolic meaning to the package design (Machiels & Karnal, 2016). By incorporating certain visual representations on the package consumers’ taste perception of the product can be manipulated. For instance, Smith, Barrat & Sørensen (2015), showed that when product packages carry a visual representation of a potentially taste-giving ingredient (e.g. strawberry), consumers expect the corresponding taste to stem primarily from that particular ingredient. However, this was not the case when the package only carried a verbal indication of the taste-giving ingredient (Smith et al., 2015). Schuldt & Hannahan (2013) showed similar results when presenting visuals of unprocessed food to symbolize freshness, resulting in higher perceived freshness of the product. All together, prior studies show the potential of visuals regarding the product attributes to influence consumers’ taste experience.

Since symbolic meaning seems to affect the taste evaluation of consumers, this specific study uses a visual metaphor to symbolize product luxury. Since a visual metaphor has the potential to portray luxury, it is likely that consumers will have a more luxurious taste perception when a visual metaphor is incorporated in the package design. However, according to Mantonakis et al. (2014), visuals (e.g. visual metaphors) related to claims (e.g. brand frame) have the potential to enhance the believability of those claims (i.e. luxury). Therefore, in order to improve the conceptual fluency between the visual and claim, the two constructs require a certain congruity, making it easier for consumers' to generate and process the information related to the proposed taste experience (Mantonakis et al., 2014). However, little is known about the impact of a textual claim (e.g. brand frame) and symbolic meaning (e.g. visual metaphor) when they convey more abstract meanings like luxury. This creates a research gap and therefore offers an opportunity for new research.

2.5 Quality Perception

Consumers infer quality relying on cues ranging from brand name to price, and even advertising endeavours. In consumer research, it is known that consumers form subjective beliefs regarding the product quality based on prior knowledge, as well as cognitive competencies of each individual consumer. Thus, from a consumer perspective, quality research involves *perceived quality*. Hence, more specifically, perceived quality could be explained as the consumer's judgment about a product's overall excellence or superiority (Zeithaml, 1988). Commonly, consumers desire quality and value, however, these terms have abstract meanings that are difficult to pinpoint (Solomon 2011; Sredl and Soukup 2011).

Usually, it is impossible to assess the quality of a product directly at the point of purchase. Therefore, consumers tend to infer the quality of food products on intrinsic and extrinsic quality cues. Expectations regarding the product quality are formed at the point of purchase, based on evaluations of available cues that the consumer perceives as reliable indicators for product quality. Consequently, through consumption, consumers make an evaluation of the experienced quality based on the expected quality and the quality attributes, which confirms or disproves their previously formed expectations (Acebrón & Dopico, 2000). As a result, the expected quality can be considered as one of the predictors of experienced quality, confirming the importance of sensory perception during consumption (Acebrón & Dopico, 2000).

It is known that a visual (e.g. visual metaphor) on a product package has a positive impact on consumer perceptions (Hagtvedt & Patrick, 2008). Similarly, non-probative visuals, those providing no direct evidence for or against a claim, influence consumers' evaluation of those claims (Mantonakis et al., 2014). According to Mantonakis et al. (2014), visuals might affect perception due to its association with related thoughts and images, making the information about the verbal claim (i.e. brand frame) easier to process. To illustrate, in a study by Mantonakis et al. (2014), consumers agreed to a certain claim (*this wine tastes high quality*) more often when wine names appeared with visuals versus without photos. Accordingly, this showed that the presence of a visual was associated with both increased quality perceptions as well as taste perceptions. In this case, the ease with which consumers could process the extrinsic product cues affected their sensory perceptions, suggesting that consumer's ongoing processing experiences influences quality perception. Therefore, in this specific study a visual metaphor (e.g. golden coffee), which represents luxury, will be used to make the information about the verbal claim (e.g. superior blend) easier to process. Consequently, this may lead to an influence in the sensory perception resulting in an increased quality perception of the product due to the association with luxury.

2.6 Purchase Intention

Purchase intentions and ultimately purchase decisions, are mainly based on heuristic, “fast and frugal”, processing of packaging cues (Dijksterhuis, Smith, Van Baaren, & Wigboldus, 2005). Consumers are inclined to base intentions and decisions on explicit cues (e.g. brand frames), as well as more subtle cues that are communicated by packaging design (e.g. visual metaphor). According to Van Ooijen (2016), consumers are more likely to process product design attributes automatically and unconsciously than explicit cues when a product is considered for purchase. Product packaging attaches meaning to the product (Schifferstein et al., 2012), which is beneficial to product identification and evaluation, and ultimately the purchase intention (Piquearas-Fiszman & Spence, 2011; Schifferstein et al., 2012). Similarly, depending on the product design, consumers draw inferences about the product and consequently its taste, which can be considered as a catalyst for purchase intention and decision-making (Becker et al, 2011).

Prior research indicates that consumers’ purchase intention increases if the package design matches the actual content (Morwitz, Steckel & Gupta, 2007), indicating that fluent processing positively affects product evaluations (Lee and Labroo, 2004; Van Rompay and Pruyn, 2011). Additionally, congruence between various modalities, also known as cross-modal correspondence, positively influences overall product evaluation and ultimately improves the decision-making process (Hekkert, 2006; Spence, 2011; Parise & Spence, 2013). That is, consumers attempt to match attributes from one modality (e.g. package design (visual metaphor or brand frame)) to attributes from another modality (e.g. taste experience, quality perception). Consequently, if the modalities are perceived as cross-modal congruent, consumers’ are more intended to purchase the product.

Additionally, metaphors on packaging design may have greater impact on consumers’ purchase processes when presented at the point of purchase (Van Rompay & Velkamp, 2014). However, in order to ensure fluent processing of the package design when a metaphor is incorporated, consumers need to understand the communicated message. Successful comprehension of a visual metaphor therefore depends on cross-domain mapping of concepts (Mohanty & Ratneshwar, 2015). To comprehend the visual metaphor, one has to extract the analogical relations between the source term and the target term to transfer the properties from the source term to the target product (Bowdle & Gentner, 2005). Such cross-domain mapping is likely to become increasingly difficult as incongruity increases, which may lead to greater feelings of incomprehension of the message (Tourangeau & Sternberg, 1981; Mohanty & Ratneshwar, 2015). However, if implemented properly, visual metaphors add value by eliciting a more favorable attitude towards the message and enhancing interest in the advertising attempt, which in turn results in an increased purchase intention (McQuarrie and Mick, 1999; McQuarrie and Phillips, 2005; Ang & Lim, 2006).

Lastly, since quality is an important determinant to purchase intention (Zeithaml, 1988), the present study will mainly focus on a visual metaphor that elicits an association with both luxury and quality.

3. Method

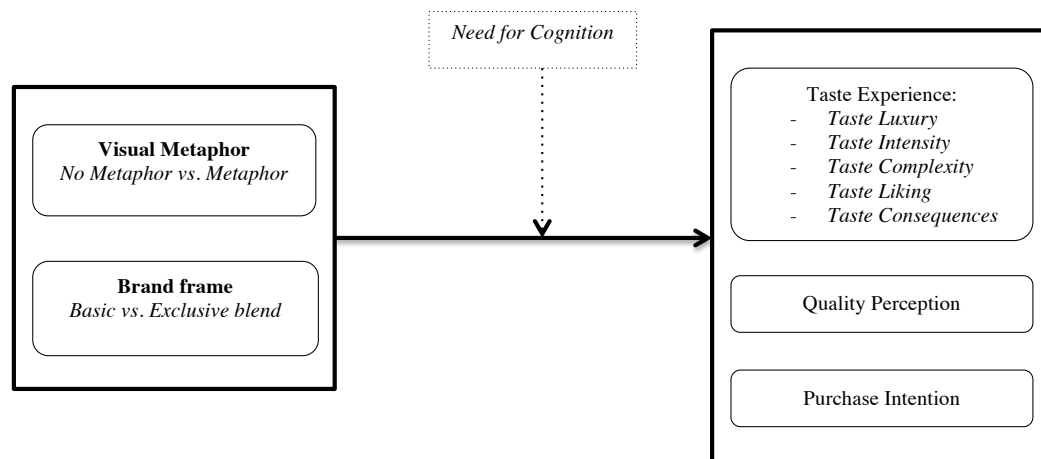
This section elaborates on and justifies the methods used in this research. The aim of this study is to investigate the effects of a visual metaphor on taste experience, quality perception and purchase intention. Moreover, it will be investigated whether the need for cognition moderates these effects. In this chapter, the research design is explained first. Then, the manipulations used for this study (i.e. brand frame and metaphor) are defined based on the results of pre-testing. Finally, the participants, procedure and measurements of the main study are described.

3.1 Design of the research

This study aims to find out what influence a visual metaphor and a brand frame have on consumer perceptions in terms of taste experience, quality perception and purchase intention of coffee. For this study, a 2 (visual metaphor; no metaphor vs. metaphor) x 2 (brand frame; basic vs. exclusive blend), experimental-between-subject design is constructed with Need for Cognition as a moderating variable, resulting in four manipulated conditions. An experimental design has been chosen to investigate the cause-and-effect relationship of each condition. For each manipulated condition 30 participants were used, resulting in a total of 120 participants.

For the execution of this study, a field experiment took place at a very centrally located coffee venue at the campus of the University of Twente. Together with the baristas a suitable coffee for the experiment was decided upon after an initial taste test. This specific coffee was chosen because of its rather plain and standard taste characteristics, attempting to not let the taste of the coffee overshadow the potential effects of the manipulations. Moreover, the taste of the chosen coffee is, according to the barista's, the most consistent over time, which was of extreme importance during the time consuming experiment. Figure 1 shows a visual representation of the research design of this study.

Figure 1: Research model 2 x 2 experimental design



3.2 Pre-study

In the following section, the manipulations that were used to conduct this study are described. First, the visual metaphors in the form of images are presented. Then, the brand frame is described in the form of appropriate frames (i.e. words) regarding the desired association. For both manipulations, pre-tests were conducted, which are discussed thoroughly.

3.2.1 Visual metaphor

In order to decide on an appropriate visual metaphor for the concerning coffee product, the opinions of an expert group, consisting of four baristas from the test location, were taken under advisement. After thoroughly explaining the visual metaphor concept to the expert group and evaluating several product packages from various luxurious coffee brands, the notion of using *gold* as a metaphor arose. Many luxurious coffee brands (e.g. Nespresso, L'or) use the color gold in their package design. However, to my knowledge, the actual product [coffee] is not advertised in gold on any of these package designs yet, leaving a gap in modern day package designs, and at the same time, provides opportunities for the current study. The color gold is the color of extravagance, wealth and richness (Bourn, 2010), which expectantly makes it a suitable metaphor for transferring attributes to the product, and presumably provokes a marketing placebo effect on luxury. Besides, coffee is often referred to as 'the black gold', which entails the potential of communicating a well-fitting metaphorical message. Therefore, in consultation with the barista's 'gold' is chosen as the appropriate metaphor for this particular study.

After deciding on 'gold' as a suitable visual metaphor, a set of ten designs, from which five designs of coffee in its solid form (i.e. beans) and five designs of coffee in its liquid form, were pre-tested on certain luxury aspects: (1) luxurious, (2) prestigious, (3) chic and (4) dominance. Furthermore, each design was tested on realism and attractiveness as a manipulation check. The luxury aspects, as well as the realism and attractiveness, were measured and rated on a 5-point Likert Scale ranging from 'totally not' to 'totally', in relation to the design. All designs were made in Adobe Photoshop and purposely vary in the amount of used gold. To keep all designs constant and to avoid any differences in outcomes, which could be ascribed to differences in manipulations, the designs are all displayed on a black background.



Figure 2: Pre-tested designs: five designs with coffee in its solid form (first row) and five designs with coffee in its liquid form (second row).

A total of 50 respondents filled out the pre-test. To analyze, the means of the luxury aspects, (1) luxurious, (2) prestigious, (3) chic and (4) dominance, were compared in order to find out which design received the highest rating on the concerning aspects. Moreover, the means from all the separate luxury aspects are also considered as a *total* mean in order to get an impression of the overall luxury association of the specific designs. Out of ten designs, design 1 and 3 (from the designs displayed above) scored significantly higher on all luxury aspects than the other eight designs. Since the total mean scores of both designs are nearly the same, and in line with the main purpose of this study, the score on the aspect *luxury* is considered as the decisive factor for determining the appropriate design.

Subsequently, design number 3 (spoon with golden coffee beans) scores considerably higher on *luxury* ($M=4.00$, $SD=1.03$) than design number 1 ($M = 3.90$, $SD = .74$). Additionally, design number 3 was more suitable to manipulate into a ‘non metaphorical design’ (i.e. brown coffee beans instead of gold), which was considered as the conclusive decision-making factor to select design number 3. Thus, design number 3 has been chosen as the appropriate design for the visual metaphor. All means and standard deviations of the ten designs are presented in Appendix B.

As for realism ($M = 2.20$, $SD = 1.07$) and attractiveness ($M = 3.08$, $SD = 1.21$), design number 3 scored a little lower in comparison to some other posters. Both constructs, realism and attractiveness, were measured using one statement, respectively “I think this image is realistic” and “I think this image is attractive”, where respondents rated from “totally not” to “totally” on a 5-point Likert Scale. However, due to the metaphorical meaning of the design (i.e. coffee beans are normally not gold) the relatively low score on realism is not of great significance in this case. An overview of the means and standard deviations for both the separate constructs, as well as the total mean score can be found in Appendix B.

3.2.2 Brand frame

In order to decide on an appropriate brand frame, a set of 20 expressions, of which 10 represented the ‘basic’ concept and, correspondingly 10 represented the ‘premium’ concept, were pre-tested on the level of luxury association. The luxury aspect was measured and rated on a 5-point Likert Scale ranging from ‘totally not luxurious’ to ‘totally luxurious’, in relation to the brand frame.

For the ‘basic’ brand frame condition the ten following frames were pre-tested: normal, basic, regular, standard, common, usual, average, classic, ordinary and traditional. Subsequently, for the ‘premium’ brand frame condition the ten following frames were pre-tested: golden, premium, excellent, exclusive, finest, superior, deluxe, luxury, rich and special. In order to provide more context in terms of the brand frame and the relation to the concerning product, the word ‘blend’ was added in both the ‘basic’ and ‘premium’ condition.

A total of 100 respondents ($N = 100$) participated in the pre-test. To analyze, the means of the ten ‘premium’ frames were compared in terms of means, with a minimum of 0.0 and a maximum of 5.0 due to the 5-point Likert Scale. Out of ten frames, the frame ‘exclusive blend’ showed the highest mean ($M = 4.32$, $SD = 0.68$), which indicates that this frame provokes the best association with luxury. Likewise, the means of the ten ‘basic’ frames were compared in terms of means were the lowest mean indicated the least luxurious frame. Out of ten frames, the frame ‘basic blend’, showed the lowest mean ($M = 1.83$, $SD = 0.81$), which indicates that this frame is not at all associated with luxury. Based on the results of the pre-test it was determined that the brand frames *exclusive blend* as well as *basic blend*, are to be the appropriate frames for the main study. Appendix B provides a complete overview of means and standard deviations for each brand frame.

3.3 Stimulus material

Based on the outcomes of the pre-test, a few small adjustments were made in order to optimize the visual metaphor design for the use of the main study. Some coffee beans were not entirely portrayed on the pre-tested design, for the final design those coffee beans were removed in order to create a more balanced image. Other than that, no changes have been made to the final design of the metaphor, in order to best replicate the luxury associations from the pre-test. The non-metaphorical counterpart was designed using the exact same image; only the gold from the coffee beans is replaced by a 'coffee brown' color using Adobe Photoshop.

For the main study, both the concerning visual metaphors and brand frames are merged into one sticker for each condition, resulting in four different stickers (see Figure 2). For the execution of the experiment, the stickers were placed onto plain black coffee bags. The brand frame (i.e. *basic blend* and *exclusive blend*) is designed in a rather standard and sans-serif typeface (i.e. Arial) in all four conditions, in order to not let the typeface interfere with the message. Furthermore, the text is designed in a very light grey tone to minimize hard contrasts that could appear slightly cheap. Lastly, to provide more context, the word *coffee* as well as the content indicator *1000g*, were added to give a more realistic impression of a coffee bag.

Figure 3: Stimulus material for all four conditions.



3.4 Main study

For the main study, a 2 (visual metaphor; *no metaphor vs. metaphor*) x 2 (brand frame; *basic vs. exclusive blend*), experimental-between-subject design has been executed with Need for Cognition as a moderating variable. The field-experiment took place at a centrally located coffee company at the campus of the University of Twente. The following paragraphs describe the procedure, measurements and participants of this study.

3.4.1 Procedure

Participants were approached at the coffee place and asked if they would be willing to participate in a simple coffee taste test. The participants were told that the offered coffee was a new type of coffee from a new startup brand that was about to be introduced. If asked, the participants were told that the purpose of the taste test was to explore the market and gather opinions about the new product. Furthermore, participants were told that the coffee they would taste is from the package that was placed right in front of them (with the concerning sticker for each specific condition on it). Importantly, the coffee was poured in a plain white cup in all conditions in order to ensure that this would not have an influence on the results. No further information about the content was given and questions regarding the product were not answered in order to prevent any biases. Next, participants filled out the survey comprising of the dependent measures. Finally, participants were thanked for their participation and offered a 10% discount at the coffee place.

3.4.2 Measures

The questionnaire used for the experiment measures all variables (Taste Experience, Quality Perception and Purchase Intention). If available, existing scales for the constructs were used. All items were measured on a 7-point Likert Scale, including reversed items in order to avoid bias. The questionnaire starts with the declaration of participation with age above 18 years old as a selection criterion, where participants under the age of 18 were excluded from the research. The questionnaire ends with demographical questions regarding age, gender and educational level. Lastly, two control questions were asked regarding coffee consumption and coffee preferences (respectively: “*How many cups of coffee do you drink on a daily basis?*” and “*How do you prefer to drink your coffee? ... black... with milk... etc.*”). The reliability of the scales is calculated according to the values of Cronbach’s Alpha. The values need to be at least .70 in order to be called reliable (Spector, 1991). Appendix C presents the final scales and respectively the reliability scores. All items, except *taste complexity*, have an alpha of at least .78 and can be called reliable.

Taste Experience

The construct taste experience measures how the participants evaluate the taste of the coffee. The taste experience construct is divided into several sub-constructs (1) taste luxury ($\alpha = .90$), (2) taste intensity ($\alpha = .79$), (3) taste complexity ($\alpha = .56$), and (4) taste liking ($\alpha = .92$). For each sub-construct, the participant could indicate their level of agreement on a 7-point scale ranging from “strongly disagree” to “strongly agree” on statements like ‘*This coffee tastes... luxurious... intense... delicious... etc.*’. Moreover, the sub-construct (5) taste consequences ($\alpha = .81$), was added to the questionnaire to measure the physical effects the participants expect to get from consuming the coffee. For this sub-construct, the participant had to indicate their level of agreement on statements like ‘*I have the feeling that this coffee will make me... alert... aroused... powerful... etc.*’, using a 7-point scale. The used items are based on a comparable research by Fenko, De Vries and Van Rompay (2018), and slightly adapted to fit this study.

Quality Perception

The construct quality perception was measured based on Dodds’ (2002) perceived value scale ($\alpha = .89$), using only the three items that measure the quality construct to fit the purpose of this study. The perceived quality is indicated on a 7-point Likert scale, using statements like ‘*I believe this coffee is of good quality*’ and ‘*I think this coffee will outperform other coffees*’. In order to fit the nature of this research, the statement ‘*I think this coffee belongs to a luxurious lifestyle*’ was included in this construct, which did not affect the reliability. In fact, all four items were needed to reach this level of reliability.

Purchase Intention

Other than the evaluation of specific taste concepts and the quality perception, the purchase intention was measured with one single item derived from Dodds, Monroe and Grewal (1991), '*I would consider buying this coffee at the supermarket*', using a 7-point Likert scale ranging from "strongly disagree" to "strongly agree". Notably, the question regarding purchase intention included the note 'the product fits within your budget', to avoid possible deviations in price perception and accordingly purchase intention.

Need for Cognition

Finally, in order to monitor a possible moderation effect the Need for Cognition Scale, developed by Cacioppo, Petty and Kao's (1984) was used ($\alpha = .78$). The Need for Cognition is measured on a 5-point Likert scale, ranging from 'extremely uncharacteristic of me' to 'extremely characteristic of me', using statements like "*I prefer complex to simple problems*" and "*Thinking is not my idea of fun*". The original scale consists of eighteen items, which was reduced to eight statements to fit the purpose of this study. When selecting suitable items, an equal amount of positively and negatively formulated items were chosen.

3.4.3 Participants

The field experiment took place in the corner of the coffee company at the campus of the University of Twente. For each condition, 30 participants were gathered, resulting in a total of 120 participants (i.e. there are 4 conditions). By means of random sampling, participants were selected to participate in the study. Table 3 presents age and gender distribution across the experiment conditions. In terms of educational level the vast majority of the participants have a bachelor degree (48,3%) or a pre-university degree (40,8%).

A Chi-Square test shows that there were no significant differences, $X^2(3) = 2.53, p = .47$, between gender and the conditions. A one-way ANOVA confirmed that there were no significant differences between the conditions and ages, $F(3, 119) = 1.93, p = .13$. Moreover, a one-way ANOVA also confirmed that there were no significant differences between the conditions and coffee consumption, $F(3, 119) = .95, p = .42$. These results confirm that the sample was random.

Table 1: Mean and standard deviations for gender and age across the experimental conditions

Condition	N	Gender		Age		Coffee Consumption	
		Male	Female	Mean	SD	Mean	SD
Basic brand frame / No metaphor	30	18 (60%)	12 (40%)	23.97	4.91	3.47	2.03
Basic brand frame / Metaphor	30	18 (60%)	12 (40%)	20.87	2.19	2.87	2.03
Exclusive brand frame / No metaphor	30	18 (60%)	12 (40%)	20.70	2.31	2.57	1.63
Exclusive brand frame / Metaphor	30	13 (43.3%)	17 (56.7%)	22.90	6.29	3.10	2.71
Total	120	67 (55.8%)	53 (44.2%)	22.91	4.93	3.00	2.13

Moreover, the participants were asked about their coffee consumption and coffee preferences. With these questions the different types of consumers were controlled in this study, which could be used as a manipulation check. Based on these questions it can be concluded that most participants are frequent coffee drinkers. On average the participants drink 3 cups on a daily basis with a minimum of 0 cups and a maximum of 10 cups a day. ($M = 3.00, SD = 2.13$). As for the coffee preferences, the vast majority of the respondents prefer to drink black coffee (60%) followed by coffee with milk (21,7%).

4. Results

The goal of this study was to find out what impact a visual metaphor has on taste experience, quality perception and purchase intention, and how this interacts with textual cues in the form of a brand frame. The following chapters reveal the results of the present study. In order to analyse the outcomes of this research, an initial MANOVA was conducted followed by two-way ANOVA's for each dependent variable. For each construct, the possible main- and interaction effects were examined. Furthermore, analyses of covariance were used to statistically control for the effect of other continuous variances that are not of primary interest. Moreover, the congruence between the visual metaphor and brand frame was examined in an explorative manner. However, this research provides no evidence for congruency effects between the product cues. All notable results are presented in this section, which leads to a confirmation or disconfirmation of the proposed hypotheses. An overview of the descriptive statistics of the variables and the results of the two-way ANOVA tests can be found in Appendix E. Further elaboration and implications regarding the results are presented in the next chapter.

4.1 MANOVA

In order to reduce the risk of an inflated Type I error, an initial multivariate analysis of variance (MANOVA) was conducted with visual metaphor, brand frame and Need for Cognition as independent variables. The constructs taste luxury, taste intensity, taste liking, taste consequences, quality perception and purchase intention served as dependent variables. This analysis yielded a significant multivariate effect of visual metaphor use ($F(6, 107) = 4.62, p < 0.001$; Wilks' $\Lambda = .795$). The multivariate effect of brand frame did not reach significance ($F(6, 107) = 1.02, NS$), neither did the interaction of visual metaphor and brand frame ($F(6, 107) = .54, NS$). In terms of the moderating variable Need for Cognition, this analysis yielded a marginally significant multivariate effect of the interaction between a visual metaphor and Need for Cognition $F(6, 107) = 1.99, p = 0.07$; Wilks' $\Lambda = .899$. The interaction between brand frame and Need for Cognition did not reach significance $F(6, 107) = .29, NS$.

4.2 Metaphor effects

The effects of a visual metaphor were tested by means of a univariate ANOVA, where two out of the total four conditions contained the metaphoric image, and the remaining two conditions contained the non-metaphoric image. The findings of this study are presented below for each construct and summarized in Table 2.

Taste Luxury

The use of a visual metaphor appears to have a **significant main effect** on *taste luxury*, $F(1, 119) = 21.43, p < .001$, where the mean of the *metaphor* condition ($M = 4.44, SD = 1.23$) is larger than the mean of the *non-metaphor* condition ($M = 3.47, SD = 1.16$). From this analysis, it seems that the variable *visual metaphor* has a significant influence on taste luxury. Thus, in the *metaphor* condition, participants experienced a more luxurious taste, compared to the *non-metaphor* condition. This is in line with the proposed hypothesis, claiming that a visual metaphor has a positive influence on the luxury taste perception of the coffee (H1a).

Taste Intensity

The visual metaphor seems to have a **significant main effect** on *taste intensity*, $F(1, 119) = 6.66, p = .01$, where the mean of the *metaphor* condition ($M = 4.23, SD = .95$) is larger than the mean of the *non-metaphor* condition ($M = 3.81, SD = .99$). According to this analysis, it seems that the variable *visual metaphor* has a significant influence on taste intensity. Thus, in the *metaphor* condition, participants experienced a more intense taste, compared to the *non-metaphor* condition. This is in line with the proposed hypothesis, claiming that a visual metaphor has a positive influence on the taste intensity of the coffee (H1b).

Taste Liking

The use of a visual metaphor appears to have a **significant main effect** on *taste liking*, $F(1,119) = 4.37, p = .03$, where the mean of the *metaphor* condition ($M = 5.14, SD = 1.03$) is larger than the mean of the *non-metaphor* condition ($M = 4.73, SD = 1.30$). According to this analysis, it appears that the variable *visual metaphor* has a significant influence on taste liking. Hence, in the *metaphor* condition, participants liked the taste better, compared to the *non-metaphor* condition. This is in line with the proposed hypothesis, claiming that a visual metaphor has a positive influence on the taste liking of the coffee (H1d).

Taste Consequences

As for *taste consequences*, the effect of a visual metaphor was not found significant $F(1,119) = .59, p = .44$. Subsequently, this results in a rejection of the proposed hypothesis (H1e). Thus, in this research a visual metaphor has no significant influence on *taste consequences*.

Quality Perception

The visual metaphor appears to have a **significant main effect** on *quality perception*, $F(1,119) = 4.37, p = .008$. For this construct, the mean of the *metaphor* condition ($M = 4.28, SD = 1.28$) is larger than the mean of the *non-metaphor* condition ($M = 3.68, SD = 1.28$). From this analysis, a visual metaphor shows to have an influence on quality perception. Thus, in the *metaphor* condition, participants' perception of quality was higher, compared to the *non-metaphor* condition. This is in line with the proposed hypothesis, claiming that a visual metaphor has a positive influence on quality perception of the coffee (H2).

Purchase Intention

Lastly, the effect of a visual metaphor was found **marginally significant** on *purchase intention*, $F(1,119) = 2.17, p = .10$, which means that the current data almost confirms the main effect a visual metaphor for this construct. On purchase intention the mean of the *metaphor* condition ($M = 4.83, SD = 1.56$) is larger than the mean of the *non-metaphor* condition ($M = 4.42, SD = 1.59$). From this analysis, a visual metaphor seems to have an influence on purchase intention, which leads to a confirmation of the proposed hypothesis (H3). Accordingly, in this study a visual metaphor has a marginally significant influence on *purchase intention*. Thus, in the *metaphor* condition the participants were more inclined to buy the product, compared to the *non-metaphor* condition.

Table 2: Results of the univariate ANOVA on metaphor for all variables.

			<i>Non-metaphor</i>		<i>Metaphor</i>	
	<i>F</i>	<i>p</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Taste Luxury	21.43	.00*	3.47	1.16	4.44	1.23
Taste Intensity	6.66	.01	3.81	0.99	4.23	0.95
Taste Liking	4.37	.03	4.73	1.30	5.14	1.03
Taste Consequences	.59 (<1)	.44 (ns)	4.33	0.92	4.46	0.98
Quality Perception	4.37	.008	3.68	1.28	4.28	1.28
Purchase Intention	2.17	.10	4.42	1.59	4.83	1.56

* $p < 0.001$

4.3 Brand frame effects

A univariate ANOVA tested the effects of a brand frame, where two out of four conditions contained the brand frame 'Basic Blend' and the other two conditions contained the brand frame 'Exclusive Blend'. The effects of brand frame are discussed below. An overview of the results is presented in Table 3.

Taste Luxury

The use of a brand frame has a **significant main effect** on *taste luxury*, $F(1,119) = 5.03, p = .02$, where the mean of the *exclusive blend* condition ($M = 4.21, SD = 1.35$) is larger than the mean of the *basic blend* condition ($M = 3.71, SD = 1.18$). From this analysis, it seems that the variable brand frame has a significant influence on taste luxury. Thus, in the *exclusive blend* condition, participants experienced a more luxurious taste, compared to the *basic blend* condition. This is in line with the proposed hypothesis, claiming that an exclusive brand frame has a positive influence on the taste luxury perception of the coffee (H4a).

Taste Intensity

The brand frame effect was not found significant for *taste intensity*, $F(1,119) = 0.52, p = .48$. This leads to a rejection of the proposed hypothesis (H4b), thus, in this study a brand frame has no significant influence on *taste intensity* of coffee.

Taste Liking

The effect of a brand frame was also not found significant for *taste liking*, $F(1,119) = 1.27, p = .26$. Consequently, this leads to a disconfirmation of the proposed hypothesis (H4d). Thus, in this study a brand frame has no significant influence on *taste liking* of coffee.

Taste Consequences

As for *taste consequences*, the effect of a brand frame was not found significant, $F(1,119) = 2.10, p = .15$. Subsequently, this results in a rejection of the proposed hypothesis (H4e), thus, in this research a brand frame has no significant influence on *taste consequences*.

Quality Perception

The use of a brand frame has a **significant main effect** on *quality perception*, $F(1,119) = 3.89, p = .05$, where the mean of the *exclusive blend* condition ($M = 4.22, SD = 1.42$) is larger than the mean of the *basic blend* condition ($M = 3.74, SD = 1.15$). From this analysis, it seems that the variable brand frame has a significant influence on *quality perception*. Thus, in the *exclusive blend* condition, participants' perception of quality was higher, compared to the *basic blend* condition. This is in line with the proposed hypothesis, claiming that an exclusive brand frame has a positive influence on the quality perception of the coffee (H5).

Purchase Intention

Lastly, the effect of a brand frame was found **marginally significant** on *purchase intention*, $F(1,119) = 2.60, p = .10$, which means that the current data almost confirms the main effect of a brand frame for this construct. On purchase intention, the mean of the *exclusive blend* condition ($M = 4.83, SD = 1.58$) is larger than the mean of the *basic blend* condition ($M = 4.38, SD = 1.57$). From this analysis, a brand frame seems to have a marginally significant influence on purchase intention, which leads to a confirmation of the proposed hypothesis (H6). Thus, in the *exclusive blend* condition the participants were more inclined to buy the product, compared to the *basic blend* condition.

Table 3: Results of the univariate ANOVA on brand frame for all variables.

	<i>F</i>	<i>p</i>	<i>Basic Blend</i>		<i>Exclusive Blend</i>	
			<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Taste Luxury	5.03	.02	3.71	1.18	4.21	1.35
Taste Intensity	.52 (<1)	.48 (ns)	3.94	.88	4.10	1.1
Taste Liking	1.27	.26 (ns)	4.79	1.31	5.08	1.04
Taste Consequences	2.10	.15 (ns)	4.27	.97	4.52	.91
Quality Perception	3.89	.05	3.74	1.15	4.22	1.42
Purchase Intention	2.60	.10	4.38	1.57	4.83	1.58

4.4 Interaction effects

A univariate ANOVA tested if there were any interaction between the use of a visual metaphor and a brand frame. However, this analysis showed no interaction effects between the variables. Accordingly, this indicates that brand frame and visual metaphor do not interact with each other; there is no combined effect of the factors on the dependent variables. In other words, both factors do not strengthen, nor reduce, each other's effects. This results in a disconfirmation of H7, which proposed that a brand frame and a visual metaphor together have a more positive effect on the dependent variables, compared to when the factors are presented separately.

However, when adding the moderating variable *Need for Cognition* to the analysis, there seems to be an interaction effect of the variable *visual metaphor* and *Need for Cognition* on *quality perception*, $F(1,119) = 4.14, p = .04$. According to this analysis, it seems that Need for Cognition moderates the effect of a visual metaphor and, consequently, increases quality perception. Interestingly, the effect of *Need for Cognition* is found significant in the *Low Need for Cognition* category ($p = .001$), where the mean of the *metaphor* condition ($M = 4.50, SD = .23$) is larger than the mean of the *non-metaphor* condition ($M = 3.39, SD = .25$). The mean difference is found significant at the .05 significance level. Thus, in line with the predictions, *need for cognition* seems to moderate the effect of a visual metaphor on quality perception. However, it was expected that high need for cognition, instead of low need for cognition would trigger this effect. Therefore, this results in a disconfirmation of H8b and respectively H8a, which proposed that the metaphor has more effect on participants in high need for cognition as opposed to participants in low need for cognition. Table 4 shows the interaction between a visual metaphor and Need for Cognition.

Table 4: Results interaction effect: visual metaphor * need for cognition on quality perception.

	<i>F</i>	<i>p</i>	<i>Non-metaphor</i>		<i>Metaphor</i>	
			<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Metaphor * Need for Cognition	4.14	.04				
<i>Low Need for Cognition</i>		.001	3.39	.25	4.50	.23
<i>High Need for Cognition</i>		.62 (ns)	3.91	.22	4.07	.24

4.5 Regression analysis

Moreover, in order to see if the constructs taste luxury, taste intensity, taste liking, taste consequences and subsequently, quality perception, have a direct effect on the purchase intention, a stepwise multiple regression analysis was conducted. According to the abovementioned two-way ANOVA, the construct *quality perception* appears to be significantly influenced by the use of a brand frame. Correspondingly, the construct *quality perception* seems to have a predictive power for the construct *purchase intention*. Although the construct *taste consequences* did not appear to be influenced by the use of a brand frame or a metaphor according to the aforementioned two-way ANOVA, the variable does seem to have a predictive power for the construct *purchase intention*. All other constructs showed no significant effect on purchase intention and were deleted from the regression analysis. The results from the regression analysis are presented in Table 5.

Table 5: Regression analysis of quality perception and taste consequences.

Models	β	t	P	F	Adj. R ² (ΔR^2)
Model 1				46.056	.28 (.006)
Quality Perception	.53	6.79	.00		
Model 2				29.038	.32 (.012)
Quality Perception	.39	4.4	.00		
Taste Consequences	.27	2.99	.00		

The remaining variables in the regression analysis are respectively *quality perception* and *taste consequences* and support H9a and H9b. Interestingly, both *quality perception* and *taste consequences* appeal to a rather abstract sensation instead of easy to pinpoint features. Merely the variable *quality perception* already predicts purchase intention for 28% and has a significant influence on purchase intention, $\beta = .53$, $t = 6.79$, $p < .001$. However, including *taste consequences*, $\beta = .27$, $t = 2.99$, $p < .01$, to the model with the quality perception, $\beta = .39$, $t = 4.40$, $p < .001$, increases its predictive power with 4%, which leads to a final adjusted R² of .32. Thus, *quality perception* and *taste consequences* together then predict almost 33% of the *purchase intention* of the coffee.

4.6 Overview of hypotheses

Considering the abovementioned results the proposed hypotheses can either be confirmed or disconfirmed, as is presented below.

	Hypotheses	Confirmed
H1a	Coffee packages containing a luxury metaphor positively influence the <i>taste luxury</i> of coffee.	Yes
H1b	Coffee packages containing a luxury metaphor positively influence the <i>taste intensity</i> of coffee.	Yes
H1c	Coffee packages containing a luxury metaphor positively influence the <i>taste complexity</i> of coffee.	-
H1d	Coffee packages containing a luxury metaphor positively influence the <i>taste liking</i> of coffee.	Yes
H1e	Coffee packages containing a luxury metaphor positively influence the <i>taste consequences</i> of coffee.	No
H2	Coffee packages containing a luxury metaphor positively influence the <i>quality perception</i> of coffee	Yes
H3	Coffee packages containing a luxury metaphor positively influence the <i>purchase intention</i> of coffee	Yes*
H4a	A coffee product that is framed as being exclusive, positively influences the <i>taste luxury</i> of the product.	Yes
H4b	A coffee product that is framed as being exclusive, positively influences the <i>taste intensity</i> of the product	No
H4c	A coffee product that is framed as being exclusive, positively influences the <i>taste complexity</i> of the product.	-
H4d	A coffee product that is framed as being exclusive, positively influences the <i>taste liking</i> of the product.	No
H4e	A coffee product that is framed as being exclusive, positively influences the <i>taste consequences</i> of the product. .	No
H5	A coffee product that is framed as being exclusive, positively influences the <i>quality perception</i> of the product.	Yes
H6	A coffee product that is framed as being exclusive, positively influences the <i>purchase intention</i> of the product.	Yes*
H7	A combination of a metaphor related to luxury and an exclusive brand frame will have a stronger influence on the evaluation of the coffee, compared to when the two elements are presented separately.	No
H8a	Consumers with low need for cognition, as opposed to consumers with high need for cognition, are more likely to be affected by a high quality brand frame in terms of <i>taste experience quality perception</i> , and <i>purchase intention</i> .	No
H8b	Consumers with a high need for cognition, as opposed to consumers with low need for cognition are more likely to be affected by a visual metaphor in terms of <i>taste experience</i> , <i>quality perception</i> and <i>purchase intention</i> .	No
H9a	The <i>taste experience</i> will mediate the effects of the brand frame and metaphor and positively influence the final purchase intention	Yes**
H9b	The <i>quality perception</i> will mediate the effects of the brand frame and metaphor and positively influence the final purchase intention	Yes

* These results were significant for an alpha level of .10.

** Confirmed for the construct *taste consequences*.

5. Discussion

The goal of this study was to gain more insights into the effects of brand frames and visual metaphors on product packages. In order to explore these effects, four different conditions containing either a basic or exclusive brand frame, and a visual metaphor or not, were tested and used to analyse the dependent variables *taste experience*, *quality perception* and *purchase intention*. This section evaluates all results for each factor and presents the final conclusions. Furthermore, based on the findings of this research, implications as well as limitations are discussed. Lastly, an overall and general conclusion is given.

5.1 Discussion of results

A visual metaphor provokes significant effects

Only recently, researchers show an increasing amount of attention to metaphor use on product packaging since it can contribute to the consumer's evaluation of a product (Sundar & Noseworthy, 2014; Van Rompay & Velkamp, 2014; Fenko, De Vries, Van Rompay, 2018). This research confirms these discoveries and reveals that the use of a metaphor, in this case golden coffee beans to communicate luxury, positively influences consumer responses. The golden coffee beans portrayed on the coffee packaging appeared to be successful in communicating certain product attributes. Most importantly, the coffee packages containing the golden coffee beans showed a significant effect of the metaphor on taste luxury; the taste perception was much more luxurious compared to the non-metaphor condition. Thus, in line with previous findings (Forceville, 2002), a visual metaphor appears to be an effective tool in communicating a product attribute, in this case luxury, by giving the illusion that the product contains specific luxury attributes. The same principle holds for the construct *taste liking*, apparently the use of a visual metaphor provokes higher scores on *tastiness*, *deliciousness* and *goodness* of the coffee. It can be concluded that the golden beans as a metaphor for luxury have also resulted in an illusion of a better taste, again providing evidence that a visual metaphor is an effective tool for communicating product attributes.

Interestingly, the taste of the coffee in the metaphor condition was perceived as more intense compared to packages without the metaphor. Even though the metaphor does not specifically signal intensity, and the used coffee was not particularly strong, the metaphor succeeded to indicate a more intense taste perception in a way that was hypothesized. Fenko, De Vries and Van Rompay (2018) found comparable results, even though that study particularly focused on provoking a stronger taste perception by means of a metaphor related to strength, the findings indicated that the use of a metaphor appears to be an effective way to signal intensity. Most likely, consumers assumed that a luxurious coffee naturally contains a more intense flavour, resulting in higher taste intensity. A possible explanation for this phenomenon can be found in Ortony's (1975) vividness hypothesis, which states that metaphors seem particularly suitable for describing intense emotions, since metaphorical language is more prevalent in descriptions of intense as compared to mild emotional states. As an illustration, people often describe their negative emotional state with sayings like '*I feel like I have been hit by a train*' (i.e. intense emotional state, train is massive and intense), and their positive emotional state with remarks like '*I am on cloud nine*' (i.e. extremely mild emotional state, clouds are light). Following the vividness hypothesis, the association between gold, which is a heavy metal, provoked a likewise 'heavy effect' on the taste intensity. However, in retrospect to the package designs, one might even expect that the non-metaphor condition (e.g. dark brown beans) would have been perceived as equally intense due to the dark colour use.

Even though consumers indicated the coffee in the metaphor condition as more intense, the metaphor appeared to have no effect on *taste consequences*. Surprisingly, participants did not expect that the coffee would make them more... alert... concentrated...etc., some effects one might typically expect from intense coffee. The golden coffee beans, apparently do not match with this construct and are consequently not directly associated with taste consequences. However, keeping in mind that the tested consequences are actually long-term consequences one might question if the outcomes give a fair representation of reality. Even though the statement regarding taste consequences specially stated '*will make*', the time between tasting the product and answering that question might not have been enough.

In line with the predictions, the golden coffee beans portrayed on the coffee packaging appeared to be successful in communicating *quality perception* and *purchase intention*. This is in line with the predictions and corresponds with previous findings that metaphor use is successful in communicating attributes like these (Fenko, De Vries & Van Rompay, 2018; Van Rompay & Veltkamp, 2014). Moreover, it matches with the outcomes on the taste luxury concept, which appeared to be influenced by the use of a metaphor as well. Apparently, and in line with the predictions, gold as a metaphor succeeded in transferring attributes like extravagance, wealth and richness to the product, as proposed by (Bourn, 2010). Concluding, a metaphor seems very suitable for communicating luxury attributes by creating a marketing placebo effect on luxury that enhances taste experience, quality perception, and consequently increases the purchase intention.

A brand frame works best for communicating a specific product attribute

This study aimed to find out to which extent a brand frame, as a form of a direct message, is of influence in the luxury evaluation, and most of all, experience of a product. To compare the effects of the indirect message of the visual metaphor, the brand frame was selected to match the message of the visual metaphor. In line with the predictions, an *exclusive brand frame* did contribute to communicating the desired attributes of a luxurious coffee. The use of a brand frame appeared to be significant on *taste luxury* and *quality perception* as well as on *purchase intention*. In line with previous findings, a textual cue like a simple word-level descriptions regarding the quality of a product, appeared to have the power to change hedonic representations of flavour and taste (Grabenhorst, Rolls and Bilderbeck, 2007).

Seemingly, the coffee packages containing an *exclusive brand frame* positively influenced the evaluation and experience of the product. However, the *exclusive brand frame* did not contribute to the *taste intensity*, *taste liking* and *taste consequences*. Remarkably, these variables all measure different constructs of the variable *taste experience*. A possible explanation for this lies in the fact the frame *exclusive blend* did not give any indication of the expected intensity, liking or consequences, which resulted in no effect of the brand frame on these constructs. Moreover, taste experience appears to be susceptible to several physical product attributes. Previous research shows that people have the tendency to match attributes from one modality, like package design, with attributes from another modality, like product taste. Perhaps, this cross-modal correspondence provides the explanation for the current findings. The textual cue on the package design (one modality) referred to the attribute exclusiveness, most likely caused a certain taste experience (other modality) since people intuitively matched the attribute exclusiveness to the taste. The created association, following the theory of cross-modal correspondence, between the modalities vision (reading exclusive blend) and people's taste experience probably caused the current findings. Moreover, since the other attributes are not an direct intuitive match (i.e. exclusiveness does not automatically refer to taste intensity, taste liking and taste consequences) it might be possible that people chose the option that matched best with was specifically stated. However, this is just an assumption and requires further research.

Consequently, it can be concluded that the *brand frame* signaled exactly what it was supposed to signal, namely luxury, and nothing else. Consequently, it can be concluded that a brand frame works best for communicating a specific product attribute, like in this case luxury, but is not beneficial in communicating additional attributes. The used brand frame was very simple and straightforward, this strategy most likely convinced the consumer about the benefits of the product, resulting in a better product experience. The use of a brand frame did not show a negative effect in this study, thus, it can be concluded that a brand frame does what it is supposed to do, by creating a certain marketing placebo effect, and most importantly, does not negatively influence other elements. Therefore, the use of a brand frame appears to be a simple and effective communication tool for signaling product attributes by means of product packages.

No joint effectiveness

This study found no interactions between the factors, thus, there is no combined effect of the factors on the dependent variables. Both factors do not strengthen, nor reduce, each other's effect, but are found effective on its own. This is in contradiction with the expectations and not in line with Paivio's Dual Coding Theory (1990), which proposes that both visual and verbal cues are processed and recognized better when presented together instead of separately. This research however, shows no effects of a combination of the brand frame and the visual metaphor, which results in doubts about their joint effectiveness. Correspondingly, this study shows no effect cross-modal congruency between the visual and textual cue. However, in this case the relatively small sample size per condition could have been of influence. Therefore, it might be of interest to explore the effects when including larger sample sizes per condition.

Though, the results are not completely incongruent with previous researches, Machiels and Karnaal (2016) found that a text and image together did not show any interaction effects on the level of consumer processing. Likewise, Fenko, De Vries and Van Rompay (2018) found that a visual metaphor with a corresponding text claim on taste intensity did not show an interaction effect of both factors. This indicates that the joint effectiveness of visual and verbal cues, and mainly the way consumer processes them, requires further investigation.

However, this study did find an interaction between visual metaphor use and consumer's *need for cognition*. Surprisingly, this effect turns out to be different than expected. This study indicates that need for cognition moderates the effect of a visual metaphor, and consequently increases *quality perception*. However, the effect of the visual metaphor is found in the low need for cognition category instead of the expected high need for cognition category. Possibly, the obvious metaphor used in this research did not require much deliberate thinking to understand the message due to the dominance of gold in the message. Most likely, the amount of gold prompted peripheral route processing Petty, Cacioppo & Schumann, 1983), and was considered as a heuristic cue for quality, something most consumers in low need for cognition rely on. However, the actual reason remains unknown and therefore requires further research.

Quality perception as an indicator for purchase intention

In this study, the construct *quality perception* seems to be influenced by the use of a visual metaphor and only shows a marginally significant effect of a brand frame. The construct *taste consequences* is not influenced by either brand frame or metaphor use. Nonetheless, the two constructs together do have a predictive power of almost one third, on the construct purchase intention. Interestingly, both *quality perception* and *taste consequences* appeal to a rather abstract sensation of the product derived from the intrinsic product attributes like its taste, instead of easy to pinpoint product features like the packaging. Most likely, the coffee packaging was of less importance than the actual coffee itself since this research was designed as a taste panel. However, the constructs *quality perception* and *taste consequences* are important predictors for the intention to actually buy the product. Especially *quality perception* seems a rather logical predictor of purchase intention; expectantly, coffee should be of decent quality in order to be considered for purchase. However, in this study, still more than two-third of the purchase intention is determined by untested and unknown factors, which is rather interesting.

Interestingly, the fact that consumers could actually taste the concerning product could have had an impact on the initial opinion of the product which is solely based on the coffee packaging. In a normal shopping situation, consumers do not have the opportunity to taste the product before considering purchasing it. However, in this artificial shopping situation, consumers did taste the coffee product and the factors *quality perception* and *taste consequences* became predictive of the purchase intention, not knowing if this stems from the packaging or the actual taste. Therefore, it might be possible that these two constructs have a rather different effect when the consumers experience it differently when the possibility of tasting before purchasing is absent. However, this matter remains unknown in this study, yet, it can be concluded that especially the quality perception of the product gives a fair indication about the consumers' intention to purchase.

5.2 Implications

Practical implications

Previous research already shows that, especially in the supermarket environment, the package design of a product influences consumers' decision-making process (Creusen & Schoormans, 2005; Schifferstein, et al., 2013). In order to stand out in the overcrowded supermarket shelves knowledge about the effects of the package design, as well as additional factors influencing consumer perceptions, is crucial to companies. Since supermarkets nowadays offer a plethora of products, companies now have to come up with innovative package designs to grab the consumer's attention. This study shows that the use of a visual metaphor displayed on a package design might be one of those innovative package design ideas. Incorporating a visual metaphor on the package design, in this case one referring to luxury, seems to successfully signal product attributes in a metaphorical and indirect way, leading to an enhanced taste experience, quality perception and ultimately purchase intention, offering quite new insights in the use of visual metaphors on package designs which might be beneficial to future product design development.

Theoretical implications

This research supports previous findings on the influence of package design on consumer responses, making existing theories and findings more valid and valuable. In turn, this study also provides new data and contributes to the current knowledge about the influence of package design, which opens doors for new research. As this study built forth on existing studies by combining findings from several studies, this research is a good example of the rather unknown combinations of elements in research on package design. Accordingly, the outcomes from this study can be used to find and test new combinations of elements that might also be of influence. Perhaps combining or testing the outcomes of this research with other elements like shape, texture, weight, color, scent etc., among different products and product categories, offers new insights to eventually strive to narrow down the research gap on this topic.

5.3 Limitations and recommendations for future research

This study provides some interesting outcomes that may be beneficial for future research. However, there are some noteworthy limitations involved that should be considered. First, and most importantly, this study was executed with a relatively small sample size, which in turn provides limited data. Consequently, some effects are based on marginally significant results, which possibly gives a distorted view of the actual effects. In order to rule out any biases that may be the result of the sample size, more data is required.

With regards to the research procedure, there are a few factors that could be considered as a limitation. Most importantly, the test location could have been of influence when assessing the quality of the coffee product. Although the experiment specifically mentioned that the offered coffee was not from the concerning coffee company, participants could have been influenced by the environment or even suspect that the coffee is from the coffee company. However, since the coffee company is a rather well known brand offering coffee of good quality this might have biased the respondents. Also, the rather cozy environment of the coffee company might have been of influence. Therefore, it might be of interest for future research to simulate the same experiment in a different setting (e.g. laboratory experiment, or directly at the point-of-purchase).

Considering the stimulus material for the visual metaphor, it is noteworthy that the printed version used during the experiment slightly differs from the pre-tested online version. Even though the sticker was designed in a way that would minimize differences in on-screen and print version, the printer encountered some minor problems when printing the golden color. Therefore, the golden color appeared slightly less shiny on the printed version than intended. For future research it might be of interest to use a better-printed golden version to possibly reach its full benefits.

Moreover, this study used an online questionnaire as a measurement instrument, which enables for relatively fast data collection. However, this provides a self-report of the participant and unfortunately offers no insights in the possible unconscious processes caused by the manipulations. Concerning the participants group, it is noteworthy that the vast majority consisted of students with a bachelor or pre-university degree, which runs the risk of a response bias. It might have been the case that participants second-guessed the purpose of the research since they are familiar with experiments like these. In order to minimize the risk of a response bias, students from the marketing communications track were excluded from the experiment. Although it is not expected that a response biased occurred, it might be interesting to execute the same experiment among different participants in order to generalize the findings.

In line with the above-mentioned limitations, additional recommendations for future research can be formulated. Most importantly, it would be interesting to investigate if the results can be generalized, using a larger sample size. If so, it might be interesting to investigate if the same principle holds for different types of products or even product categories. Moreover, this research used a quite obvious visual metaphor, therefore, it might be interesting to see if a less obvious metaphor (e.g. less gold) provokes the same effects in order to generalize the effects of a visual metaphor on luxury. Additionally, it might be interesting to build forth on previous research on embodiment (e.g. Van Rompay et al., 2014) in order to examine the effects of embodiment and visual metaphor use. It might be possible that a visual metaphor provokes different effects when embodiment is considered and incorporated in the design.

Also, the role of the moderating variable need for cognition requires further investigation. This research found contradicting results than was hypothesized, in this case participants in low need for cognition were affected by the metaphor instead of participants in high need for cognition. It is possible that the amount of gold used in this metaphorical image caused a distorted view on the role of need for cognition in understanding metaphors. Therefore, in future research it would be of interest to see if the moderating effect of need for cognition differs when the metaphor is less obvious.

5.4 Conclusion

The overall findings testify to the importance of packaging design to consumer responses and, most importantly, provide insights into the manner through which visual metaphors affect consumer perceptions. With respect to the underlying process, the findings presented, emphasize the importance of symbolic meaning in package design. That is, metaphor use (in this research golden coffee beans) affects consumer evaluations since it seems to transfer attributes from the source domain (gold) to the target domain (coffee). Metaphor use has been found to be a successful strategy in communicating product attributes like luxury, it positively affects taste experience, enhances quality perception and consequently increases purchase intention. Though not all effects were found significant, the outcomes and the detectable trend yield more interest in the effects of metaphor use on package design. Moreover, the brand frame has proven to be effective in communicating product attributes like luxury, but only in a more traditional and less attractive manner. In terms of the brand frame, it can be concluded that the brand frame signals exactly what it was supposed to signal, namely luxury, and nothing else. This study aimed at answering the following research question: *What is the added value of a visual metaphor in communicating luxury perceptions of coffee compared to a more traditional way of communicating luxury by means of a brand frame?* Through an experiment, this study succeeded in answering this question. A visual metaphor has proven to be successful in communicating luxury, provoking more luxurious taste experience, enhancing quality perception and consequently, increasing purchase intention. All together, this research confirms that incorporating visual, as well as textual cues, in packaging design can be considered as an effective marketing tool.

References

- Acebrón, L. B., & Dopico, D. C. (2000). The importance of intrinsic and extrinsic cues to expected and experienced quality: an empirical application for beef. *Food Quality and Preference*, 11(3), 229- 238.
- Allison, R. I., & Uhl, K. P. (1964). Influence of beer brand identification on taste perception. *Journal of Marketing Research*, 36-39.
- Ang, S. H., & Lim, E. A. C. (2006). The influence of metaphors and product type on brand personality perceptions and attitudes. *Journal of Advertising*, 35(2), 39-53.
- Audrin, C., Brosch, T., Chanal, J., & Sander, D. (2017). When symbolism overtakes quality: Materialists consumers disregard product quality when faced with luxury brands. *Journal of Economic Psychology*.
- Bagwell, L. S., & Bernheim, B. D. (1996). Veblen effects in a theory of conspicuous consumption. *The American Economic Review*, 349-373.
- Becker, L., Van Rompay, T. J., Schifferstein, H. N., & Galetzka, M. (2011). Tough package, strong taste: The influence of packaging design on taste impressions and product evaluations. *Food Quality and Preference*, 22(1), 17-23.
- Bogue, J. & Ritson, C. (2004). Integrating consumer information with the new product development process: The development of lighter dairy products. *International Journal of Consumer Studies*, 30(1), 34-44.
- Bourn, J. (2010). Color Meaning: Meaning of the color gold. Retrieved from Bourn Creative: <http://bourncreative.com/meaning-of-the-color-gold>.
- Bowdle, B. F., & Gentner, D. (2005). The career of metaphor. *Psychological review*, 112(1), 193.
- Cacioppo, J. T., & Petty, R. E. (1982). The need for cognition. *Journal of Personality and Social Psychology*, 42(1), 116- 131
- Cacioppo, J. T., Petty, R. E., & Feng Kao, C. (1984). The efficient assessment of need for cognition. *Journal of personality assessment*, 48(3), 306-307.
- Cardello, A. V. (1994). Consumer expectations and their role in food acceptance. In *Measurement of food preferences* (pp. 253-297). Springer US.
- Caswell, J. A., & Padberg, D. I. (1992). Toward a more comprehensive theory of food labels. *American Journal of Agricultural Economics*, 74(2), 460-468.
- Chandon, P., & Wansink, B. (2012). Does food marketing need to make us fat? A review and solutions. *Nutrition reviews*, 70(10), 571-593.
- Chang, C. T., & Yen, C. T. (2013). Missing ingredients in metaphor advertising: The right formula of metaphor type, product type, and need for cognition. *Journal of Advertising*, 42(1), 80-94.
- Creusen, M. E., & Schoormans, J. P. (2005). The different roles of product appearance in consumer choice. *Journal of product innovation management*, 22(1), 63-81.
- De Araujo, I. E., Rolls, E. T., Velazco, M. I., Margot, C., & Cayeux, I. (2005). Cognitive modulation of olfactory processing. *Neuron*, 46(4), 671-679.
- d'Astous, A., & Seguin, N. (1999). Consumer reactions to product placement strategies in television sponsorship. *European journal of Marketing*, 33(9/10), 896-910.
- Deliza, R., Macfie, H. A. L., & Hedderley, D. (2003). Use of computer-generated images and conjoint analysis to investigate sensory expectations. *Journal of Sensory Studies*, 18(6), 465-486.
- Dijksterhuis, A., Smith, P. K., Van Baaren, R. B., & Wigboldus, D. H. (2005). The unconscious consumer: Effects of environment on consumer behavior. *Journal of Consumer Psychology*, 15(3), 193-202.
- Dodds, W. B., Monroe, K. B., & Grewal, D. (1991). The effects of price, brand and store information on buyers' product evaluations. *Journal of Marketing Research*, 28 (August), 307-
- Enax, L., & Weber, B. (2015). Marketing Placebo Effects-From Behavioral Effects to Behavior Change?. *Journal of agricultural & food industrial organization*, 13(1), 15-31.
- Fenko, A., de Vries, R., & van Rompay, T. J. (2018). How strong is your coffee? The influence of visual metaphors and textual claims on consumers' flavour perception and product evaluation. *Frontiers in psychology*, 9, 53.
- Fillion, L., & Arazi, S. (2002). Does organic food taste better? A claim substantiation approach. *Nutrition & Food Science*, 32(4), 153-157.

- Forceville, C. (1994). Pictorial metaphor in advertisements. *Metaphor and Symbol*, 9(1), 1-29.
- Forceville, C. (2002). The identification of target and source in pictorial metaphors. *Journal of pragmatics*, 34(1), 1-14.
- Frey, K. P., & Eagly, A. H. (1993). Vividness can undermine the persuasiveness of messages. *Journal of Personality and Social Psychology*, 65(1), 32.
- Grabenhorst, F., Rolls, E. T., & Bilderbeck, A. (2007). How cognition modulates affective responses to taste and flavor: top-down influences on the orbitofrontal and pregenual cingulate cortices. *Cerebral Cortex*, 18(7), 1549-1559.
- Grabenhorst, F., Schulte, F. P., Maderwald, S., & Brand, M. (2013). Food labels promote healthy choices by a decision bias in the amygdala. *NeuroImage*, 74, 152-163.
- Hagtvedt, H., & Patrick, V. M. (2008). Art infusion: The influence of visual art on the perception and evaluation of consumer products. *Journal of Marketing Research*, 45(3), 379-389.
- Hagtvedt, C. P., Petty, R. E., & Cacioppo, J. T. (1992). Need for cognition and advertising: Understanding the role of personality variables in consumer behavior. *Journal of Consumer Psychology*, 1(3), 239-260.
- Hekkert, P. (2006). Design aesthetics: principles of pleasure in design. *Psychology science*, 48(2), 157.
- Hitchon, J. C. (1997). The locus of metaphorical persuasion: An empirical test. *Journalism & Mass Communication Quarterly*, 74(1), 55-68.
- Ikeda, K. (2002). New Seasonings. *Chemical Senses*, 27(9), 847-849.
- Jacoby, J., Olson, J. C., & Haddock, R. A. (1971). Price, brand name, and product composition characteristics as determinants of perceived quality. *Journal of Applied Psychology*, 55(6), 570- 579.
- Jeong, S. H. (2008). Visual metaphor in advertising: Is the persuasive effect attributable to visual argumentation or metaphorical rhetoric?. *Journal of Marketing Communications*, 14(1), 59-73.
- Johar, G. V. (1995). Consumer involvement and deception from implied advertising claims. *Journal of Marketing Research*, 267-279.
- Kardes, F. R. (1988). Spontaneous inference processes in advertising: The effects of conclusion omission and involvement on persuasion. *Journal of Consumer Research*, 15(2), 225-233.
- Karnal, N., Machiels, C. J., Orth, U. R., & Mai, R. (2016). Healthy by design, but only when in focus: Communicating non-verbal health cues through symbolic meaning in packaging. *Food Quality and Preference*, 52, 106-119.
- Kapferer, J.N., & Bastien, V. (2009). *The luxury strategy: Break the rules of marketing to build luxury brands*. London: Kogan Page Ltd.
- Krishna, A. (2012). An integrative review of sensory marketing: Engaging the senses to affect perception, judgment and behavior. *Journal of Consumer Psychology*, 22(3), 332-351.
- Krutulyte, R., Costa, A. L., & Grunert, K. G. (2009). A cross-cultural study of cereal food quality perception. *Journal of Food Products Marketing*, 15, 304-323.
- Lakoff, G., & Johnson, M. (1980). The metaphorical structure of the human conceptual system. *Cognitive science*, 4(2), 195-208.
- Lee, L., Frederick, S., & Ariely, D. (2006). Try it, you'll like it: The influence of expectation, consumption, and revelation on preferences for beer. *Psychological science*, 17(12), 1054-1058.
- Lee, A. Y., & Labroo, A. A. (2004). The effect of conceptual and perceptual fluency on brand evaluation. *Journal of Marketing Research*, 41(2), 151-165.
- Machiels, C. J., & Karnal, N. (2016). See how tasty it is? Effects of symbolic cues on product evaluation and taste. *Food Quality and Preference*, 52, 195-202.
- Malhotra, N. K. (1981). A scale to measure self-concepts, person concepts, and product concepts. *Journal of marketing research*, 456-464.
- Mantonakis, A., Cardwell, B., Beckett, R., Newman, E., & Garry, M. (2014). The mere presence of a photo on a product label can change taste perception. In *Conference Proceedings of the 8th International Conference of the Academy of Wine Business Research* (pp. 609-614).
- McDaniel, C., & Baker, R. C. (1977). Convenience food packaging and the perception of product quality. *Journal of Marketing*, 41(4), 57-58.

- McQuarrie, E. F., & Mick, D. G. (1999). Visual rhetoric in advertising: Text-interpretive, experimental, and reader-response analyses. *Journal of consumer research*, 26(1), 37-54.
- McQuarrie, E. F., & Phillips, B. J. (2005). Indirect persuasion in advertising: How consumers process metaphors presented in pictures and words. *Journal of advertising*, 34(2), 7-20.
- Mohanty, P., & Ratneshwar, S. (2015). Did you get it? Factors influencing subjective comprehension of visual metaphors in advertising (forthcoming). *Journal of Advertising*, 1-11. doi:10.1080/00913367.2014.967424
- Morwitz, V. G., Steckel, J. H., & Gupta, A. (2007). When do purchase intentions predict sales?. *International Journal of Forecasting*, 23(3), 347-364.
- Mueller, S., & Lockshin, L. (2008). *How Important is Wine Packaging for Consumers? On the Reliability of Measuring Attribute Importance with Direct Verbal Versus Indirect Visual Methods* (Doctoral dissertation, Academy of Wine Business Research).
- Ortony, A. (1979). The role of similarity in similes and metaphors. *Metaphor and thought*, 186-201.
- Paivio, A. (1990). *Mental representations: A dual coding approach*. Oxford University Press.
- Parise, C., & Spence, C. (2013). Audiovisual cross-modal correspondences in the general population. *The Oxford handbook of synaesthesia*, 790-815.
- Peracchio, L. A., & Meyers-Levy, J. (2005). Using stylistic properties of ad pictures to communicate with consumers. *Journal of Consumer Research*, 32(1), 29-40.
- Petty, R. E., & Cacioppo, J. T. (1986). The elaboration likelihood model of persuasion. *Advances in experimental social psychology*, 19, 123-205.
- Petty, R. E., Cacioppo, J. T., & Schumann, D. (1983). Central and peripheral routes to advertising effectiveness: The moderating role of involvement. *Journal of consumer research*, 10(2), 135-146.
- Phillips, B. J. (2003). Understanding visual metaphor in advertising. In L. M. Scott & R. Batra (Eds.), *Persuasive imagery: A consumer response perspective*. Mahwah, NJ: Lawrence Erlbaum.
- Phillips, B. J., & McQuarrie, E. F. (2004). Beyond visual metaphor: A new typology of visual rhetoric in advertising. *Marketing theory*, 4(1-2), 113-136.
- Piqueras-Fiszman, B., & Spence, C. (2011). Crossmodal correspondences in product packaging. Assessing color-flavor correspondences for potato chips (crisps). *Appetite*, 57(3), 753-757.
- Piqueras-Fiszman, B., Spence C. (2015) Sensory expectations based on product extrinsic food cues: an interdisciplinary review of the empirical evidence and theoretical accounts. *Food Qual Prefer*, 40. 165-79.
- Plassmann, H., O'Doherty, J., Shiv, B., & Rangel, A. (2008). Marketing actions can modulate neural representations of experienced pleasantness. *Proceedings of the National Academy of Sciences*, 105(3), 1050-1054.
- van Ooijen, I. (2016). Packaging design as communicator of product attributes: Effects on consumers' attribute inferences.
- van Ooijen, I., Franssen, M. L., Verlegh, P. W., & Smit, E. G. (2016). Atypical food packaging affects the persuasive impact of product claims. *Food Quality and Preference*, 48, 33-40.
- Rao, A. R., & Monroe, K. B. (1989). The effect of price, brand name, and store name on buyers' perception of product quality: An integrative review. *Journal of marketing research*, 351-357.
- Russell, C. A. (2002). Investigating the effectiveness of product placements in television shows: The role of modality and plot connection congruence on brand memory and attitude. *Journal of consumer research*, 29(3), 306-318.
- Schifferstein, H. N., Fenko, A., Desmet, P. M., Labbe, D., & Martin, N. (2013). Influence of package design on the dynamics of multisensory and emotional food experience. *Food Quality and Preference*, 27(1), 18-25.
- Schröder, K., & Vestergaard, T. (1985). *The language of advertising*. UK: Basil Blackwell Publisher Ltd.
- Schuldt, J. P., & Hannahan, M. (2013). When good deeds leave a bad taste. Negative inferences from ethical food claims. *Appetite*, 62, 76-83.
- Shankar, M. U., Levitan, C. A., Prescott, J., & Spence, C. (2009). The influence of color and label information on flavor perception. *Chemosensory Perception*, 2(2), 53-58.
- Shiv, B., Carmon, Z., & Ariely, D. (2005). Placebo effects of marketing actions: Consumers may get what they pay for. *Journal of marketing Research*, 42(4), 383-393.

- Sirgy, M. J., Johar, J. S., Samli, A. C., & Claiborne, C. B. (1991). Self-congruity versus functional congruity: Predictors of consumer behavior. *Journal of the Academy of Marketing Science*, 19(4), 363-375.
- Smith, V., Barratt, D., & Selsøe Sørensen, H. (2015). Do natural pictures mean natural tastes? Assessing visual semantics experimentally. *Cognitive Semiotics*, 8(1), 53-86.
- Solomon, M. (2011): Consumer Behavior. Buying, Having and Being. 6th ed. Pearson/Prentice hall, New York; ISBN 978-0131404069.
- Sopory, P. & Dillard, J. P. (2002) The persuasive effects of metaphor: a meta-analysis, *Human Communication Research*, 28(3), pp. 382–419.
- Spector, P.E. (1991). Summated rating scale construction. Thousand Oaks: Sage publications inc.
- Spence, C. (2011). Crossmodal correspondences: A tutorial review. *Attention, Perception, & Psychophysics*, 73(4), 971-995.
- Srédli K., Soukup A. (2011): consumer's behaviour on food markets. *Agricultural Economics – czech*, 57: 140–144.
- Sundar, A., & Noseworthy, T. J. (2014). Place the logo high or low? Using conceptual metaphors of power in packaging design. *Journal of Marketing*, 78(5), 138-151.
- Tourangeau, R., & Sternberg, R. J. (1981). Aptness in metaphor. *Cognitive psychology*, 13(1), 27-55.
- Van Rompay, T. J., De Vries, P. W., Bontekoe, F., & Tanja-Dijkstra, K. (2012). Embodied product perception: Effects of verticality cues in advertising and packaging design on consumer impressions and price expectations. *Psychology & Marketing*, 29(12), 919-928.
- Van Rompay, T. J., Finger, F., Saakes, D., & Fenko, A. (2016). “See me, feel me”: Effects of 3D-printed surface patterns on beverage evaluation. *Food Quality and Preference*.
- Van Rompay, T. J., & Pruyn, A. T. (2011). When visual product features speak the same language: Effects of shape-typeface congruence on brand perception and price expectations. *Journal of Product Innovation Management*, 28(4), 599-610.
- Van Rompay, T. J., Pruyn, A. T., & Tieke, P. (2009). Symbolic meaning integration in design and its influence on product and brand evaluation. *International journal of design*, 3(2).
- Van Rompay, T. J., & Veltkamp, M. (2014). Product packaging metaphors: Effects of ambiguity and explanatory information on consumer appreciation and brand perception. *Psychology & marketing*, 31(6), 404-415.
- Wansink, B., Payne, C. R., & North, J. (2007). Fine as North Dakota wine: Sensory expectations and the intake of companion foods. *Physiology & Behavior*, 90(5), 712-716.
- Williamson, J. (1978) *Decoding Advertisements: Ideology and Meaning in Advertising*. London: Marion Boyars.
- Zeithaml, V. A. (1988). Consumer perceptions of price, quality, and value: a means-end model and synthesis of evidence. *The Journal of marketing*, 2-22.

Appendices

A: Pre-test - Questionnaire

B: Pre-test – Outcomes

C: Main study - Questionnaire

D: Main study – Items per scale and scale reliability

E: Main study – Outcomes

F: Main study – Experimental Setting

Appendix A

1. Questionnaire Pre-test (in Dutch)

Note: the questions were asked in Dutch, however the brand frames were presented in English already in order to prevent any differences in interpretation between the pre-test and the mainstudy.

-- Introduction --

Beste respondent,

Allereerst wil ik u hartelijk danken voor uw deelname aan dit onderzoek. In het kader van mijn masteropleiding Marketing Communication aan de Universiteit Twente doe ik onderzoek naar de invloed van productverpakking op product evaluaties waarbij het product koffie centraal staat. In deze korte enquête ziet u een aantal uitdrukkingen en afbeeldingen waar enkele vragen over gesteld worden.

Het onderzoek zal ongeveer 5 minuten van uw tijd in beslag nemen. Er zal vertrouwelijk met uw gegevens worden omgegaan en de resultaten worden geheel anoniem verwerkt.

Mocht u nog vragen of opmerkingen hebben over het onderzoek of interesse hebben in de resultaten, neem dan contact met mij op via m.h.folsche@student.utwente.nl.

Nogmaals hartelijk dank voor uw deelname aan dit onderzoek.

*Met vriendelijke groet,
Marloes*

Er komt een nieuwe hoge kwaliteitskoffie op de markt. Welk van de onderstaande beweringen associeert u het meest luxe en goede kwaliteit? Geef dit aan op een schaal van 1 (totaal niet luxe) tot 5 (zeer luxe).

	Totaal niet luxe	Niet luxe	Neutraal	Luxe	Zeet luxe
Special blend	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Classic blend	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Regular blend	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Basic blend	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Premium blend	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Superior blend	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Standard blend	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Luxury blend	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Normal blend	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Traditional blend	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Usual blend	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Deluxe blend	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Common blend	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ordinary blend	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Finest blend	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Excellent blend	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Golden blend	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Exclusive blend	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Average blend	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rich blend	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Wat is uw leeftijd?

Wat is uw geslacht?

- ☐ Man
☐ Vrouw

Hoeveel koppen koffie drinkt u gemiddeld per dag?
(Als u geen koffie drinkt vul dan 0 in)

Wat vindt u van de volgende afbeelding?



Deze afbeelding komt op mij over als:

	Helemaal niet	Niet	Neutraal	Wel	Helemaal wel
Luxeus	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Prestigieus	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Chique	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dominant	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Aantrekkelijk	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Realistisch	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Note: The same question as the one displayed above, was asked for each of the ten designs.

Appendix B

1. Outcomes pre-test visual metaphor design

Appendix Table 1: Mean and standard deviations of the pre-tested visual metaphors

Design	N	Luxury	Prestige	Chic	Dominance	Total	Design	N	Luxury	Prestige	Chic	Dominance	Total
1	50	M: 3,90 SD: 0,74	M: 3,86 SD: 0,76	M: 3,84 SD: 0,74	M: 3,44 SD: 0,91	<i>M: 3,76</i>	6	50	M: 3,26 SD: 1,16	M: 3,26 SD: 1,01	M: 3,40 SD: 0,99	M: 3,10 SD: 1,02	<i>M: 3,26</i>
2	50	M: 2,58 SD: 1,11	M: 2,76 SD: 1,14	M: 2,46 SD: 1,07	M: 2,44 SD: 0,97	<i>M: 2,56</i>	7	50	M: 3,26 SD: 1,08	M: 3,16 SD: 0,99	M: 3,26 SD: 1,01	M: 3,02 SD: 0,94	<i>M: 3,18</i>
3	50	M: 4,00 SD: 1,03	M: 3,74 SD: 1,08	M: 3,82 SD: 0,89	M: 3,44 SD: 0,88	<i>M: 3,75</i>	8	50	M: 3,64 SD: 0,92	M: 3,46 SD: 0,95	M: 3,72 SD: 0,67	M: 3,16 SD: 0,79	<i>M: 3,49</i>
4	50	M: 3,00 SD: 1,23	M: 2,92 SD: 1,05	M: 2,96 SD: 1,23	M: 2,96 SD: 1,11	<i>M: 2,96</i>	9	50	M: 3,66 SD: 0,98	M: 3,44 SD: 1,01	M: 3,40 SD: 1,11	M: 2,86 SD: 0,97	<i>M: 3,34</i>
5	50	M: 3,18 SD: 1,21	M: 3,06 SD: 1,04	M: 3,20 SD: 1,07	M: 2,88 SD: 1,02	<i>M: 3,08</i>	10	50	M: 3,40 SD: 1,03	M: 3,36 SD: 0,96	M: 3,32 SD: 1,06	M: 3,18 SD: 1,02	<i>M: 3,31</i>

2. Outcomes pre-test visual metaphor design manipulation check

Appendix Table 2: Mean and standard deviations of the pre-tested designs on the control questions

Design	N	Attractiveness	Realism	Design	N	Attractiveness	Realism
1	50	M: 3,80 SD: 0,86	M: 3,40 SD: 0,97	6	50	M: 2,80 SD: 1,18	M: 2,76 SD: 1,24
2	50	M: 2,34 SD: 1,06	M: 2,72 SD: 1,37	7	50	M: 2,90 SD: 1,25	M: 2,84 SD: 1,25
3	50	M: 3,08 SD: 1,21	M: 2,20 SD: 1,07	8	50	M: 3,76 SD: 1,02	M: 3,98 SD: 0,96
4	50	M: 2,78 SD: 1,36	M: 2,40 SD: 1,03	9	50	M: 3,02 SD: 1,10	M: 2,22 SD: 1,11
5	50	M: 3,32 SD: 1,08	M: 3,46 SD: 1,09	10	50	M: 3,28 SD: 1,13	M: 2,92 SD: 1,26

3. Outcomes pre-test brand frame

Appendix Table 3: Mean and standard deviations of the pre-tested brand frames

Frame	Luxury	Frame	Luxury	Frame	Luxury	Frame	Luxury
Golden blend	M: 3,92 SD: 0.73	Superior blend	M: 4,08 SD: 0.79	Normal blend	M: 2,34 SD: 0.76	Usual blend	M: 2,09 SD: 0.83
Premium blend	M: 3,80 SD: 0.82	Deluxe blend	M: 3,90 SD: 0.67	Basic blend	M: 1,83** SD: 0.81	Average blend	M: 2,39 SD: 0.78
Excellent blend	M: 4,06 SD: 0.74	Luxury blend	M: 4,05 SD: 0.72	Regular blend	M: 2,44 SD: 0.76	Classic blend	M: 2,95 SD: 0.73
Exclusive blend	M: 4,32* SD: 0.68	Rich blend	M: 3,67 SD: 0.75	Standard blend	M: 2,14 SD: 0.82	Ordinary blend	M: 2,38 SD: 1.05
Finest blend	M: 3,73 SD: 0.74	Special blend	M: 3,66 SD: 0.69	Common blend	M: 2,15 SD: 0.72	Traditional blend	M: 2,87 SD: 0.76

* Highest mean score on luxury indicating that this brand frame is the most suitable as 'premium' frame

** Lowest mean score on luxury indicating that this brand frame is the most suitable as 'basic' frame

Appendix C

1. Questionnaire main study

Dear coffee lover,

First of all, thank you for your time and your efforts to taste and grade this possible new coffee!

Feel free to share your true opinions; both positive and negative. Your opinion is of great value for our company to evaluate the possible success of this new coffee.

Are you ready to judge the coffee? Tick the 'next' button and you will see the questions about the coffee package presented to you and the coffee you are enjoying now.

- ☐ I hereby agree to participate in this study and declare that I am at least 18 years old

Our new coffee, the one you are about to taste, comes in the package you look at. Please take a smell and a sip or two, taste carefully and answer the following questions. Again, please be honest.

Please indicate your level of agreement on the following statements:

This coffee tastes:

	Strongly disagree	Disagree	Somewhat disagree	Neither agree or disagree	Somewhat agree	Agree	Strongly agree
Luxurious	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Chic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Prestigious	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Exclusive	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cheap	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Standard	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strong	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Powerful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pure	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Intense	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Weak	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bitter	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Complex	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rich	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Balanced	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tasty	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Good	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Delicious	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Now, please indicate your level of agreement on the following statements:

I have the feeling that this coffee will make me:

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly Agree
Alert	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Concentrated	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Focussed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lazy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Aroused	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Relaxed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Powerful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Also, please indicate your level of agreement on the following statements:

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat Agree	Agree	Strongly Agree
I believe that this coffee is of good quality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe that this coffee will outperform other coffees	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think this coffee contains unique quality features	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think this coffee belongs to a luxurious lifestyle	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Now, imagine you are in a supermarket looking for coffee and you see this coffee package.

Note: the product fits within your budget.

Please indicate your level of agreement on the following statement:

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
I would consider buying this coffee at the supermarket	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Furthermore, please indicate to what extent the following statements are characteristic of you.

	Extremely uncharacteristic	Somewhat uncharacteristic	Uncertain	Somewhat characteristic	Extremely characteristic
I prefer complex to simple problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Thinking is not my idea of fun	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would rather do something that requires little thought than something that is sure to challenge my thinking abilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I try to anticipate and avoid situations where there is a likely chance I will have to think in depth about something	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I only think as hard as I have to	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I really enjoy a task that involves coming up with new solutions to problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I prefer my life to be filled with puzzles I must solve	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The notion of thinking abstractly is appealing to me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Lastly, we would like to know some general information about you.

What is your gender?

- ☐ Male
- ☐ Female

What is your age?

What is the highest level of education you have completed?

- ☐ Intermediate vocational education (MBO)
- ☐ Pre-university education (VWO)
- ☐ Bachelor degree (HBO/WO)
- ☐ Master degree
- ☐ Doctorate degree (PhD)
- ☐ Other, namely

How many cups of coffee do you drink on a daily basis? (If you do not drink coffee, please answer 0).

How do you prefer to drink your coffee?

- ☐ Black
- ☐ With Milk
- ☐ With Sugar
- ☐ With Milk and Sugar
- ☐ With Sweeteners
- ☐ Other, namely

This is the end of the questionnaire. Thank you for your time!

Appendix D

Appendix Table 4: Items per scale and the reliability of the constructs

Scale	Items	N	α
Taste Luxury	‘This coffee tastes... luxurious’ ‘This coffee tastes... chic’ ‘This coffee tastes... prestigious’ ‘This coffee tastes... exclusive’ ‘This coffee tastes... cheap’ (<i>reversed</i>) ‘This coffee tastes... standard’ (<i>reversed</i>)	6	.90
Taste Intensity	‘This coffee tastes... strong’ ‘This coffee tastes... powerful’ ‘This coffee tastes... pure’ ‘This coffee tastes... intense’ ‘This coffee tastes... weak’ (<i>reversed</i>) ‘This coffee tastes... bitter’	6	.79
Taste Complexity	‘This coffee tastes... complex’ ‘This coffee tastes... rich’ ‘This coffee tastes... balanced’	3	.56*
<i>*Due to poor internal consistency this scale is not used for further analyses</i>			
Taste Liking	‘This coffee tastes... tasty’ ‘This coffee tastes... good’ ‘This coffee tastes... delicious’	3	.92
Taste Consequences	‘I have the feeling this coffee will make me... alert’ ‘I have the feeling this coffee will make me... concentrated’ ‘I have the feeling this coffee will make me... focused’ ‘I have the feeling this coffee will make me... lazy’ (<i>reversed</i>) ‘I have the feeling this coffee will make me... aroused’ ‘I have the feeling this coffee will make me... relaxed’* ‘I have the feeling this coffee will make me... powerful’	6	.81
<i>*Item deleted to reach this Cronbach’s Alpha</i>			
Quality Perception	‘I believe this coffee is of good quality’ ‘I believe this coffee will outperform other coffees’ ‘I think this coffee contains unique quality features’ ‘I think this coffee belongs to a luxurious lifestyle’	4	.89
Need for Cognition	‘I prefer complex to simple problems’ ‘Thinking is not my idea of fun’ (<i>reversed</i>) ‘I would rather do ... challenge my thinking abilities’ (<i>reversed</i>) ‘I try to anticipate ... to think in depth about something’ (<i>reversed</i>) ‘I only think as hard as I have to’ (<i>reversed</i>) ‘I really enjoy a task that involves coming up with new solutions to problems’ ‘I prefer my life to be filled with puzzles I must solve’ ‘The notion of thinking abstractly is appealing to me’	8	.78

Appendix E

1. Outcomes main study, means and standard deviations.

Appendix Table 5: Mean and standard deviations of all variables.

Brand Frame	Metaphor	Taste Luxury	Taste Intensity	Taste Liking	Taste Consequences	Quality Perception	Purchase Intention
Basic Blend	<i>No Metaphor</i>	M: 3.08 SD: 1.00	M: 3.62 SD: 0.83	M: 4.43 SD: 1.35	M: 4.14 SD: 0.96	M: 3.33 SD: 1.15	M: 4.10 SD: 1.61
	<i>Metaphor</i>	M: 4.34 SD: 0.99	M: 4.27 SD: 0.82	M: 5.16 SD: 1.17	M: 4.41 SD: 0.98	M: 4.16 SD: 1.01	M: 4.67 SD: 1.52
Exclusive Blend	<i>No Metaphor</i>	M: 3.87 SD: 1.18	M: 4.00 SD: 1.12	M: 5.03 SD: 1.19	M: 4.52 SD: 0.85	M: 4.03 SD: 1.32	M: 4.73 SD: 1.55
	<i>Metaphor</i>	M: 4.54 SD: 1.43	M: 4.19 SD: 1.09	M: 5.12 SD: 0.87	M: 4.52 SD: 0.99	M: 4.41 SD: 1.52	M: 4.93 SD: 1.62

2. Outcomes main study, two-way ANOVA

Appendix Table 6: Results of the two-way ANOVA for all variables.

Factor	Taste Luxury	Taste Intensity	Taste Liking	Taste Consequences	Quality Perception	Purchase Intention
Brand frame	F: 5,03 <i>p</i> : .02	F: .52 <i>p</i> : .48	F: 1,27 <i>p</i> : .26	F: 2,10 <i>p</i> : .15	F: 3,89 <i>p</i> : .05	F: 2,60 <i>p</i> : .10
Metaphor	F: 21,43 <i>p</i> : .00*	F: 6,66 <i>p</i> : .01	F: 4,37 <i>p</i> : .03	F: .59 <i>p</i> : .44	F: 4,37 <i>p</i> : .008	F: 2,17 <i>p</i> : .10
Brand frame * Metaphor	F: 1,09 <i>p</i> : .30	F: 1,83 <i>p</i> : .18	F: 1,31 <i>p</i> : .25	F: .59 <i>p</i> : .44	F: .38 <i>p</i> : .54	F: .28 <i>p</i> : .59

p < .001.

Appendix F

1. Visual representation of the test location for the experiment

