

Brand Properties and Purchasing Behaviour

Abstract

In this thesis, I have offered insights on how to grasp the interplay between brand properties- acting as background - and the product on which the consumer focuses. In order to sell your product and raise brand equity; choosing the right brand properties is key. This research has incentivized brand recognition and willingness to pay based on *slogans* versus *celebrity endorsers* as brand properties. We explain *why*, *how* and *what* companies want to influence with regards to brand properties and purchase decisions. The experimental results have shown that there is a significant difference between brand recognition rates of slogans compared to pictures of celebrity endorsers. However, the difference in recognition rates do not lead to a significant difference in willingness to pay.

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Preface

To be is to do ~ Socrates

You are reading the master thesis that serves as the completion of my master degree – Behavioural Economics at the Erasmus University in Rotterdam, the Netherlands.

Firstly, I would like to thank my thesis supervisor: Georg Granic. Thank you for your recommendations with regards to statistical tests and experiment set-up. Also, thank you for your understanding and patience. We started this journey in January 2017 and progress fluctuated due to other commitments from my side.

Secondly, I would like to take this opportunity to thank my mother, Anne-Marie Dekker-Hazelaar and my father Hasse Dekker for their support during my study, but most importantly, in the period before I went to university. Unlike most master students, I did not attend pre-university school from the start of my secondary education. During primary school my teachers told me I was not a university type of student. They recommended me a somewhat more practical education. After primary school I started at a lower transitional class – Mavo/Havo in Dutch. After 8 years of study at universities in Amsterdam, Leuven and Rotterdam, I can proudly say that I completed a Bachelor in Economics, a Master in Philosophy and that I am on the brink of completing my fourth thesis and second Master degree. Thanks to my parents, their upmost support, belief and love, I was able to exceed myself.

I wish you, the reader, an interesting read and hopefully new insights in the field of purchasing behaviour.

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1. Introduction

Every perceivable signal frames our decisions. Different product properties can significantly alter consumers' evaluation of a product. How we create, rather than perceive, the world around us is illustrated by a pudding experiment conducted by Hoegg & Alba (2007). Participants in a laboratory experiment were asked to evaluate the taste of a pudding. Half of the subjects received a vanilla pudding. The other half received a vanilla pudding injected with a tasteless, brown food colouring. When asked about the taste, most subjects who received the brown vanilla pudding stated that they tasted chocolate pudding. This experiment has shown how humans can be framed by adjusting a signal such as a colour.

How can we explain these effects? Kahneman (2003) has demonstrated that *framing* is a key concept in understanding how decisions are made. To understand this principle in relation to purchase decisions, we need to refer to the *dual-system theory*. According to dual-system theories, two mental systems determine our decisions and behaviour. System 1 consists of thinking processes that are intuitive, automatic, experience based and relatively unconscious. On the contrary, system 2 is more reflective, controlled, deliberate and analytical.

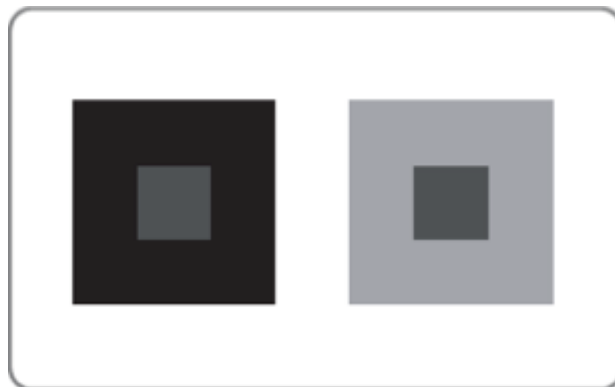


Figure 1: reference dependence in the perception of brightness (Kahneman, 2003)

Looking at the two small squares in the centre of figure 1, it seems that the two grey squares are a different colour – but they are not. The background serves as frame that leads to the subjective perception of different shades of colour. Framing happens implicitly. Whether it is the colour of a vanilla pudding, the shape of packaging or the brand name.

In the perspective of brands as frames, dual-system theories explain how brands influence purchase decisions, framing perception and with it the experience of the product. *The aim of this thesis* is to grasp the interplay between the brand - acting as background - and the product on which the consumer focuses. An economic experiment was conducted to determine if celebrity endorsers have a significantly different effect as brand property compared to slogans with regards to brand recognition and willingness to pay. Participants in an online experiment were first asked to link slogans or celebrity endorsers to brands. Secondly, the subjects were asked to state their willingness to pay for a certain product depending on whether subjects saw a slogan or celebrity endorser.

The idea that there is something more to how brands and products are experienced than purely their objective qualities is not new in itself. However, since Kahneman's dual-system theory a discussion emerged about which brand properties or signals play an important role in framing (Barden, 2015). In order to sell your product and raise brand equity; choosing the right brand properties is key.

Recent research has shown that only a limited set of brand properties are managed – mostly logo's, brand/product claims and slogans (Keller, 2003). More implicit and subtle brand properties, such as shapes, celebrity endorsers, gestures and sounds are often overlooked in brand activations (Barden, 2015). The contribution of this thesis within the underexposed framework of implicit brand properties is to design an economic experiment that investigates brand recognition based on slogans versus celebrity endorsers. This experimental set-up is unique as it incentivizes brand recognition and willingness to pay.

RQ: Do celebrity endorsers have a significantly different effect as brand property compared to slogans with regards to brand recognition and willingness to pay?

Theories and research findings from business and psychology journals are presented in the 2nd section "Theoretical Framework." Hypotheses linked to the theoretical framework can be found in the 3rd section "Hypotheses." The experimental set-up with design, subject and procedure is formulated in the 4th section "Methodology." Details concerning statistical analysis and analyses of the results are presented in the 5th section "Results & Discussion." section 6 entails a reflection of the limitations and future research. This section is followed by conclusions.

2. Theoretical Framework

The theoretical framework is structured according to three questions: why, how and what. The first sub-section of the theoretical framework explains *why* companies want to influence purchase decisions. The model that helps us answer the why question is Keller's brand equity model. The second sub-section focuses on *how* companies influence purchase decisions based on Kahneman's dual system theory. The third sub-section dives deeper into *what* brand properties have proven to be of significant influence on purchase behaviour.

2.1. Brand Equity

The question to start with is: why do companies want to influence purchase behaviour? Companies apply marketing strategies in order to build brands and brand value. In practise, this means that companies try to influence purchase behaviour in favour of their products and services. In this sub-section we will elaborate on the concept of brand equity.

Philip Kotler is an American marketing author, consultant and professor at the J.L. Kellogg Graduate School of Management in Chicago. Kotler has defined a brand as "(...) a name, term, sign, symbol, or design, or combination of them which is intended to identify the goods and services of one seller or group of sellers and to differentiate them from those of competitors" (Kotler, 1991: 442). These individual brand components are called brand properties or brand signals and altogether they form "the brand." Kotler has stated that brands signal the source of the product to the consumer and protects both the customer and the producer from competitors who would attempt to provide products that appears to be identical.

Companies use two types of resources in order to build and grow brands. These two types of resources can be categorized as tangible and intangible resources (Penrose, 1959). Tangible resources are the physical assets of a firm, such as installations and raw materials. On the contrary, intangible resources are not physically present in a firm. Examples are brand credibility, brand superiority and brand awareness. In short, this means that tangible resources can be bought and intangible resources cannot be bought, but have to be built over time.

Several studies have been conducted to investigate the effect of intangible brand properties on brand perceptions (Aaker & Joachimstahler, 2000; Aaker, 1991; Keller, 2003; Barden, 2013). Kevin Lane Keller is a professor of Marketing at Tuck school of Business at Dartmouth College and he describes intangible brand properties as “(...) variables that help to identify and differentiate the brand” (Keller, 2003). These brand properties, amongst others, are names, symbols, logos, price, packaging, slogans and celebrity endorsers. More interestingly, Barden argues that “(...) pricing, faces and celebrity endorsers used in advertisement can make a brand more fluent” (Barden, 2013: 109).

In practise we can see that brand properties have an intangible value over the pure functionality of a certain product or service. To illustrate, at the train station in Rotterdam it is likely to come across a café where a mint tea costs between €3 and €4. People are willing to pay this amount of money while most of them know that for the price of one cup of mint tea, you can purchase enough mint at the grocery store to have a whole kettle of mint tea. Barden (2013) assumes that consumers are led to believe that they are purchasing a different product. A difficult to grasp, intangible value is added to the physical product, commonly known as brand equity.

Keller (2003) describes brand equity as “(...) the differential effect of brand knowledge on consumer response to the marketing of the brand.” According to Van Eekhout (2012) there are three important elements in this definition: the differential effect, brand knowledge and consumer responses. The differential effect is determined by comparing the response of the customer when he is confronted with the same products of which one is a known brand and the others are non-existing. The second effect is brand knowledge and consist out of brand awareness and brand image. Lastly, the consumer response is the customer reaction after seeing the brand. Consumer response is related to consumer perceptions and behaviours after seeing the brand.

In relation to consumer perceptions, Keller (2001) states that “(...) brand equity comes from the power of a brand that lies in what consumers have learned, felt, seen and heard about the brand over time.” Keller argues that brand equity comes from the customer’s perception of the brand and is therefore customer-based. In the next subsection we look further into Keller’s brand equity model.

2.1.1. Brand Equity Management

Brand image- and reputation enhance differentiation and have a positive influence on purchasing behaviour, i.e. brand equity (McEnally and de Chernatony, 1999). In this thesis, I have investigated two brand properties in an economic experiment with regards to brand recognition and willingness to pay. To understand how the experimental results relate to the bigger concept of brand equity, we will touch upon Keller's customer based model.

Keller's brand equity model is formally known as Customer-Based Brand Equity (CBBE) model. Keller argues that the CBBE model yields the following: "(...) in order to build a strong brand, companies must shape how customers think and feel about your product" (Keller, 2001: 5). The four steps of the pyramid in figure 2 represent four fundamental questions that customers ask in relation to brands. These four steps contain six building blocks that must be in place for companies to reach the top of the pyramid and to develop a powerful brand. At the base of the pyramid is brand salience, which relates to brand properties in the sense that they are "(...) aspects of customer awareness of the brand" (Keller, 2001: 8).

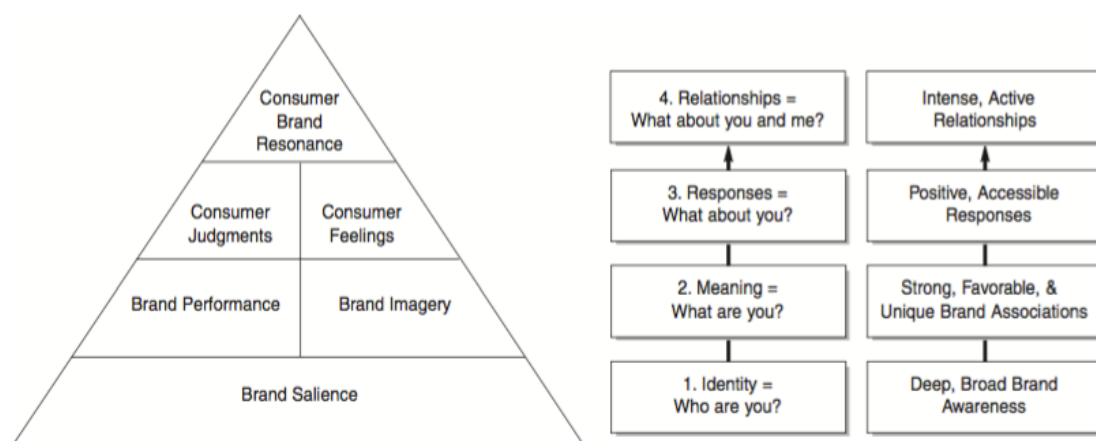


Figure 2: The Customer-Based Brand Equity Model (Keller, 2001).

Brand awareness includes more than the customer's potential to recognize a brand. For example, brand awareness acts as a way to influence customers. By aiming at the emotions and feelings of a customer, the brand will be recalled quicker and easier (Rossiter & Percy, 1987). Note that brand awareness is often compared to a leaky bucket. Therefore, companies consistently advertise in order to remind customers of the brand. As a consequence, brand loyalty will increase because the brand will become part of a purchase consideration set (Nedungadi, 1990). The importance of brand awareness is reflected by the fact that brand properties are at the base of Keller's brand value pyramid.

Keller's brand equity model has proven to be an effective way to manage brand awareness (Kuhn et al., 2008). The downside to investing in brand equity is that it is extremely costly to build and easy to lose. In general, the periods in which investments and changes are monitored are not long enough in order to observe long-term effects, which usually involve years rather than months. Also, Aaker and Biel state that "(...) there is no universal rule on how to convert brand awareness into shareholder value" (Aaker & Biel, 1993: 335). The manufacturing problems Toyota faced with regards to airbag issues in 2016 led to a brand value decline of 2% to \$28.9 billion (MilwardBrown, 2017). However, all these numbers are no more than estimates as intangible values are difficult to grasp. To understand what it is that guides our decisions and enables us to grasp intangible values, we need a psychological framework.

2.2. A Psychological Framework for Purchase Decisions

The aim of this thesis is to grasp the interplay between brand properties - acting as background - and the product on which the consumer focuses. Barden argues that in order to “(...) translate insights from decision science into the world of consumer behaviour, we need Kahneman’s psychological framework that allows us to systematically apply the most important principles, rules and mechanisms offered by science” (Barden, 2013: 8). After Kahneman’s dual process theory, we also review other, less relevant dual-system theories. Note that Dual-process theories are critical to interpret the experimental results of this thesis and explain how companies use brand properties to influence purchase decisions.

Probably the most well-known dual-system theory is produced by Nobel Prize winner Daniel Kahneman. He is a Senior Scholar at Princeton University and Emeritus Professor of Public Affairs at Woodrow Wilson School of Public and International Affairs. Kahneman’s research attempted to obtain a map of bounded rationality “(...) by exploring the systematic biases that separate the beliefs that people have and the choices they make from the optimal beliefs and choices assumed in rational-agent models” (Kahneman, 2003: 1449).

In standard economics, knowledge and goals are organized by following the principle of rationality: “(...) if the system wants to attain goal G and knows that to do act A will lead to attaining G, then it will do A. This law is a simple form of rationality that described how an agent operates in its own best interest according to what it knows” (Newell, 1992). The rational agent model is the starting point for Kahneman’s framework.

What is Kahneman’s framework of bounded rationality in short? The framework differentiates between two modes of thinking and deciding - traditionally called reasoning and intuition – now widely known as system 1 and 2 (Frederick & Kahneman, 2002). Kahneman describes *system 1* as “(...) fast, automatic, effortless, associative and often emotionally charged; they are also governed by habit and are therefore difficult to control or modify.” In addition, Kahneman described *system 2* as “(...) slower, serial, effortful and deliberately controlled; they are also relatively flexible and potentially rule governed” (Kahneman, 2003: 1451).

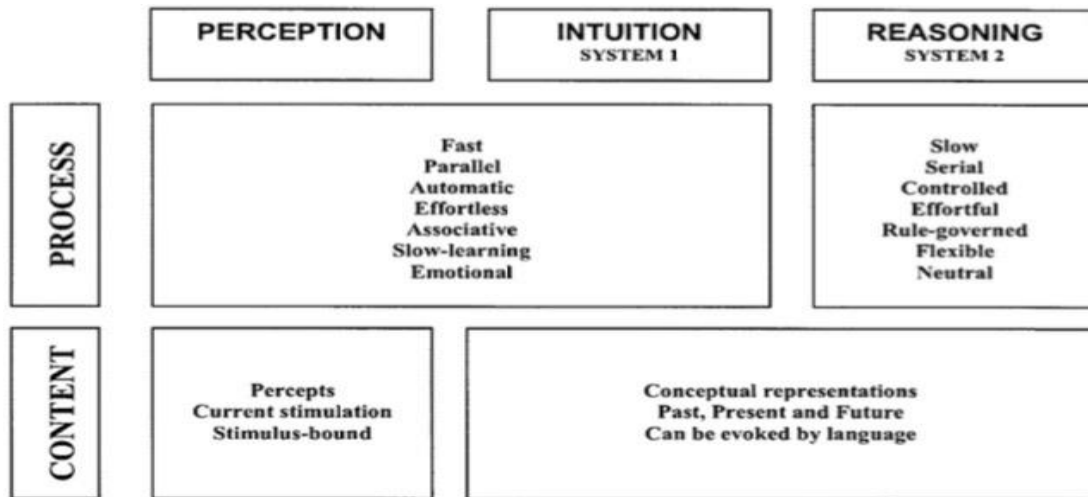


Figure 3: the scheme above summarizes the characteristics of system 1 and 2 (Kahneman, 2003).

Kahneman (2003) argues that both systems are mental processes that determine the way we think, decide and behave. In his bestselling book *Thinking Fast and Slow*, Kahneman states that system 1 integrates perception and intuition whereas it is always active, fast, effortless and automatic. To illustrate, Kahneman (2011: 21) listed in his book a number of examples of actions that are related to system 1 and I quote:

- Detect that one object is more distant than another.
- Complete the phrase: “Bread and....”
- Make a “disgust face” when shown a horrible picture.
- Detect hostility in a voice.
- Recognize your favourite brand.
- Answer to $2 + 2 = ?$
- Drive a car on an empty road.

System 2, however, is made for thinking. It is rather slow, works step by step and is effortful. To illustrate, Kahneman (2011: 22) also listed examples of actions that are related to system 2 and I quote:

- Brace for the starter gun in a race.
- Focus attention on clowns in the circus.
- Look for a woman with white hair.
- Search memory to identify a surprising sound.

- Maintain a faster walking speed than is natural for you.
- Monitor the appropriateness of your behaviour in a social situation.
- Tell someone your phone number.
- Fill out a tax form.

Frederik and Kahneman (2002: 3) state that “(...) although system 1 is more primitive than system 2, it is not necessarily less capable. Cognitive complex operations eventually migrate from system 2 to system 1 as proficiency and skill are acquired.” One example is the ability of learning another language and to speak it fluently after a while.

How does the psychological framework of Kahneman explain how brand properties influence our purchase decisions? Firstly, we need to use at least one of our senses to perceive the world around us. Perception is what we use to identify brand properties. Secondly, brands can be purchased after careful deliberation or almost automatically. This depends on a number of factors, amongst them is brand familiarity.

Kenning et al. (2002) have introduced the concept of *cortical relief*, which means that “(...) strong brands have a significant effect on the brain and lead to intuitive and fast decision making.” Participants in the laboratory experiment were told to choose a brand to purchase. The participants looked at pictures that either showed their favourite brand or did not. The brain scans indicated that favourite brands lead to different brain activity. More specifically; when the participant saw a favourite brand, the choice to purchase the brand was made instantly by system 1 and, hence, the brain showed less activity. The opposite was true for non-favourite brands which triggered system 2.

A study by Pieters and Wedel (2012) indicates that in some advertisements, brands and products can be recognized in as little as 100 milliseconds – even when the advertisement is visually unclear. Barden (2013) concludes from Kenning et al. (2002) and Pieters and Wedel (2012) that the characteristic of a strong brand is to activate system 1 processing. Barden argues that weak brands on the other hand activate system 2, which means that customers have to think about whether to purchase the product.

2.2.1. Dual-Process Theories in Perspective

During our journey so far we saw *why* companies try to influence purchase behaviour through brand properties. The main reason is to increase brand equity whereas Keller's brand equity model has proven to be an effective way to manage brand awareness. To understand *how* brand properties influence brand awareness and purchase decisions, we elaborated on Kahneman's dual process theory that enables us to understand the mental processes that determine our decision and behaviour. To broaden the scope of the dual-process debate, I will now briefly touch upon less relevant dual-process theories and compare them to Kahneman's theory.

Frederick and Kahneman, (2002) state that dual-process models come in different flavours but they all have one common denominator: "(...) all distinguish cognitive operations that are quick and associative from others which are slow and governed by rules." The role of the two systems in decision making depend on features of the task and of the individual. Finucane et al. (2000) found that system 1 influences judgement and choice regarding risk and benefit evaluations. The study of Finucane et al. (2000) indicates that people seem prone to using an 'affect heuristic' which relies on emotions and feelings. Other factors seem to be: respondent's state of mind (Bless et al., 1996) and the ability to acquire knowledge and skill (Stanovich and West, 2000).

Keren and Schul (2009) critically examine dual-process theories and argue that two is not always better than one. In general, "(...) rather than having two qualitative different subsystems that carry higher order functions of the human mind, one can assume that our single mental apparatus is capable of shifting between many different mental states, each of which aims to solve a particular task" (Keren and Schul, 2009: 546). In this view, mental processes are seen as small parts that are joined in several ways when the mind has to deal with impulses. Bechtel (2008) agrees that there is no need for a partition of fixed mental subsystems. On the contrary, mental parts could interact in different combinations, depending on the goals and context.

Frederick and Kahneman seem to disagree with Keren and Schul: not one but two systems order mental processes and decisions. Frederick and Kahneman (2002: 3) support the idea that "(...) system 1 and system 2 generate automatic and controlled cognitive operations that compete for the control of overt responses, and that deliberate judgements are likely to remain anchored on initial impressions." On the other hand, some common ground seems to be shared as Kahneman states that "(...) judgements

are always explicit and intentional – whether or not they are openly expressed” (Kahneman, 2003: 1452). This means that system 2 is overlapping and involved in all judgements, whether the judgements are generated by impressions or deliberate reasoning.

Moving forward with Kahneman’s dual-process theory; how do system 1 and 2 interact when we purchase? In other words, how do we perceive brand properties? Kahneman (2003: 1454) states that perception is *reference-dependent*: “(...) perceived attributes of a focal stimulus reflect the contrast between that stimulus and a context of prior and current stimuli.” This means that every perceivable brand property can frame our decisions; whether it is the smell of cookies that affects helping behaviour (Baron, 1997) or the shape of packaging that influences our perception of quantity (Raghubir and Krishna, 1999). Framing happens implicitly as we are not aware of the impact on our thoughts and behaviour.

Going back to figure 1 in the Introduction of this thesis – we now know that the impact of the background of the brand has a significant influence on how we perceive the brand. The background (colours, shapes, slogans etc.) indirectly and implicitly changes our perceptions, recognitions and, hence, changes our decisions (Barden, 2013). So which brand properties provide brands with the best frame?

2.3. Brand Properties

Modern day advertisement helps brands become difficult to replace – not just in the minds but also in the baskets of consumers (The Guardian, 2015). Growth often implies a change with regards to one or multiple brand properties. Without a change in the brand's properties – brand name, logo, symbol, price, packaging, slogan or celebrity endorser – no news can be communicated to the outside world. Therefore we need to ask ourselves: what brand properties could influence the purchase decisions of customers in order to win at the point of purchase?

Before we answer that question, it is important to realize that we are almost at the end of our theoretical journey. Remember that this research incentivizes brand recognition and willingness to pay based on *slogans* versus *celebrity endorsers*. So far we understand that companies influence purchase behaviour through brand properties to increase brand awareness and therefore brand equity. In addition, an increased brand awareness will lead to a higher chance that a brand will be purchased.

In this sub-section we discuss slogans and celebrity endorsers in more detail. For the sake of completeness, the remaining major brand properties are also briefly discussed. Before we move on brand properties, let us first look in this part into the concept brand property in greater extent.

It might not occurred to you as reader or to the public at large how “brand properties” or “brand signals” have an increasing impact on our daily life. It is well possible that we start the day with branded cereal including packaging with a unique name and slogan. We drive a branded car that signals a certain style and at the end of the day we step into a branded bed that promises a certain level of quality. The connection between the customer and a brand is caused by brand properties as they influence the customer's recollection of the brand (Hoogland, De Boer & Boersema, 2006).

Keller, Aperia and Georgson (2008) use the term *brand property* in relation to “(...) visual or verbal information that serves to identify and differentiate a product.” Whereas brand properties are implemented to stimulate brand awareness, enhance brand relations or evoke emotions. Due to the fact that brand properties have different advantages and goals, a mix of brand properties can be used (Keller, Aperia and Georgson, 2008).

2.3.1. Brand Name

“What’s in a name? That we call a rose by any other name would smell as sweet.” This phrase is a well-known part of William Shakespeare’s play *Romeo and Juliet*. In this play, Juliet argues that the name of the place where Romeo is originally from does not matter because names of things do not affect what they really are. This reasoning might apply in romantic settings, but does this also apply to brand equity?

The right brand name can stimulate brand awareness and enhance brand relations. In addition, an effective brand name should represent the brand identity (Robertson, 1989). For example, Van den Bergh et al. (1984) argue that brands that contain a plosive at the beginning of the name are easier to remember than brand that start with non-plosives. According to the online Oxford dictionary (2017), plosives are harsh sounding letters such as *p*, *t* and *k*.

Since higher brand awareness leads to more brand equity (Keller, 2003), we can conclude that the brand name of the rose you give to your loved-ones does affect the perceived value.

2.3.2. Logos and Symbols

Despite the brand name often being the most distinctive brand property, other brand properties, such as logos and symbols, also play an important role in terms of brand awareness (Keller, 2003). To give an example, which brand is the following?



Figure 3: Although the spelling is not correct, the brand is clear (Barden, 2013: 79)

People in general immediately recognize the Coca-Cola brand in figure 3, despite that most people are confronted with this figure for the first time and despite the fact that the logo has been changed.

So how does this recognition of the brand work? The brain is lazy and uses a limited amount of available information to identify a brand; so called diagnostic characteristics (Decode Marketing, 2014). Our brain does not store snapshots or pictures. Our visual input is deconstructed based on specialized neurons, some of which deal with colours, some with shapes and others with angles or sizes. For example, the Coca-Cola logo (figure 3) automatically activates the right brand even when the brand is not written correctly. If the brand recognition would be based on picture recognition, the brain was not able to recognize the Coca-Cola brand.

A logo or symbol may be considered as an important brand property because it serves as an anchor. The anchoring effect consists out of rules of thumb or mental shortcuts based on previous experiences that influence the decision process. (Frederick, Kahneman & Mochon, 2009). Having a distinctive logo or symbol can act as frame; automatically triggering system 1 in terms brand awareness – leading to more brand equity.

2.3.3. Pricing

Price is an important brand element as it influences the purchase decisions of most people (Kaushik & Talukdar, 2003). Knutson et al. (2007) discovered that the underlying principle that determines the purchase decision is based on a reward-pain relationship. If feelings of reward based on having a product exceed the feeling of pain caused by losing money, consumers are willing to purchase.

Barden (2013) argues that the reward-pain relationship is affected by explicit and implicit values. The explicit values are processed by system 2; consumers evaluate all possible information and based on the reward-pain relationship decide to purchase the product. On the contrary, the implicit values are in line with system 1 and are less likely to be noticed. This means that implicit values could be more valuable to companies as it is difficult to duplicate. Implicit values in relation to a wine brand could be a celebrity that is known to drink it and certain restaurants or organizations that promote the brand. The explicit price signals a certain quality (Plassmann et al., 2008). However, implicit values frame the brand and are aimed at emotions, expectations, habits and heuristics. When it comes to maximizing value, companies need to maximize both explicit and implicit value.

2.3.4. Packaging

Keller (2003) describes Packaging as “(...) the activity of designing and producing containers or wrappers for a product.” Packaging must appeal to consumers from an aesthetical perspective but it also has to fulfil its practical purpose. For example, lager beer must be served cold, taste good, look desirable and has around 5% alcohol. The challenge is that most consumer products deliver roughly the same basic value. (Barden, 2013). This is where packaging, such as a green or brown beer bottle, can make a difference.

Packaging, like other brand properties, is able to add brand value through framing. Raghurir and Krishna (1999) conducted research on whether consumers judge volume based on the shape of a package. The results from their research indicate that the packaging format determines the volume perception of a product and, hence, influences the perception of value for money. Consumers are mainly influenced by the height of the packaging whereas a tall shaped packaging leads consumers to belief that it has more content than square packages. This research is an example of the power of perception and how system 1 influences our purchase behaviour.

Other elements that can influence purchase decisions are claims added to packages. Claims can for example highlight a promotion, e.g. receive a 25% discount on this product, or refer to health benefits. However, marketers have to be careful with making these kind of statements; too many or exaggerated claims can have the opposite effect.

Underwood (2003) states that “The traditional role of packaging has been to protect contain and deliver the product to the retail shelf.” However, it seems that packaging is more and more likely to play a persuasive role at the point of purchase in the future due to behavioural insights.

2.3.5. Slogans

Language is not only an important brand property but also because it uniquely defines humans as species on earth. Kahneman (2003: 1452) states: “Like system 2, the operations of system 1 deal with stored concepts as well as with precepts, and can be evoked by language.” From this citation we can conclude that words influence our perception. To illustrate, Wansink et al. (2005) conducted research on how descriptive food names influence perceptions in restaurants. The task of the participants was to choose a menu with descriptive labels or labels with just a name on it. The result of the

research indicated that descriptive labels increased the number of orders and caused participants to perceive these menus as better tasting compared to the same menus with a generic label.

How does language influence purchasing behaviour? It is not uncommon that brand statements refer to human characteristics. Brands often refer to characteristics such as ‘authenticity’, ‘reliability’, ‘sympathy’ and ‘trust’ (Barden, 2013). This raises the question whether we perceive brands the same way as we perceive our fellow man. The answer can be short: yes we do. Aaker states that brand personality is defined as “the set of human characteristics associated with a brand” (Aaker, 1997: 347). For example: HEINEKEN is described as adventurous and outgoing whereas Amstel is generally perceived as friends and family orientated. May we then conclude that the use of human characteristics in advertisement improves the way the product or brand is perceived?

Yoon et al. (2006) used a brain scanner (fMRI) to find out whether judgements about products and persons are processed in the same way. Participants saw brands they knew and used as well as brands they knew and did not use. In addition, names of celebrities such as Bill Clinton were shown along with the participant’s own name. Brands and names were presented in combination with characteristics, such as ‘jolly’, ‘sincere’ and ‘likeable’. The task of the participants was to indicate whether the personality traits matched with a brand or person. The results of this research indicate that brands are most likely not seen as people but as objects.

It seems that products are not seen as people, but that choosing the right words can have a positive impact on how products and brands are perceived by consumers. How does this relate to choosing the right combination of words, i.e. slogans?

Keller (2003) states that: “Slogans play a vital role in the creation of solidarity between the brand and the consumer because, like brand names, they are a very efficient way to build brand equity.” Also, slogans are able to automatically activate the brand in a system 1 response (Decode Marketing, 2014). There are two benefits that can be linked to slogans. Firstly, slogans increase brand awareness by creating a mental shortcut. For example, it is likely that you know which city is meant by “the big apple.” The second benefit is that slogans can position the brand. An example by Keller is Lifetime company that advertised with “Television for Women” – which indicated the target audience and the company’s position (Keller, 2003).

When designing slogans, the link to the brand should be very clear. Also, the most powerful slogans should go beyond recognition and trigger brand values that consumer's associate with the brand (Decode Marketing, 2014). Keller (2003) states two options. One option is to build both awareness and image, such as "Maybe she is born with it, Maybe its Maybelline" for Maybelline cosmetics. Another option is to include product-related messages, such as "The big Q stands for Quality" for Quaker State Motor Oil. Olivera et al. (2001) explains additional ways to engage the audience. One example is the usage of person markers: "You have sensitive skin, we have sensitive wipes" (Simple Wipes).

There is a downside to slogans however. Slogans are perhaps the easiest brand property to implement and change over time, therefore the use of slogans in advertisement is common. It is in this commonality that they might be less powerful than celebrity endorsers.

2.3.6. Celebrities and Faces

The use of celebrity endorsers has a long tradition within advertisement. Whether celebrities are involved in campaigns of presidents or the launch of a new product or service – the phenomenon is widespread. Part of the reason to use celebrities in advertisement is the increasing number of sources of information that consumers might consult, from friends or peers to company websites and from bloggers to conventional advertisement. Ketchum Global Research Network listed 8 sources of information that influence consumer purchase decisions. Their research indicated that 33% of teenage girls within their sample used celebrities as their main source of information (Adweek Media, 2010). So, does this mean that the use of celebrities in advertisement is the key to success, i.e. a good way to frame your brand?

Barden (2013) argues how the use celebrities, such as Jenson Button and Pamela Anderson, made Walkers (a sandwich company) more successful as their sales increased. The idea behind the campaign was that Walker made any sandwich more exciting. As a metaphor, they surprised the inhabitants of Sandwich in the United Kingdom with the presence of celebrities. Barden concludes that the campaign had a positive impact on Walkers' brand awareness and its position within the sandwich market.

Keller (2003) argues that the main reason for using a celebrity endorser is due to the fact that a famous person can draw attention and at the same time shape the

perception of a brand. The way a celebrity endorser shapes people's perception is based on the knowledge they have about the famous person. In short, marketer's hope that the fans of the celebrity will also become fans of their products and services. The minimum requirement is that the celebrity must be famous enough to improve brand awareness and image. Examples of celebrity usage in advertising are Kate Moss for H&M, Tiger Woods for Gillette and Michael Phelps for Kellogg.

Despite the positive influence the usage of celebrity endorsers can have on brand awareness, there are also a couple pitfalls. Firstly, celebrities can represent several brands and as a consequence the link between the celebrity and the brand is unclear (Barden, 2013). Secondly, celebrities come and go. If a celebrity becomes less popular, this could reduce their marketing value to the brand (Keller, 2003). Thirdly, there must be a reasonable match between the celebrity and the brand (Keller, 2003). An example of a farfetched connection between brand and celebrity is an advertisement campaign of Turkish Airlines that featured basketball player Kobe Bryant. Lastly, it happens that celebrities get all the attention while the brand is not highlighted enough. To overcome these problems, marketers and academics should evaluate the use of celebrities more extensively.

Another way to increase brand awareness by using celebrity endorsers is to put more emphasis on faces. Scientific research indicates that the human brain uses system 1 to judge others in terms of their characteristics (Critchley et al., 2000; Winston et al., 2002; Engell et al., 2007). Our ability to process, recognize and associate human faces is intertwined with system 1 – as it goes within thinking. These skills are already present at young age and serve as important survival skill, such as the need to differentiate between friend and enemy (Tomasello and Farrar, 1986). But what effect does the image of a face in advertising have on our purchasing behaviour? Can the presence of a (celebrity) face unconsciously drive our preferences?

Neuroscientific research shows that beautiful faces are rewarding for the brain as they trigger the internal reward system. More specifically, there is a brain region – called the “fusiform gyrus” – which sole task is to recognize faces. This brain region lights up each time when we see faces (Aharon et al., 2001). Given the association between beauty and reward, we can conclude that beautiful faces trigger high levels of attention. But are faces also effective brand properties?

Costanzo and Goodnight (2005) conclude from their study that celebrities who are recognized in magazine advertisements do not increase brand recognition. This

accounts for both professional athletes as well as entertainment celebrities. On the contrary, Atkin and Block (1983) found that the image of a product tends to be more favourable when a famous endorser is shown because celebrities are perceived as more gifted and trustworthy by all age groups. For example, subjects are likely to rate alcohol brands as enjoyable and pleasant as a consequence of celebrity endorsers (Costanzo and Goodnight, 2005). Furthermore, Tanner and Maeng (2012) combined faces of celebrities and stock models using computer software and compared these faces to regular, non-famous models. The results from their research indicate that implicit recognition leads to increase trust in a product.

All in all, scientific evidence indicates that celebrities seem to induce trust and brand awareness. We know from the literature that brand awareness and purchase decisions are positively linked. Based on this rationale, we will explain the thesis hypothesis in the next chapter.

3. Hypotheses

The aim of this thesis is to grasp the interplay between the brand - acting as background - and the product on which the consumer focuses. Therefore the following research question is formulated:

RQ: Do celebrity endorsers have a significantly different effect as brand property compared to slogans with regards to brand recognition and willingness to pay?

The theoretical framework described *why, how and what* companies try to influence regarding brand awareness and purchase decisions. From the theoretical framework we can deduct the following main hypothesis: celebrities have a significantly different effect as brand property compared to a slogan. To test the main hypothesis we use two sub-hypotheses. The two sub-hypotheses are supported by literature as described below.

H1: celebrity endorsers have a significantly different effect as brand property compared to slogans with regards to brand recognition and willingness to pay.

- H1a: Celebrities lead to higher brand recognition rates compared to slogans.
 - “It has been known for a long time that the human brain is strongly tuned towards faces in ads. Recent neuroscience work has revealed that beautiful faces are rewarding for the brain (they trigger the internal reward system), which is the key reason why models and testimonials trigger high levels of attention” (Decode Marketing, 2014). Also, this Decode Marketing paper shows that standard models/actors have low branding power. Celebrities will probably not only raise attention, because of their appearance, but also have high branding power due to their fame.
 - Atkin and Block (1983) found that the image of a product tends to be more favourable when a famous endorser is shown as celebrities are perceived as more gifted and trustworthy by all age groups.

- H1b: Celebrity endorsers lead to a higher willingness to pay compared to slogans.
 - “A beer promotion using a picture of a celebrity triggered much higher sales if the celebrity gazed in the direction of the beer rather than elsewhere” (Barden, 2013).
 - Familiarity works at an implicit level. The face of a celebrity is more familiar and, hence, can be trusted more – even if we do not detect the celebrity consciously via system 1 (Tanner and Maeng, 2012).

We *ex-ante* expect celebrity endorsers to lead to higher brand recognition rates and willingness to pay compared to slogans. This expectation is based on the commonality of slogans. Almost every brand has a slogan, while celebrity endorsers are relatively few (Keller, 2003). Therefore slogans have less impact and are more likely to lead to confusion among consumers as illustrated by Decode Marketing (2014). The methodology and outcomes of these hypotheses will be described in the following sections.

4. Research Methodology

The methodology of the thesis research is described in this section. Firstly, the data collection process is explained. Next, additional information on how the data was analysed is presented.

4.1. Survey Respondents

The data was collected through an online economic experiment. Online research software “Qualtrics” was used to create and distribute the economic experiment via Facebook, WhatsApp and email. The economic experiment was distributed amongst family, friends, fellow students and colleagues in The Netherlands and abroad.

4.2. Experiment Design

The goal of the economic experiment was to collect data from the control- and treatment group, whereas the control group can be linked to slogans and the treatment group to celebrity endorsers. In the backend of the experiment, a technique known as ‘blocking’ was implemented. Blocking equally distributes participants between the slogan- and celebrity endorser group. Randomization decreases error variance, which increases the power and significance of the test due to minimal risk that treatment is correlated with individual characteristics.

The experiment consisted out of three tasks: (1) brand recognition, (2) willingness to pay and (3) demographic factors. The slogan- and celebrity endorser group received different first and second assignments. The third assignment with regards to demographics was the same for all participants.

The first task of the control group was to link slogans to the correct brands whilst the treatment group had to link pictures of celebrity endorsers to the correct brands. The first task for both groups consisted out of 10 multiple choice questions with 3 answer possibilities. This meant that the participant had to choose between 3 possible brands in order to move on to the next question. In addition, the order of the questions of the first assignment was randomized for every participants. The aim of the first task was to measure the brand recognition rates, reflected by linking the right slogan or celebrity endorser to the correct brand. The number of questions means that every participant in the slogan- or celebrity endorser group could have a maximum score of

10 and a minimum score of 0. Linking slogans and celebrity endorsers to the correct brands relates back to the first hypothesis: celebrities lead to higher brand recognition rates compared to slogans.

The second task of the control group was to state their willingness to pay for a product based on a slogan whilst the control group had to state their willingness to pay based on a celebrity picture in combination with the product. The second task for both groups consisted out of one open question: to state their willingness to pay. The slogan group received a product description (Pepsi can 33cl) and the slogan: Pepsi – live for now. The celebrity endorser group received a picture of Beyoncé in combination with the Pepsi 33cl can. In addition, a price range was communicated. The willingness to pay statements for both groups had to be between €0 and €2. The aim of the second task was to list all the prices communicated by the participants. Retrieving the willingness to pay from participants relates back to the second hypothesis: celebrity endorsers lead to a higher willingness to pay compared to slogans.

The third assignment for all participants was to fill out the demographic questions. The control group and treatment group received the same demographic questions. All questions were multiple choice and the number of answer possibilities ranged from 2 (gender) to 6 (education). The demographic task included a control question about the number of hours per week a subject watches television. You can find a more detailed description of the three tasks in appendix A.

4.3. Economic Experiment

Recent research has shown that only a limited set of brand properties are managed – mostly logo's, brand/product claims and slogans (Keller, 2003). More implicit and subtle brand properties, such as shapes, celebrity endorsers, gestures and sounds are often overlooked in brand activations (Barden, 2015). The contribution of this thesis within the underexposed framework of implicit brand properties is to design an economic experiment that investigates brand recognition based on slogans versus celebrity endorsers. This experimental set-up is unique as it incentivizes brand recognition and willingness to pay.

Participants of both groups were incentivised for task 1 and 2. At the start of task 1 it clearly stated that participants could earn 1 euro for every correct brand recognition. Therefore, the participants were encouraged to try to recognize as many brands as possible. A random lottery incentive was implemented by choosing one

participant after data collection. One participant received €8, based on 8 correct answers.

At the start of task 2, participants were encouraged to state their true willingness to pay for the product based on the Becker-DeGroot-Marschak mechanism. The bid of the participant was compared to a price determined by a random number generator. If the participant's bid was higher than the random number, one of the participants would pay the price and receive the Pepsi can. If the participant's bid would lower than the random price, the participant would pay nothing and received nothing. In addition, the task clearly stated that it was in the participant's best interest to give a truthful answer.

4.4. Data Analyses

The Mann-Whitney U test was used to determine whether celebrities lead to higher brand recognition rates compared to slogans. The Mann-Whitney U test is a distributional test that looks at how the rank sums compare to each other. We give up some information compared to a simple t-test because we use ranks in relation to recognition rates. However, an advantage is that we do not need take any distributional assumptions into account; such is the case with parametric tests.

By using the non-parametric Mann-Whitney U test, the observations need to be independent which is in line with the dataset. Independence was achieved by taking participant's individual recognition rates as independent observation, i.e. one observation per participant. This means that there is no relationship between the observations in each group or between the groups themselves. There were different participants in each group with no participant being in more than one group. A probit regression was done in addition to the Mann-Whitney U test to estimate the probability that a subject with particular characteristics would recognize a brand.

In order to know whether celebrity endorsers lead to a higher willingness to pay compared to slogans, we used the same approach by selecting the Mann-Whitney U test. Again, we have two independent variables and we can rank the outcomes. Also, Mann-Whitney U test was used because both samples were asked about stating a price for the same product (33cl Pepsi can). A linear regression was conducted in addition to the Mann-Whitney U test to estimate the relationship between the recognition rate, the treatment and control variables. Demographic analyses are presented in Appendix B. There you can find the demographic composition of the two treatment groups.

5. Results & Discussion

In this section the results of the research are presented. This thesis aims to quantify and test the interplay between the brand - acting as background - and the product on which the consumer focuses. The contribution of this thesis within the underexposed framework of implicit brand properties is an economic experiment that investigates brand recognition based on slogans versus celebrity endorsers. This experimental set-up is unique as it incentivizes brand recognition and willingness to pay. The main hypothesis is formulated as follows: celebrity endorsers have a significantly different effect as brand property compared to slogans with regards to brand recognition and willingness to pay.

5.1. Hypotheses Testing

The main hypothesis is broken down into two sub-hypotheses.

- H1a: Celebrities lead to higher brand recognition rates compared to slogans.
- H1b: Celebrity endorsers lead to a higher willingness to pay compared to slogans.

Additional Analyses on Treatment			
	Average Score	Highest Recognition Brand	Lowest Recognition Brand
Slogan	64%	Nespresso (94%)	Adidas (30%)
Picture	52%	Nespresso (98%)	Häagen Dazs (12%)

Table 1: Brand recognition values for both the control (slogan) and treatment (picture) group

From table 1 we can conclude that participants are on average most likely to recognize the Nespresso slogan (what else?) and the Nespresso celebrity endorser (George Clooney). The respondents are on average less likely to recognize Adidas and Häagen Dasz. These findings might be caused by the frequency and duration of their commercials on Dutch media. However, we think that George Clooney is also likely to add to Nespresso's high brand recognition rate as he is widely known for his films, such as Ocean's Eleven and From Dusk Till dawn. On average, we see that celebrities do not lead to higher brand recognition rates compared to slogans. Participants could link on average 64% of the slogans to the correct brand versus 52% for celebrity endorsers.

The Mann-Whitney U test was used to test the first hypothesis. This test allowed us to detect whether two independent samples came from the same population. In other words, the brand recognition scores of the treatment and control group were compared with each other. The null-hypothesis states that there is no difference in the ranks of each treatment and is stated as follows: celebrities do not lead not higher brand recognition compared to slogans. The alternative hypothesis states that the ranks of the treatment group are higher than the control group and is stated as follows: celebrities lead to higher brand recognition compared to slogans. Formally:

- $H_{0a} : \mu_1 = \mu_2$
- $H_{1a} : \mu_1 \neq \mu_2$

U-value	768
Z-score	3.66168
P-value	0.00013

Table 2: values Mann-Whitney U test H_{1a}

Given the p-value of 0.00013, we can conclude that the result of this one-tailed Mann-Whitney U test is significant at a 1% and 5% level ($P < 0.01$). We reject the null-hypothesis that there is no difference between the ranks of each treatment. This conclusion is in favour of the alternative hypothesis that states that there is a difference between the ranks of each treatment. In addition, a probit regression was conducted and the outcome of the regression supports the conclusion that there is a significant difference between treatments.

All in all, there is a significant difference between the control and treatment group with regards to brand recognition. This means that slogans and celebrity endorsers do not have the same level of brand recognition. Please see appendix C for an explanation of the Mann-Whitney U test results and appendix E/F for the probit regression on treatment effects.

The Mann-Whitney U test was also used to test the second hypothesis. The willingness to pay of the treatment and control group were compared with each other. The null-hypothesis states that there is no difference in the ranks of each treatment and is stated as follows: celebrity endorsers do not lead to a higher willingness to pay compared to slogans. The alternative hypothesis states that the ranks of the treatment group are higher than the control group and is stated as follows: celebrity endorsers lead to a higher willingness to pay compared to slogans. Formally:

- $H_{0b} : \mu_1 = \mu_2$
- $H_{1b} : \mu_1 \neq \mu_2$

U-value	1267
Z-score	0.20763
P-value	0.41683

Table 3: values Mann-Whitney U test H_{1b}

Given the p-value of 0.41683, we can conclude that the result of this one-tailed Mann-Whitney U test is not significant at a 5% level ($P > 0.05$). In other words, we cannot assume that the two treatments differ. The null-hypothesis that states the ranks of each treatment are the same is not rejected. This conclusion is not in favour of the alternative hypothesis that states that there is a difference between the ranks of each treatment. In addition, a linear regression was conducted and the results from this test support the conclusion that there is not a significant difference between treatments.

All in all, we cannot prove with any significance that there is a difference between the two treatments with regards to willingness to pay. This means that we cannot conclude that slogans and celebrity endorsers lead to a different willingness to pay. Please see appendix D for an explanation of the Mann-Whitney U test results and appendix G for the linear regression on treatment effects.

Given the outcome of the two sub-hypothesis, we can partly conclude that there is a difference between celebrity endorsers and slogans and how they affect consumer's perception. On the one hand, there is a significant difference in terms of brand recognition; whereas subjects are more likely to recognize brands on the basis of

slogans compared to pictures of celebrity endorsers. Note that the hypothesis stated that celebrity endorsers would lead to higher brand recognition rates compared to slogans. The opposite is more likely. As illustrated by table 4, the average brand recognition score of the control group is higher than the treatment group (64% > 52%).

Additional Analyses on Treatment			
	Average Score	Highest Recognition Brand	Lowest Recognition Brand
Slogan	64%	Nespresso (94%)	Adidas (30%)
Picture	52%	Nespresso (98%)	Häagen Dazs (12%)

Table 4: control group (slogan) shows higher mean recognition rates than treatment group (pictures)

On the other hand, the willingness to pay does not seem to significantly differ amongst the control and treatment group. However, subjects from the control group have on average a slightly higher willingness to pay compared to the treatment group.

```

-> treatment = 0

```

Variable	Obs	Mean	Std. Dev.	Min	Max
wtp	53	1.013019	.5647688	0	2

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-> treatment = 1

```

Variable	Obs	Mean	Std. Dev.	Min	Max
wtp	49	.9857143	.5940679	0	2

Table 5: control group (slogan) shows a higher mean WTP than treatment group (pictures).

In conclusion, the results counter our ex ante expectations that celebrity endorsers lead to higher brand recognition and willingness to pay compared to slogans. I elaborate on possible explanations on why we found these unexpected results in the next chapter: shortcomings and research recommendations.

5.2. Additional Analyses

In this section we will analyse the average brand recognition rates for the control (slogan) and treatment (picture) group in more depth. First, we compare high and low recognition rates per brand and treatment. Secondly, we compare the popular incorrect answers per brand and see if there are similarities in both treatments.

Slogan				
Question	Brand	Correct Answer	Popular Incorrect Answer	
1	Coca-Cola	72%	Pepsi Max	24%
2	Hunkemöller	31%	Victoria's Secret	39%
3	Häagen Dazs	63%	Ikea	30%
4	Nespresso	94%	Illy	4%
5	Adidas	30%	Mizuno	54%
6	Magnum	69%	Ben & Jerry's	17%
7	T-Mobile	46%	Vodafone	37%
8	Red Bull	93%	Aquarius	7%
9	Opel	56%	Volkswagen	37%
10	McDonald's	81%	Burger King	13%

Table 6: average brand recognition rates of the control (slogan) group.

Slogans are perhaps the easiest brand property to implement and to change over time, therefore the use of slogans in advertisement is common. The risk of low brand recognition rates lie in the commonality – people might confuse slogans with other brands. From table 6 we can conclude that most of the respondents link the slogan of Adidas to Mizuno (54%) instead of Adidas (30%). Both brands sell sport articles and use athletes in their marketing. In addition, a significant part of respondents link the slogan of Hunkemöller to Victoria's Secret (39%) instead of Hunkemöller (31%). Both brands sell lingerie and use well-known models in their advertisement. As described in the theoretical framework; the link to the brand should be very clear. Do we find comparable recognition rates when pictures of celebrity endorsers are used?

Picture				
Question	Brand	Correct Answer	Popular Incorrect Answer	
1	Victoria's Secret	90%	Douglas	8%
2	Red Bull	18%	Apple	47%
3	Nespresso	98%	Gillette	2%
4	Magnum	49%	G-Star	39%
5	Häagen Dazs	12%	Armani	76%
6	Opel	45%	Volkswagen	29%
7	Adidas	33%	Nike	61%
8	Hunkemöller	80%	Nivea	20%
9	McDonald's	37%	Pizza Hut	43%
10	T-Mobile	55%	Vodafone	31%

Table 7: average brand recognition rates of the treatment (picture) group.

The rationale behind using celebrity endorsers in advertising is that a famous person can draw attention to a brand and shape the perceptions of a brand. The pitfall is that celebrities get all the attention whilst the brand is not highlighted enough. This might be case for Adidas who used famous football player Paul Pogba in their advertisement.

From table 7 we can conclude that most of the respondents link Pogba to Nike (61%) instead of the actual company that hired him: Adidas (33%). The low average brand recognition rate might arise from the fact that both brands sell sport articles and use football players in their marketing.

Another explanation that might account for brands such as Red Bull and Häagen Dasz is that they use celebrity endorsers who are not well known to the general public. As mentioned in the theoretical framework; celebrities come and go. If a celebrity becomes less popular, this could diminish their marketing value.

All in all, we compared the popular incorrect answers per brand and found similarities in both treatments. These similarities do not refer to certain brands but more to a phenomenon at hand; if you do not stand out in the crowd with your marketing, consumers will not recognize the brand. More additional analyses are included in appendix B.

6. Shortcomings and Research Recommendations

Nobody is perfect, that is why pencils have erasers and theses have shortcomings. This infamous saying is applicable to this thesis. In this part I will elaborate on the shortcomings of this research. Furthermore, recommendations for future research are disclosed.

6.1. Shortcomings

This thesis has two shortcomings. One practical shortcoming relates to the survey set-up and the other shortcoming relates to marketing intentions.

Firstly, both the control and the treatment group had to recognize as many brands as possible during the first survey assignment. Both groups received 10 questions. Ideally, both groups received questions about the same brands. However, both groups received 1 brand that which they did not have in common. The control group received the Coca-Cola slogan while the treatment group received a Victoria's Secret picture. The rest of the brands were completely in line for both groups.

Secondly, marketing departments deliberately want the consumer to recognize a slogan or celebrity to a certain level. Some companies put more emphasis on the slogan whilst others focus more on celebrity endorsers. For this thesis brands were selected which both have a slogan and a celebrity endorser. The shortcoming is that not all companies focus equally on slogans and celebrity endorsers. Given the small number of unique brands used in the survey, this could have biased the results.

If this research would had access to more resources, a solution for the marketing bias could be implemented. We compared the popular incorrect answers per brand and found similarities in both treatments. By creating fictive brands and brand properties, we can control for the marketing bias. With marketing bias I mean that brands have different marketing strategies and budgets. As a result, some brand properties are over- or underexposed. An optimal experimental design would include fictive brands that have similar marketing strategies. The use of fictive products, slogans and celebrity endorsers could solve the marketing bias in the current experimental design.

6.2. Research Recommendations

The aim of this thesis is to grasp the interplay between the brand - acting as background - and the product on which the consumer focuses. Therefore the research focussed on semantic brand properties and visual brand properties. However, auditory brand properties could perhaps influence brands in the same manner. Think for example of the iconic bottle opening sound that Grolsch uses in their advertisement. Unfortunately it was not possible to include sound bites in Qualtrics and therefore I would recommend this as further research.

7. Conclusion

The aim of this thesis is to grasp the interplay between brand properties- acting as background - and the product on which the consumer focuses. The research focussed on *slogans* and *celebrities* as brand properties with regards to brand recognition and willingness to pay.

The first part of the thesis focuses on *why* companies want to influence purchase decisions. Recent research indicated that raising brand awareness has a positive impact on the chance that a brand or product will be purchased. Within Keller's Brand Equity model, brand properties that increase brand awareness lead to higher brand equity.

This brings us to the second part of this thesis: *how* companies influence purchase decisions. Kahneman's dual-process theory provides us with a psychological framework to understand *how* there is something more to brands and products are experienced than purely their objective qualities.

The third part dives deeper into *what* brand properties have proven to be of significant influence on purchase behaviour. Recent research showed that only a limited set of brand properties are managed – mostly logo's, brand/product claims and slogans. More implicit and subtle brand properties, such as shapes, celebrity endorsers, gestures and sounds are often overlooked in brand activations.

The contribution of this thesis within the underexposed framework of implicit brand properties is an economic experiment that investigated brand recognition based on slogans versus celebrity endorsers. This experimental set-up is unique as it incentivizes brand recognition and willingness to pay. This research aimed at answering the following question: Do celebrity endorsers have a significantly different effect as brand property compared to slogans with regards to brand recognition and willingness to pay? The results show that there is a significant difference between brand recognition rates in relation to slogans or pictures of celebrity endorsers. However, these brand properties do not lead to a significant difference in willingness to pay. All in all, implicit brand properties seem to have a significant effect on brand awareness and further research could shed light on which implicit brands lead to the highest willingness to pay.

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9. Appendix

Appendix A – Experiment Set-Up

Below is an overview of how the economic experiment was set-up, including screenshots of the first 2 tasks of the control (slogan) and treatment (celebrity) group.

- **Task description assignment 1 – control group**

Task description

In the first part of the survey we will present slogans of well known brands.

Your task will be to connect the slogans to the right brands.

For each correct answer you can earn 1 euro.

The more correct answer, the higher your earnings will be.

One winner will randomly be selected after data collection.

The winner will receive his/her earnings according to the number of correct answers.

If you are interested in winning your possible earnings, please leave your email address at the end of this survey.

- **Example assignment 1 – control group**

logan

Taste the feeling

- Coca-Cola
- Sprite
- Pepsi Max

- **Task description assignment 1 – treatment group**

Task description

For the first part of the survey we will present celebrities that took/take part in advertisement of well known brands.

Your task will be to connect the celebrities to the right brands.

For each correct answer you can earn 1 euro.

The more correct answer, the higher your earnings will be.

One winner will randomly be selected after data collection.

The winner will receive his/her earnings according to the number of correct answers.

If you are interested in winning your possible earnings, please leave your email address at the end of this survey.

- Example assignment 1 – treatment group



The celebrity on the image above can be linked to one of the following brands

- Mars
- Gillette
- Nespresso

- Task description assignment 2 – control group

Task description

In the second part of this survey we will present the slogan of Pepsi.

You will be asked to state the maximum amount you are willing to pay for a 33cl Pepsi can.

Depending on your bid - you will either receive the product by post or a price that will be determined by a number generator.

It is in your own interest to state your truthful willingness to pay.

If you are interested in receiving the product, please leave your email address at the end of this survey.

- Assignment 2 – control group

What would you like to pay for a Pepsi 33cl can based on the slogan below.
The bid must be between 0 Euro and 2 Euros.

Pepsi - Live for now

- Task description assignment 2 – treatment group

Task description

In the second part of this survey we will present a Pepsi advertisement.

You will be asked to state the maximum amount you are willing to pay for a 33cl Pepsi can.

Depending on your bid - you will either receive the product by post or a price that will be determined by a number generator.

It is in your own interest to state your truthful willingness to pay.

If you are interested in receiving the product, please leave your email address at the end of this survey.

- Assignment 2 – treatment group



What would you like to pay for a Pepsi 33cl can based on the advertisement above.
The bid must be between 0 Euro and 2 Euros.

Appendix B – Additional analyses

Demographics				
Variables		Total	Control (slogan)	Treatment (picture)
Gender	Blank	2	1	1
	Male	61	35	26
	Female	40	18	22
Nationality	Blank	2	1	1
	Dutch	94	51	43
	Other	7	2	5
Age	Blank	2	1	1
	0 - 17	2	1	1
	18 - 30	67	34	33
	31 - 45	6	6	0
	46 - 65	24	11	13
	65+	2	1	1
Occupation	Blank	2	1	1
	Student	30	17	13
	Out of work and looking for work	4	3	1
	Employed for wages	44	22	22
	Self-employed	19	9	10
	Out of work but not currently looking for work	2	1	1
	Retired	1	1	0
	Unable to work	1	0	1
Education	Blank	2	1	1
	Professional degree (HBO)	27	13	14
	Master's degree	42	22	20
	Bachelor's degree	19	9	10
	Associate degree (MBO)	5	4	1
	Secondary school	6	4	2
	Doctorate	2	1	1

Above is an overview of the demographic composition for both control and treatment group. Respondents who participated in assignment 1 and 2 but did not answer the demographic questions cause the presence of two blank respondents.

Question	Treatment	Brand	Correct Answers Males		Correct Answers Females	
			Absolute	Average	Absolute	Average
1	Slogan	Coca-Cola	22	63%	16	89%
	Picture	Victoria's Secret	25	96%	18	82%
2	Slogan	Hunkemöller	11	31%	5	28%
	Picture	Red Bull	3	12%	5	23%
3	Slogan	Häagen Dazs	20	57%	14	78%
	Picture	Nespresso	26	100%	21	95%
4	Slogan	Nespresso	33	94%	17	94%
	Picture	Magnum	10	38%	13	59%
5	Slogan	Adidas	7	20%	9	50%
	Picture	Häagen Dazs	5	19%	1	5%
6	Slogan	Magnum	26	74%	11	61%
	Picture	Opel	14	54%	7	32%
7	Slogan	T-Mobile	18	51%	7	39%
	Picture	Adidas	9	35%	7	32%
8	Slogan	Red Bull	33	94%	16	89%
	Picture	Hunkemöller	17	65%	21	95%
9	Slogan	Opel	18	51%	11	61%
	Picture	McDonald's	7	27%	10	45%
10	Slogan	McDonald's	31	89%	13	72%
	Picture	T-Mobile	14	54%	12	55%
Total			349	56%	234	59%

Additional Analyses on Gender					
	Average Score	Highest Recognition (Slogan)	Highest Recognition (Picture)	Lowest Recognition (Slogan)	Lowest Recognition (Picture)
Male	56%	Nespresso / Red Bull (94%)	Nespresso (100%)	Hunkemöller (43%)	Häagen Dazs (23%)
Female	59%	Nespresso (94%)	Nespresso / Hunkemöller (95%)	Hunkemöller (28%)	Häagen Dazs (5%)

On average, females seem more likely to recognize more brands than males (59% > 56%). The table shows that the Hunkemöller slogan is least well known amongst both males and females. Hunkemöller is a lingerie brand for females and is more likely to be recognized by males with regards to the slogan (43% > 28%).

Appendix C – Mann-Whitney U test H1a

Sample 1	
Sum of ranks	3363
Mean of ranks	62.28
Expected sum of ranks	2808
Expected mean of ranks	52
U-value	768
Expected U-value	1323

Sample 2	
Sum of ranks	1993
Mean of ranks	40.67
Expected sum of ranks	2548
Expected mean of ranks	52
U-value	1878
Expected U-value	1323

Sample 1 and 2 combined	
Sum of ranks	5356
Mean of ranks	52
Standard deviation	151.43

Brand Recognition					
Control	Score (\dot{x})	Rank	Treatment	Score (\dot{x})	Rank
1	9	101	1	8	94
2	9	101	2	8	94
3	9	101	3	7	79
4	9	101	4	7	79
5	9	101	5	7	79
6	8	94	6	7	79
7	8	94	7	7	79
8	8	94	8	7	79
9	8	94	9	6	56
10	8	94	10	6	56
11	8	94	11	6	56
12	8	94	12	6	56
13	7	79	13	6	56
14	7	79	14	6	56
15	7	79	15	6	56
16	7	79	16	6	56
17	7	79	17	6	56
18	7	79	18	6	56
19	7	79	19	6	56
20	7	79	20	6	56
21	7	79	21	6	56
22	7	79	22	6	56
23	7	79	23	5	32
24	7	79	24	5	32
25	7	79	25	5	32
26	7	79	26	5	32
27	7	79	27	5	32
28	6	56	28	5	32
29	6	56	29	5	32
30	6	56	30	5	32
31	6	56	31	5	32
32	6	56	32	5	32
33	6	56	33	5	32
34	6	56	34	5	32
35	6	56	35	4	15.5
36	6	56	36	4	15.5
37	6	56	37	4	15.5
38	6	56	38	4	15.5
39	5	32	39	4	15.5
40	5	32	40	4	15.5
41	5	32	41	4	15.5
42	5	32	42	4	15.5
43	5	32	43	3	7
44	5	32	44	3	7
45	5	32	45	3	7
46	5	32	46	3	7
47	5	32	47	3	7
48	5	32	48	2	2
49	5	32	49	2	2
50	4	15.5	SUM		1993
51	4	15.5			
52	3	7			
53	3	7			
54	2	2			
SUM		3363			

Above are the brand recognition rank sums for the control (slogan) and treatment (picture) group. The mean of ranks of the control group is higher than the treatment group ($62.28 > 40.67$), which indicates that the brand recognition rates are higher amongst subjects who received slogans.

Appendix D – Explanation Mann-Whitney U test H1b

Sample 1	
Sum of ranks	2761
Mean of ranks	52.09
Expected sum of ranks	2729.5
Expected mean of ranks	51.5
U-value	1267
Expected U-value	1298.5

Sample 2	
Sum of ranks	2492
Mean of ranks	50.86
Expected sum of ranks	2523.5
Expected mean of ranks	51.5
U-value	1330
Expected U-value	1298.5

Sample 1 and 2 combined	
Sum of ranks	5253
Mean of ranks	51.5
Standard deviation	149.3

The mean of ranks of the control group is higher than the treatment group ($52.09 > 50.86$), which indicates that the willingness to pay is higher amongst subjects who received slogans compared to the celebrity picture. However, this difference is not significant at a 5% level.

watches television seem to significantly increase the likelihood of recognizing brands. Furthermore, whether the recognition rate is significant depends on the brand, i.e. questionid. Brand 3 (Nespresso) is most likely to be recognized.

```

Average marginal effects          Number of obs   =          909
Model VCE      : Robust

Expression  : Pr(recognition), predict()
dy/dx w.r.t. : 1.treatment age 1.gender 2.questionid 3.questionid 4.questionid 5.questionid
                6.questionid 7.questionid 8.questionid 9.questionid 1.nationality
                1.education 2.education 3.education 4.education 5.education 1.employment
                2.employment 3.employment 4.employment 5.employment 6.employment television

```

	Delta-method					[95% Conf. Interval]	
	dy/dx	Std. Err.	z	P> z			
1.treatment	-.1609203	.0287286	-5.60	0.000	-.2172273	-.1046134	
age	-.0156433	.0258907	-0.60	0.546	-.0663881	.0351015	
1.gender	-.0000368	.0290065	-0.00	0.999	-.0568885	.0568149	
questionid							
2	-.1388179	.0753409	-1.84	0.065	-.2864833	.0088475	
3	.4262427	.0505557	8.43	0.000	.3271554	.52533	
4	-.2133369	.0682809	-3.12	0.002	-.3471651	-.0795087	
5	.0631881	.0733797	0.86	0.389	-.0806334	.2070096	
6	-.0257394	.0629251	-0.41	0.683	-.1490703	.0975915	
7	.0349476	.082124	0.43	0.670	-.1260126	.1959078	
8	-.0364945	.0674095	-0.54	0.588	-.1686146	.0956257	
9	.0743878	.0779898	0.95	0.340	-.0784693	.227245	
1.nationality	-.0987396	.0674305	-1.46	0.143	-.230901	.0334217	
education							
1	.2836575	.0864748	3.28	0.001	.1141701	.453145	
2	.2060434	.0569297	3.62	0.000	.0944632	.3176237	
3	.2411723	.0492786	4.89	0.000	.1445879	.3377566	
4	.164376	.05338	3.08	0.002	.0597532	.2689988	
5	.1970254	.1000233	1.97	0.049	.0009833	.3930675	
employment							
1	.0125404	.0786335	0.16	0.873	-.1415784	.1666592	
2	.0468728	.0416714	1.12	0.261	-.0348016	.1285472	
3	-.0921677	.0633381	-1.46	0.146	-.2163082	.0319728	
4	-.0067019	.0802598	-0.08	0.933	-.1640082	.1506044	
5	.3301326	.0639867	5.16	0.000	.2047209	.4555443	
6	-.2061107	.0891082	-2.31	0.021	-.3807595	-.0314619	
television	-.0374835	.0125476	-2.99	0.003	-.0620763	-.0128908	

Note: dy/dx for factor levels is the discrete change from the base level.

The table above allows us to analyze the contrasts or marginal effects. We can conclude that the use of pictures of celebrity endorsers in advertisement significantly decreases the likelihood of recognizing a brand by 16.09%. Age, gender, nationality and employment do not have a significant influence on brand recognition at a 5% significance level.

Appendix F – Probit regression on treatment effects

```
. teffects ra (recognition questionid gender age nationality education employment television,
> probit) (treatment)
```

```
Iteration 0: EE criterion = 3.322e-17
Iteration 1: EE criterion = 5.703e-33
```

```
Treatment-effects estimation      Number of obs   =      909
Estimator      : regression adjustment
Outcome model  : probit
Treatment model: none
```

recognition	Coef.	Robust Std. Err.	z	P> z	[95% Conf. Interval]	
ATE						
treatment (1 vs 0)	-.1691985	.0342124	-4.95	0.000	-.2362536	-.1021434
POmean						
treatment 0	.6314292	.023104	27.33	0.000	.5861463	.6767121

The probit regression above shows that on average, the subjects who received the slogans had a brand recognition rate of 63.14%. The subjects who received the pictures of celebrity endorsers have a significantly lower recognition as they had 16.92% less correct answers. This result is significant at a 5% level.

	dy/dx	Delta-method Std. Err.	t	P> t	[95% Conf. Interval]	
1.treatment	-.0901024	.1189735	-0.76	0.451	-.3262015	.1459966
1.gender	.1673909	.1228718	1.36	0.176	-.0764442	.4112261
age	-.1781773	.1127576	-1.58	0.117	-.401941	.0455864
1.nationality	.1140654	.2727549	0.42	0.677	-.4272078	.6553386
education						
1	.3279786	.398166	0.82	0.412	-.4621689	1.118126
2	.6522619	.2510744	2.60	0.011	.1540129	1.150511
3	.0230193	.2648131	0.09	0.931	-.5024937	.5485323
4	.3767465	.2440608	1.54	0.126	-.1075842	.8610773
5	.4170631	.2399966	1.74	0.085	-.0592023	.8933286
employment						
1	.0133943	.2082339	0.06	0.949	-.3998391	.4266276
2	-.0681078	.1718058	-0.40	0.693	-.4090507	.2728352
3	.3203619	.2317384	1.38	0.170	-.1395154	.7802391
4	-.7255012	.3505938	-2.07	0.041	-1.421243	-.0297593
5	-.173135	.3353377	-0.52	0.607	-.8386018	.4923319
6	1.20324	.3579953	3.36	0.001	.4928098	1.91367
television	.0429702	.0558734	0.77	0.444	-.0679088	.1538491

Note: dy/dx for factor levels is the discrete change from the base level.

From the table above, we can conclude that there is no significant difference ($P > 0.05$) between the control and treatment group regarding their willingness to pay for a Pepsi can.