

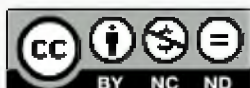
Montero, Andrea Fabiana

**Touch, ownership, uncertainty
and preference: which
consumers are affected by the
mere touch endowment effect
uncertainty and willingness to
pay**

**Tesis para la obtención del título de posgrado de
Magister en Dirección de Empresas**

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**TOUCH, OWNERSHIP, UNCERTAINTY AND PREFERENCE: WHICH
CONSUMERS ARE AFFECTED BY THE MERE TOUCH ENDOWMENT
EFFECT UNCERTAINTY AND WILLINGNESS TO PAY**

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Cordoba, 2017

ABSTRACT

This study provides an understanding of the impact of the sense of touch in consumers' behavior. Focusing on Willingness to Pay as Range (Wang et. al 2007), we investigated the effect of "touching" and its ability to generate an asymmetric shift in willingness to pay thresholds, where the minimum price experienced a higher increase than the ceiling price, and thus a reduction in the WTP range occurred, reflecting an increase in individuals' certainty (Maier et. al 2014). However, this effect seems not to be the same in every type of products. According to our results, when the aesthetic dimension of a product design was manipulated and taken under analysis, surprising and unexpected findings were noticed in individuals' certain and uncertain value perception. A likely explanation is that the sense of touch evidences facts that need to be yet discovered.



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TABLE OF CONTENTS

I. INTRODUCTION	6
II. LITERATURE REVIEW	9
2.1 Discovering The Endowment Effect	9
2.2 What Came Next: Searching for Endowment Effect's Theoretical Foundations Came Next	10
2.2.1 The Loss Aversion Approach.....	10
2.2.2 Psychological Factors Improving Individuals' Attachment and Endowment Effect.....	11
2.3 The Sense of Touch	12
2.3.1 Exploring the Sense of Touch.....	12
2.3.2 Touch and the Endowment Effect.....	12
2.4 Measuring Consumer Value Preception	14
2.4.1 The Approach of Willigness to Pay as a Range.....	14
2.4.2 Variations in Cosumers' Certainty Shapping WTP.....	15
2.5 Product Design	16
2.5.1 The role of Product Desing.....	16
2.5.2 Aesthetics Products.....	17
2.5.3 The benefits of Aesthetics Products.....	18
2.5.4 Aesthetic Design as a way to Improve Individuals' Attachment ...	19
III. INTENT CONTRIBUTIONS	21
IV. CONCEPTS, RELATIONSHIPSAND ASSUMPTIONS	22
V. RESEARCH METHOD	24

5.1 Sample, Object of Analysis, Dependent and Independent Variables.....	24
5.2 Performing our Experiment.....	25
VI. RESULTS.....	28
7.1 Normal Distribution Analysis, Previous Two-Way ANOVA Tests.....	28
7.2 Floor Price.....	29
7.2.1 Normal Distribution Analysis.....	29
7.2.2 Test for Homogeneity.....	29
7.2.3 The Two-Way ANOVA Test.....	29
7.3 Participantps Range WTP.....	32
7.3.1 Normal Distribution Analysis.....	32
7.3.2 Test for Homogeneity.....	32
7.3.3 Two Way – ANOVA Test.....	33
7.4 Exploratory Investigation Into the Role of Gender in Minimum Price Setting and Range.....	35
7.5 Exploratory Investigation about Participant’s Perceptions and Evaluation of the Box of Chocolates Appearance.....	36
7.6 Sample Characteristics.....	37
VIII. DISCUSSION.....	38
8.1 Individuals’ Certain and Uncertain Value Perceptions.....	38
8.2 Differences Between Male and Female Gender in Aesthetic Design Preferences.....	40
IX. GENERAL CONCLUSION.....	43

X. APPENDIX	45
A.1 Survey	45
A.2 Box of Chocolates Designs	47
A.2.1 Proposed Design for the Electric Green Box of Chocolates – Less Aesthetics.....	47
A.2.2 Proposed Design for the Brown Box of Chocolates – High Aesthetics.....	44
A.2.3 Final Results in Photographs.....	48
A.3 T- Test for exploratory investigation Into the Role of Gender in Minimum Price Setting and Range	49
A.4 Chi-Squared Test For Exploratory Investigation about Participant’s Perceptions and Evaluation of the Box of Chocolates Appearance	53
A.4.1 Aesthetic Dimension Statements.....	53
A.4.2 Functionalist Dimension Statements.....	56
A.4.3 Symbolic Dimension Statements.....	59
XI. REFERENCES	61

I. INTRODUCTION

The new emerging tendency of consumers to select online channels to perform their regular shopping engage the interest of numerous marketing research trapped by the main goal of clarifying how to compensate the experience of touch when it is not available (Peck & Childers 2007). It is difficult to think that the online experience provided by web stores might be a threat for traditional stores, where the special environment and the possibility to take direct contact with products enhance the experience of consumers while doing shopping. However, the increasing number of purchases made online, especially in the US and Europe, highlight a new scenario in consumers' purchase preferences (Perea & Monsuwé et. al 2004).

Casual observations emphasize the sense of touch as an important source of information, and investigations confirmed the role that this sense has in consumers' behavior and product evaluation. Following this line, Peck & Childers' (2003) research determined that Haptic data, or data acquired by the hands, is vital for the assessment of products and remarked how the impossibility of a direct experience with a certain item can be translated in a decrease of confidence in product evaluation and consumers' frustration, especially in those highly motivated to touch. Further insights were provided by Peck & Shu (2009) research which established a positive link between the act of mere touching a product and perceived ownership. These authors postulated that when the experience of touch is able to convey either neutral or pleasant haptic sensory feedback, an optimal reaction toward the item emerges and results in a positive product valuation, leading individuals to experience the so called endowment effect, reflected in a higher willingness to pay.

Yet, the sense of touch is not only an effective tool to gather information about the features of a particular product; it also constitutes a means to enable consumers to manipulate uncertainty about preferences or product performance, both of which are present in almost all purchase situations. This kind of situation is experienced by consumers in different degrees and is the result of an active, cognitive evaluation of available consumption options (Wang et. Al 2007).

Previous literature of endowment effect postulated a positive effect of certainty on point base Willingness to Pay (WTP) measures (Isik 2006; Van Dijk & Van Kinnippanberg, 1996) which implies considering the assumption that individuals are certain about their preferences and therefore know exactly how much they are willing to pay for one unit of a product (Hanemann, 1984). Since these assumptions are not consistent with what happens in real life, poor conclusions could be obtained by considering a point base WTP measure. Thus, in response to this and guided by the special interest to develop a behavioral measure, Wang et. al (2007) proposed WTP as a range, an interesting measure which contemplates consumers' level of uncertainty and represents a real pattern of consumers' behavior. He defined the reservation price as a range connected to the probability of purchase together with two thresholds: the floor or minimum price which determines the purchase probability of 100% and the ceiling price which contemplates the purchase probability of 0%. Finally, it is in the interval between the ceiling price and the floor price, which contemplates consumers' levels of uncertainty (purchase probability between 0% and 100%), the most interesting aspect of this measure since it is indeed in this interval where consumers begin hesitating about their purchase decisions. Following WTP as range approach, we wonder if touching implies an increase in certain value perception or if, to the contrary, it is translated in an increase of individuals' uncertain value perception. As levels of uncertainty and levels of certainty are linked to product valuation, it affects how much an individual is willing to pay.

Even more questions emerged when we analyzed an exact type of sensory feedback through the aesthetic dimension of a product design. We wondered if the touching effect should be the same for all kind of products and in this particular case, considering the aesthetic dimension of a product design, we aimed at determining to what extent attributes that cause the perception of beauty in an object affect consumers' preferences or uncertainty about preferences (Leder et al. 2004).

In order to give answers to our questions we performed an experimental setting where 80 university students, alternated through a touch and no touch scenario, interacted with a "more aesthetic box of chocolates" and a "less aesthetic box of chocolates".

Previous studies confirmed that the appearance of a product exerts a high influence on the consumers' evaluation process and choice, and since it determines the first impression that consumers have about a certain product, this source of differentiation, leads them to make inferences about other features of the product (Creusen & Schoormans, 2005). Bloch (1995) highlighted the determinant role of an optimal product appearance to be successful in the marketplace. He also defined numerous benefits that both brands and consumers can obtain through or usage experience. Anderson & Robertson (1995) proposed that the form of a design has a considerable impact on consumers' beliefs about the product and the brand. Following this line, Kumar & Noble (2015) remarked the product's appearance positive effect on brand affection and suggested that all professionals involved in the development of a product design should concentrate their efforts in the development of emotionally appealing designs since it enables peer perception of the product and affective reaction and evaluations.

Despite all these theoretical foundations that conduct us to predictable results, surprising results were obtained after performing our experimental setting.

II.LITERATURE REVIEW

2.1 Discovering the Endowment Effect

At the beginning of 1970 Richard Thaler, a student of a very conservative economics department at the University of Rochester, started conceiving ideas that later became the center of interest in numerous investigations. He used to enjoy observing people's behaviour in such a way that he eventually felt the need to explain concepts that the behavioural economics model was not able to explain. Even more enjoyable for him was the idea to highlight the economic irrationality that most of his professors used to manifest, one of whom was particular representative. A wine loving economist who purchased some nice Bordeaux wines years ago at low price, he had experienced a considerable increase in its valuation across the time, so the bottle of wine that previously had been purchased at only \$10 would now fetch \$ 200 at auction. The most interesting point of that issue was the fact that in that new scenario, the economist would neither be willing to sell the wine at the auction price nor buy an additional bottle at that price (Kahneman et. al 1991). Neoclassical theory suggests that the price an individual is willing to accept and is willing to pay should be identical. Yet, the previous example shows evidence that this is not a rule (Horwitz & McConnell, 2003). Thaler (1980) found a justification in a higher willingness to accept price than the willingness to pay through the effect he called the Endowment Effect. He established the hypothesis that people ascribe more value to things merely because they own them, so they will tend to pay more to retain something they own than to obtain something they still do not own, even when there is no cause for attachment, or even if the item was only obtained minutes earlier (Marewedge & Giblin, 2015). Consequently, through the study of the gap between economics and psychology, he studied the implications of relaxing the standard economic assumption that agents have stable, well-defined preferences and make rational choices. Rather, he postulated that agents in the economy behave like humans: they are irrational and emotional, they are prone to error and they do not always want to maximize financial benefits. Finally, through what Samuelson and Zeckhauser (1988) called status quo bias, further explanations were provided as to the existence of

the endowment effect which accentuated individuals' preference for the current state and their reluctance to change for a better one.

2.2 What Came Next: Searching for Endowment Effect's Theoretical Foundations Came Next.

2.2.1 The Loss Aversion Approach.

Thaler (1980) findings became the main reason for new investigations and thus the effect was widely replicated by many authors who tried to extend it and find new answers to the effect. Kahneman & Tversky (1979) conceived it as a result of Loss Aversion, the main concept of the prospect theory where losses (outcomes below some reference point) are perceived much stronger than gains (outcomes above the reference point) when individuals evaluate choice options (Kahneman & Tversky, 1984). The fact that the very first moment an individual owns an object used to be decisive as the prospect of losing it, leads individuals to experience this situation as a, relatively large, loss. On the other hand, the idea of acquiring an item for someone who does not own it is assumed as a, relatively small, gain. In other words, as a result of a shift in the reference point, the endowment effect changes what individuals consider as a loss or a gain. This phenomenon is consistent with Hossai & List (2012) findings, which demonstrated that employees who previously received an incentive would work harder to maintain that incentive rather than those who did not explicitly receive an incentive and were promised to obtain it. Later, authors like Reb & Connolly (2007) proposed that even more than factual ownership, subjective feelings of ownership (which does not imply factual ownership), are drivers for the loss aversion and an endowment effect. Similarly, according to Georgantzis & Navarro Martinez (2010) the sense of ownership changes the value and perception that individuals have about a particular object.

2.2.2 Psychological Factors Improving Individuals' Attachment and Endowment Effect

Over the last years, a growing number of researchers, in their attempt to deepen endowment effect findings, concentrated their efforts on the study of the psychological mechanism driving this effect. The connection between an object and its sense of worth is illustrated by authors like Strahilevitz & Loewenstein (1998) who strongly suggested that the longer an individual owns a product, the stronger is the value attached to it. This entails a process of psychologically adapting to the new material situation. Hence, the value of an item acquired in the past would be greater than the value of a recent acquired item or an item that has not been acquired. Other authors like Novemsky & Kahneman (2005), in their attempt to identify endowment effect boundaries, proposed that the presence of loss aversion and thus endowment effect is particularly harder in consumer goods, and that any effect is observed in the case of exchange goods. List (2003) introduced a new variable and postulated the hypothesis that individuals' experience in a certain market would eliminate the anomaly of the endowment effect. His studies concluded that although the endowment effect does not vanish with experience, it could be attenuated over the time as the individual gains experience in the market.

These entire findings highlight the fact that behind the endowment effect there are many variables which can enhance levels of attachment with a particular object. Many years of research have shown that the mere ownership plays a determinant role in a certain object valuation. Authors like Peck & Shu (2009), in order to obtain further knowledge about this controversial phenomenon, concentrated their attention on clarifying how the direct experience with an object can enhance product valuation. Focusing on the idea of finding factors to explain the shift in consumers' reference, Peck & Shu (2009) carried out experiments which showed how variables which seemed to be irrelevant can enhance perceived ownership and stimulate consumers to experience great levels of endowment effect, in this case, through the direct contact with the product under analysis.

2.3 The Sense of Touch

2.3.1 Exploring the Sense of Touch

Diverse studies of touch have concentrated their efforts on gathering conclusions about how powerful hands can be as the primary source of input to the perceptual system in many consumers' behavioural aspects (Krishna, 2011). Hands are related to the haptic system which is excellent at seeking, extracting and encoding information by hands about an object's material properties that correspond to texture, hardness, temperature and weight information. For example, the softness of a sweater can be materialized by touching it or the firmness of a tomato can be assessed by squeezing it (Lederman & Klatzky 1987; Klatzky & Lederman 1992; 1993). Along the same lines, Klatzky and Lederman (1987) conceived the hands as a person's "outer brain" and described "the intelligent hand". This proximal sense which is complementary with the vision, incorporates both cutaneous (affecting the skin) and kinesthetic (affecting the muscle) information which in turn create a live impression of the object as a whole (Klatzky & Lederman, 1993). However, the reasons that lead individuals to touch are not only based on their necessity to determine material properties. In this regard, Joan Peck developed the taxonomy of touch by defining Instrumental and Hedonic touch.

The classification of instrumental touch responds to the fact that consumers touch products as a means to an end- a possible purchase. At a simple level of this first classification, we find that consumers might touch a product with the main purpose of purchasing it. The following level shows that touching an object would be considered a tool to obtain no haptic information especially through visual, olfactory and auditory inspections. Finally, consumers may touch a product to obtain specific haptic information about the product's properties such as material properties of texture, hardness, temperature, and weight (Krishna 2010: 19-25).

2.3.2 Touch and the Endowment Effect

Many investigations demonstrated that consumers' valuation of an object increased once they have taken ownership, an effect which is very much in line

with the endowment effect (Dommer & Swaminathan 2013; Kahneman et. al 1990; Strahilevitz & Loewenstein 1980).

Peck & Shu (2009) showed that merely touching an object results in an increase of perceived ownership and in the valuation of a certain product when consumers experience either neutral or positive sensory feedback. Although improvements in product valuation were specially observed in legal owners (Kahneman et al. 1990), it was demonstrated that individuals are likely to experience the “feel of ownership” even when they do not own an object. Imaginary ownership became of relevant importance in situations where the possibility to touch is not available because of its positive effects on perceived ownership. It was also demonstrated that touching items that provide pleasant haptic sensory feedback can be translated in improvements of perceived ownership as well as in a positive reaction toward the product, which would together with perceived ownership, stimulates product valuation and generate in consumers a higher willingness to pay. But the benefits of touch are not only based on a higher perceived ownership and product valuation. Many studies examined the numerous benefits that touching has in consumers’ behaviour and how persuasive it could be when it enables consumers to gather information about specific product attributes. Peck & Childers (2003) postulated that touching is a persuasive tool which has the ability to increase attitude and purchase intention toward a product which can be explained as a consequence of an increased confidence in the product valuation. Later those authors conducted a study to analyze the influence of touch on impulse–purchasing behaviour and a positive relation was found especially in those consumers where the need to touch was higher. It was demonstrated that not only touch that provides specific product attribute information but also hedonic touch have persuasive effects on consumers’ behaviour (Peck & Childers, 2006). The studies of Peck and Wings (2006) shed light upon the manner in which communication that incorporates a touched element generates a positive impact on consumers’ behaviour mainly on those who enjoy touching a certain product just for fun or interest. Moving to interpersonal touch Hornik (1992a) findings highlight the importance of touch in terms of nonverbal communication and show evidence of its positive role in consumers’ behaviour. The studies included collecting data from, restaurants, bookshops and supermarkets.

According to the studies, consumers experienced positive feelings and expressed willingness to be complacent with a requester just by an elegant tactile sensation in their arms. In this sense, another study by the same author determined that touch increases the time that customers spend on doing shopping, which improves the evaluation of that particular store and also their willingness to pay (Hornik, 1992b). What is more, Willis & Hamm (1980) suggested that in a touch condition, individuals tend to be more compliant to sign a petition than in a no touch condition. Rather than depicting the numerous benefits that touching has in many aspects of our lives, subsequent studies remarked the negative side of this powerful sense. For example, Morales & Fitzimons (2007) explained that the moment people realized that a particular object has been touched by another, they tend to elicit disgust and the object tend to be perceived as less attractive. Their explanations were based on the existence of a product negative contagion effect among consumers: when objects touch one another other their properties are transferred and can have an influential effect in choice and meaningful change in evaluations.

2.4 Measuring Consumer Value Perception

2.4.1 The Approach of Willingness to Pay as a Range

The reservation price is defined as the maximum price that consumers are willing to pay for one unit of a good and it is related with consumers' threshold (Wang et. al 2007). Along many years, numerous investigations based their conclusions on WTP as a single point (Van Dijk & Van Kinnippanberg 1996; Isik 2006), under the utility theory assumption which established that consumers are completely certain about their preferences and know exactly how much they are willing to pay for one unit of a product (Hanemann, 1984). In response to this, Wang et. al 2007, relaxed this strong assumption and postulated that the reservation price should be defined as a range associated with the probability of purchase, as consumers may lack a well-defined preference structure and they are also bound by their cognitive abilities. Later Dost & Wilken (2012) demonstrated the relevance of considering Willigness to Pay as range approach instead as a single point. Almost in all purchase situations consumers experience different levels of uncertainty but

particularly two types are highly related to their behaviour: performance and preference uncertainty. While performance uncertainty arises as a consequence of imperfect information and involves the risk of product non-performance and no fulfilled expectations, preference uncertainty reflects how consumers' goals are perceived to be in conflict even when they have expert information about a product (Maier et. al 2014).

Therefore, Wang et. al 2007, in his endeavour to develop a high related consumer behaviour measure, created Willingness to pay as Range which defined two thresholds: a floor or minimum reservation price below which consumers would definitely purchase (probability of purchase is 100%) and the ceiling or maximum reservation price above which consumers would no longer purchase (probability of purchase is 0%). However, the most interesting aspect of this measure is defined by the difference between the ceiling and the floor price as it is within this range where, as a consequence of performance or preference uncertainty, consumers are in doubt as to whether to purchase an item or not.

2.4.2 Variations in Consumers 'Certainty Shopping WTP

Through this measure and guided by a special interest to obtain a better understanding of consumers' behaviour Maier et. al, (2014) carried out a study to analyse the impacts of uncertainty in WTP.

Previous studies of the endowment effect demonstrated a positive relation between certainty and point based WTP as a result of a reduction of performance uncertainty. Maier et. al, (2014) extended these previous findings and demonstrated that higher levels of certainty are translated in asymmetric shift WTP thresholds, where the floor price experiences a greater increase than the ceiling price and a decrease in the range is operated. In other words, consumers' preferences are increased and the uncertainty about the preferences experiences a reduction.

Product reviews, word of mouth, and advertising, among others are suggested as traditional marketing mixed instruments which help reduce consumers' levels of uncertainty. Yet, it was noticed that direct sensory contact would convey even more important levels of certainty.

2.5 Product Design

2.5.1 The role of Product Design

The design of a product became a key marketing element since it demonstrated to be an important source of competitive advantage and the only aspect which makes one product different from other in the marketplace. The term “design” can be related to a process or to a particular product composition. When we talk about product design as a process, many professionals like industrial (product) designers, engineers, marketing experts, scientist, technicians, among others, participate in its development process with the main goal to produce a product “design” while when we refer to product design as a particular product composition many important considerations are involved. A successful design should perform its function in an optimal manner, it should be cost-effective and individuals should have a pleasant experience with its usage (Veryzer, 1995). All these desirable features are probably the result of the constant strive of many specialists to interpret consumers’ needs appropriately. Cicantelly & Magidson (1993) postulated that determining consumers’ needs or their exact expectations of a certain product is not a simple task and it is an effort that is often not achieved with success, constituting the reason why many products fail. They also expressed that the main foundations for this to occur is not difficult to understand since “consumers’ needs and desires are elusive because consumers themselves generally have not consciously formulated what they are or how to fulfill them....”. Provided that a product design can be translated in success or failure in the marketplace, research on consumers’ needs and response to products’ design was at the core of many investigations. A good example is the study conducted by Hamburg et. al (2015) who developed a new scale in order to identify those dimensions of vital importance in every design and analyse its impacts on consumers’ behaviour. This scale enables measuring the product design along with the aesthetics, functionality, and symbolism dimensions. The Aesthetic dimension is related to products’ attributes that cause a perception of beauty for the beholder, the Functionality dimension reflects the perception that consumers have on the ability of a product to meet its purpose, and the Symbolism dimension reflects the

message that a particular product conveys regarding self- image to both consumers and others on the basis of visual elements (Hamburg. et al 2015). A positive impact of each dimension was demonstrated in consumers' purchase intention, WOM (Word of Mouth), and Willingness to pay. Other authors like Creusen & Schoormans (2005) defined six roles of product appearance: 1) Communication of aesthetic, 2) Symbolic, 3) Functional, 4) Ergonomic information, 5) Attention drawing and 6) Categorization. They also investigated whether those aspects play a determinant role or not in consumers' choice. A qualitative study demonstrated a positive influence of each role in consumers' evaluations and provides insights into how the appearance of a product can influence consumers' daily choices. Therefore, consumer behaviour and product valuation have demonstrated to be the main point of attention of many recent investigations. The design of a product in this sense has demonstrated to be of relevant importance not only in consumers' behaviour but also in the experience they can leave by using a certain product.

2.5.2 Aesthetics Products

Previous studies examined many factors and a dimension which defined the design of a product in consumers' behaviour and value perception (Creusen & Schoormans 2005; Hamburg et. al 2015). In this study, we will rather concentrate our attention on the aesthetic dimension of a design. The term 'Aesthetics' comes from the Greek word *aesthesis*, and refers to sensuous knowledge or sensory perception and understanding (Krishna, 2010: 18). Aesthetics is particularly related to the response and positive reaction that individuals can experience toward a particular object, artifact or system as a result of seeing, hearing, touching, smelling, tasting, and thinking certain patterns that positively influence our primary senses' functioning (Hekkert, 2006).

Over the last years, many investigations highlighted the role of the aesthetic dimension in consumers' behaviour and the tendency of people moving toward aesthetics components in every aspect of their lives (Venkatesh & Meamber 2008; Weggeman et al., 2007): As a pleasant haptic sensory feedback of consumers with a determined product plays an important role in

consumers' endowment effect and constitutes one of the most important reasons for the success of many products in the marketplace. Marketing experts and designers concentrate their efforts on the development of products with special features in order to make them exclusive and different in comparison with alternative or similar ones. In this regard, aesthetics products prove to be an optimal tool not only to differentiate a certain product in the market but also to fulfill consumers' expectations and heighten their experience with a certain object.

2.5.3 The benefits of Aesthetics Products

Many investigations confirm that people tend to base their thoughts on the stereotype which asserts "what is beautiful is good". Dion et. al (1972) research determined that physically attractive persons are assumed to have a great variety of positive personal attributes, for example attractive persons are expected to be friendlier or they are expected to be successful in their workplace. Furthermore, studies in the Food Industry highlighted the important repercussion that food appearance has on consumers' perceptions and on their willingness to accept food products. As the "first taste is almost always with the eye", food appearance demonstrated to have a halo effect which can modify flavor perception and the value of food products (Imram, 1999). Following this line, it was proposed that people tend to base their judgments about a particular object on its aspect. Consequently, numerous designers and practitioners found in an appealing design a source of multiple benefits, both for retailers and brands and for consumers' experience with a particular object. It was also demonstrated that level of price sensitivity decreases when a certain item looks more unique and attractive, a situation which enables companies to establish higher prices and achieve considerable profits (Yigit & Kimzan, 2015). Indeed, according to Bloch (1995) investigations, an appealing product design can generate multiple other benefits. An optimal product design constitutes a powerful tool to grab consumers' attention in a defined market as well as a means to convey information about the product which consumers use as a base to make inferences of its attributes. Similarly to this, Hassenzahl (2008) argued that if beauty contributes to a positive evaluation of a certain product, this positive evaluation is expected to be extended to other features of the product.

Finally, a product design is also significant in a larger sense as it affects the quality of our everyday lives. In other words, an attractive design enhances the experience with a certain product through the sense of pleasure and stimulation while an unattractive item may produce undesirable effects like feelings of distaste. The lasting effects ascribed to aesthetics items are of remarkable importance. Instead of discarding some products quickly, it was observed that those items which conserve aesthetics properties tend to be preserved by their owners (Bloch, 1995).

2.5.4 Aesthetic Design as a way to Improve Individuals' Attachment

Authors like Mugge et. al (2010) emphasize that apart from being an optimal tool to grab consumers' attention, a product's appearance also contributes to trigger consumers' affective attachment to a particular object. It was found that people tend to conserve objects with high aesthetic value. As a result, products with exceptional utility or appearance can enhance the level of attachment that individuals experience with a certain product. Other authors like Cooper (2005) argue that the lifespan of a certain object is affected by its form and appearance. In this way, to conserve the level of attachment that people develop with a particular object, it was proposed that the way it looks over the time and ages became of sum importance (Chapman, 2009). Products should become more attractive over time, and its materials and surface should evidence that the object was used and also cared for. In consequence, people should not have the necessity to discard products provided they keep their instrumental functions, and not its aesthetic appearance. In this line, Page (2014), based his study on the way a consumer-product relationship is built and its effects on consumers' decision on replacement. He placed product appearance and reliability in order of great importance when consumers decide to replace a product.

Hektner et. al (2007) remarked the fact that consumers are not always expected to choose what is more pleasant for them- in this case buying an aesthetic product. However, due to their limited cognitive abilities, human beings are likely to spend sources and time in activities and relationships which they associate with positive and pleasant experiences and avoid those activities

which create negative experiences and feelings. The goal of creating aesthetics products has become a new tool that companies adopted to ensure the success of products in the market place. Under this argument, creating aesthetics products imply multiple economic and social benefits, and consumers with a positive experience feel more motivated to consume them.

III. INTENT CONTRIBUTIONS

This research aims first at going a step further in defining the role of a product design in consumers' perceptions and product valuation. By using haptic stimulus we want to extend Homburg et. al (2015) findings all of which were fundamentally based on visual stimulus. As a result, we intend to provide insights into how consumers' product valuation can differ when they take direct contact with the product under analysis. Aesthetics products are greatly appreciated when their properties of beauty and the effects of pleasure are sensed strongly by consumers touching them as opposed to not having the opportunity of a direct contact. A better understanding of the aesthetics dimension's role in every product design can be obtained by the practitioners. The importance of a product's appearance resides in the message and in the information they provide about the product (Bloch, 1950). This factor has a direct impact on consumers' perceptions and in the inferences they can do about other features of the product by just considering its appearance Hassenzahl (2008). Hence, mistakes in the information that a company conveys to consumers through the design they choose for a product can be avoided.

Secondly, Peck and Shu's (2009) findings would be replicated through a concrete evidence of how the ability to touch a product could lead consumers to reinforce perceived ownership and valuation of a product and also extend the authors' findings by examining an exact type of sensory feedback provided by touching aesthetics products.

Thirdly, this research enables us to replicate Maier et. al (2014) findings and observe how the direct experience with a product, as Smith and Swinyar (1983) established, enhances attitude certainty and in turn attitude behaviour consistency (Fazio & Zanna 1978; Wu & Shaffer 1987) aspect that can be reflected in a stronger increase of the floor price as compared with the ceiling price, and a subsequent reduction in the range of consumers' WTP.

Besides the theoretical contribution of this research, we provide managerial contributions to retailers to design new strategies to grab the attention of potential new customers by reducing non-performance risks and encouraging them to take direct contact with the products.

IV. CONCEPTS, RELATIONSHIS AND ASSUMPTIONS

Using a range based WTP (Wang et. al 2007) conceptualization, we firstly took under study the touch effect on individuals' certain value perception and simultaneously in the uncertain value perception. Then by considering a defined sensory feedback through the aesthetics dimension of a product we pretend to obtain answers as to whether this effect is extensive to all kind of products. Maier et. al (2014) demonstrated that higher levels of certainty imply a reduction in the range risk, as a consequence of a more relevant increase in the floor price rather than in the ceiling price. Following Peck & Shu (2009) findings and through the positive link established by touching a product, perceived ownership and consumers' affective reaction, an optimal product's valuation takes place. As a result, individuals express a higher willingness to pay, a situation which could be explained by the sense of touch: a tool to gather information about the features of a particular product and to help individuals manage uncertainty about preferences or product performance.

H1.A: Touch increases certain value perception.

H1.B: Touch decreases uncertain value.

A pleasant haptic sensory feedback of consumers with a determined product is crucially important on the consumers' endowment effect and could constitute one of the most important reasons for the success of many products in the marketplace. Aesthetics products emerged as a way to fulfill consumers' expectations and enhance their experience with a certain object. The stereotypes in which people based their thoughts "what is beautiful is good" (Dion et. al 1972) has demonstrated to be applicable not only in persons and food but also in products (Imram, 1999). Following this line, it was proposed that people tend to base their judgments about a particular object in its appearance. Thus, an appealing and striking design has become a synonym of higher profits for companies (Yigit & Kimzan, 2015), and also the cause of many other benefits: it contributes to grab consumers' attention, it constitutes an optimal tool for consumers to collect information about a particular product, it triggers judgment and inferences about other features of a certain object and it has a positive impact on consumers' everyday lives thanks to the sensory experience

and stimulus it conveys (Bloch, 1995). All this multiple benefits can be the explanation of Homburg et. al (2015) findings which highlight the significant impact that the design of a product through the aesthetic, functional and symbolism dimensions have on consumers' purchase intention, WOM (Word of Mouth) and WTP. Based on this claim, we establish our second hypothesis.

H2 A: Higher aesthetics products should increase certain value.

H2 B: Higher aesthetics products should decrease uncertain value

It is interesting to note that although all dimensions positively affected consumers' behaviour, the aesthetic dimension showed the weakest effect. The intrinsic reward of having direct contact with aesthetics products such as pleasure, inspiration or imagination, together with visual stimulus can lead consumers to enhance the product valuation.

In spite of the numerous benefits mentioned in previous investigations as a result of an attractive design, other studies also postulated that products with an optimal appearance can enhance the level of attachment that individuals experience with a particular object (Cooper, 2005; Chapman, 2009; Mugge et. Al. 2010;Page 2014)

All these findings enable us to reach our third and last hypothesis.

H3A: Touching a highly aesthetic product should increase certain value perception.

H3B: Touching a highly aesthetic product should decrease uncertain value perception.

V. RESEARCH METHOD

5.1 Sample, Object of Analysis, Dependent and Independent Variables

The experiment was performed in a student residence in Frankfurt Oder where 80 university students were interviewed. The objects under analysis were chocolates provided in two different packaging with almost similar characteristics. The decision to use chocolates to carry out our research was basically due to the fact that they were employed in several prior studies of product valuation and endowment effect. Chocolates also foster students' interest to participate in our experiment because of the pleasure that almost all consumers experience with its consumption. In order to avoid any previous information or influence in consumers' certainty and perceptions, we decided not to employ well-known brands, and instead, with the support of an industrial designer, we created our own chocolate packages with almost identical features: the same form, size, material, weight as well as the same kind of chocolate inside. The aesthetic dimension of both package designs was manipulated just by varying the color of the package. The decision to vary the color of our two boxes of chocolates was based on the fact that color is a property which influences aesthetics' judgments (Creusen & Schoormans, 2004). What is more, the proper use of colors has demonstrated to be not only a source which enables companies to gain differentiation in the marketplace but also a feature of product designs which influence moods and feelings in a positive and negative way and therefore the attitude toward a certain product (Singh, 2006).

The color brown was selected for the more aesthetic box of chocolates since it is employed for the package of numerous successful chocolate brands, and an electric green was selected for the less aesthetic one since it is not a color associated with this product category and also does not contribute with an aesthetic appearance.

In other words, we pretended to improve the appearance of one of the boxes in order to make it look more aesthetic and worsen the appearance of the other one to make it look less aesthetic.

With regard to the independent and dependent variables in our investigation, we firstly defined independent variables on a touch and no touch condition. We manipulated them by explicitly asking participants to touch the product in a touch condition and not to do so in a no touch condition and based on the aesthetic dimensions of our packages: the most and least aesthetic box of chocolates. Secondly, and moving towards the experiment dependent variables, two dependent variables were defined: the first one was given by a certain value, reflected in the floor or minimum price that participants are willing to pay (100% purchase probability), and the second one was defined by an uncertain value, reflected through the difference between the ceiling price and floor price that participants were willing to pay (WTP range, indicative of the degree of uncertainty) (Wang et. al 2007).

5.2 Performing our Experiment

We displayed our box of chocolates in two different rooms. To start our experiment, half of the participants were conducted to one of the rooms where the most aesthetic box of chocolates was shown. We asked the first participant to get into the room and touch the box of chocolates for one minute without eating the chocolates. As soon as they had direct contact with the product, the participant completed our survey which was organized in three sections (Appendix A1):

In the first section, and following the approach of WTP as a range, we asked every participant to define their floor price (the price below by which you would buy the box of chocolate in any case) and their ceiling price (the price above by which you would definitely not buy the box of chocolates). In the second section, and using the scale developed by (Homburg et. al 2015) participants evaluated the appearance of our packages by considering its aesthetic, functional and symbolism dimensions. To conclude our survey, in the third section every participant was asked to provide demographic data: age, gender, monthly income and highest level of education.

Once the first participant finished completing the survey, we asked a second participant to come into the room. This time on a no touch condition, the box of chocolates was shown to the participant for one minute without any possibility of physical contact with the item and subsequently we asked him/her

to complete our survey. The third participant, similarly to the first one, came into the room and was asked to touch the item. After taking direct contact with the product, as every participant did, we asked him/her to complete our survey. Thereby participants were alternated through a touch and no touch condition until we reached the number of 40 participants; that is half of our sample.

In the next stage and to conclude our study, the other half of the participants were conducted to the other room where the less aesthetic box of chocolates was displayed. Repeating the procedure previously described with the more aesthetic box of chocolates and until we reached the number of 40 participants; students were then alternated through a touch and no touch condition and were asked again to complete our survey at the end of their experience with our box of chocolates.

VI. OPERATIONALIZATION AND MEASUREMENT

To test our hypothesis two relevant measures were considered: To begin with, the scale of product design that Homburg et. al. (2015) proposed with their research helped us to measure both designs of chocolates boxes through the aesthetics, functional and symbolic dimensions. This scale provided insights into the effectiveness of our manipulation to make one of the boxes of chocolates look more aesthetics than the other one, and also into how the aesthetic dimension would affect individuals' preferences and product evaluation.

Then, by adopting WTP as a range we relaxed the utility theory assumption which established that individuals know their preferences structures with certainty and instead of treating the reservation price as a single measure we defined the reservation price as a range which is positively related to performance and preference levels of uncertainty that every individual experience in a purchase situation (Wang et. al 2007). Thresholds of consumers' WTP are defined under this approach, which distinguishes both states consumers' certainty and uncertainty, and would provide references on the degree in which individuals' preferences and levels of uncertainty are affected in a touch and in a no touch condition and also on the impact of an aesthetic design in consumers' behaviour.

VII. RESULTS

The research method has previously described two groups of 40 students who were subject to different stimulus. Both groups of participants were alternated through a touch and no touch condition, and while one group interacted with the more aesthetic box of chocolates the other group of participants did it with the less aesthetic one.

A two-way ANOVA analysis was originally planned in order to test our hypothesis and obtain answers to the research question. Though at first we considered to include the variable “gender” as a third factor in the model, this would have reduced some of the sizes to ten or twelve people, for which reason the originally two-way ANOVA was conducted and gender was analyzed separately.

7.1 Normal Distribution Analysis, Previous Two-Way ANOVA Tests

In order to administer the Two-way ANOVA analysis, a number of tests of normality, both Kolmogorov–Smirnov and Shapiro-Wilk were conducted for both dependent variables.

Because of the complexity of the model table 1 shows all investigated groups.

Table 1: Normal Distribution tests, previous Two-Way ANOVA tests.

Independent Variables		Dependent Variables	
		Floor Price <i>Shapiro Wilk p value</i>	WTP's Range <i>Shapiro Wilk p value</i>
Touch		<.001	.004
No Touch		.234	.303
Touch	Less Aesthetic	.002	.082
	More Aesthetic	.007	.001
No Touch	Less Aesthetic	.466	.519

More Aesthetic	.126	.472
Less Aesthetic	.005	.030
More Aesthetic	<.001	.008

Notes: Groups with p (value) < 0, 05 differ from normal distribution.

7.2 Floor Price

7.2.1 Normal Distribution Analysis

The investigation of the normal distribution of the groups showed that 5 of out 8 groups differ from a normal distribution in a statistically significant way (see also table 1). The assumption of normality is required for statistical significance testing using a two-way ANOVA analysis. The decision to conduct the ANOVA according to plan responds to the fact that this statistical test is relatively “robust” regarding violation of normal distribution which means that some violations for this assumption are admitted and valid results can still be obtained by performing it (Field 2009: 358).

7.2.2 Test for Homogeneity

Because of our necessity to conduct the analysis as a two-way ANOVA, the results of the Leven’s test ($p < .005$ lack of homogeneity of variances) will be disregarded. See also table 2.

Table 2 : Levene's Test of Equality of Error Variances

Dependent Variable: Floor Price			
F	df1	df2	Sig.
9,854	3	76	,000

Notes: $p < .005$ highlight lack of homogeneity of variances.

7.2.3 The Two-Way ANOVA test

The results show a main effect for the touch condition, a main effect for the condition aesthetics as well as a main effect for the interaction between touch and aesthetics.

With regard to the touch condition, the result shows that the participants in the no touch condition have a lower mean score than those in the touch condition ($M=2.05$ vs $M=3.25$), see also table 4. This difference is statistically significant with $F(1, 80) = 16.12$, $p < .005$, and for this reason we accept hypothesis H1A, see also table 3.

Taking under consideration the condition Aesthetic, the group “less aesthetic” has a considerably lower mean than the group “more aesthetic” ($M=1.63$ vs $M=3.70$), see also table 5. In this case the group’s difference is also statistically significant with $F(1, 80) = 46.46$, $p < .005$ and lead us to accept hypothesis H2A, see also table 3.

Finally, concerning the interaction between touch and aesthetics factors, a pattern is discernible in the highest mean score. A box of chocolates that is less aesthetically pleasing results in a lower floor price than the more aesthetic one and this effect is particularly distinct in the touch condition. Therefore, if people are allowed to touch the less aesthetic box of chocolates it results in the lowest minimum price they are willing to pay ($M=1.56$) while people who are allowed to touch an aesthetically pleasing box it results in a considerable higher minimum price they are willing to pay ($M=4.94$), see also table. This interaction is sharply significant with $F(1, 80) = 20.21$, $p < .005$, and lead us to accept hypothesis H3A, see also table 3.

Table 3: Effects of the two Independent Variables (Touch and Aesthetic) in the FP.

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	147,796 ^a	3	49,265	27,596	,000
Intercept	562,012	1	562,012	314,816	,000
Touch	28,776	1	28,776	16,119	,000
Aesthetic	82,947	1	82,947	46,463	,000
Touch * Aesthetic	36,073	1	36,073	20,207	,000
Error	135,676	76	1,785		

Total	845,483	80			
Corrected Total	283,471	79			

a. R Squared = , 521 (Adjusted R Squared = , 502).

Notes: the p-value has to be smaller than 0.05 or 5%.

Table 4: Estimated marginal mean for Touch. Dependent Variable: Floor Price

Touch	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
No Touch	2,051	,211	1,630	2,472
Touch	3,250	,211	2,829	3,671

Table 5: Estimated marginal mean for Aesthetics. Dependent Variable: Floor Price

Aesthetics	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Less Aesthetic	1,632	,211	1,211	2,053
More Aesthetic	3,669	,211	3,248	4,090

Table 6: Estimated marginal mean for Touch * Aesthetic. Dependent Variable: Floor Price.

Touch	Aesthetic	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
No Touch	Less Aesthetic	1,704	,299	1,109	2,299
	More Aesthetic	2,398	,299	1,802	2,993
Touch	Less Aesthetic	1,561	,299	,965	2,156
	More Aesthetic	4,940	,299	4,345	5,535

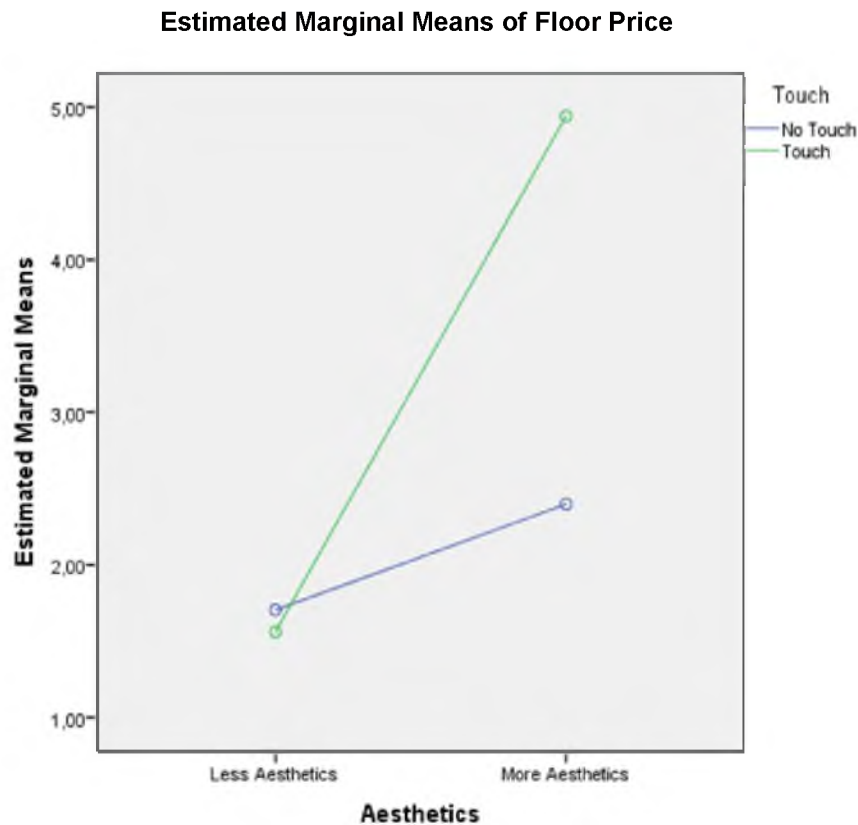


Figure 1: Interaction effect between touch and aesthetics and its significant effect in the floor price

7.3 Participants` Range WTP

7.3.1 Normal Distribution Analysis

Considering the range of WTP as the dependent variable, the Shapiro-Wilk test showed that three of the eight groups differ from a normal distribution in a statistically significant way. Similarly to our first dependent variable (floor price), and since ANOVA models are relatively robust regarding violations of normal distribution, the decision to conduct a two-way ANOVA analysis was taken.

7.3.2 Test for Homogeneity

The results of the Leven's test shows that the variances of the groups are Homogeneous ($p > .05$). See table 7.

Table 7 : Levene's Test of Equality of Error Variances

Dependent Variable: Range			
F	df1	df2	Sig.
2,162	3	76	,099

Notes: p value > .05 highlights homogeneous variances.

7.3.3 Two Way – ANOVA test

The two-way ANOVA results show that there is a main effect for the touch condition. Hence, participants in the touch condition express a considerably lower mean range, than those who do not touch ($M=1.92$ vs $M=4.03$), see also table 9. This difference is statistically significant with $F(1, 80) = 54.08$, $p < .005$ and lead us to accept our H1B hypothesis, see also table 8.

Neither aesthetic as main effect nor the interaction between touch nor aesthetic are statistically significant ($p = .055$ and $p = .269$, respectively), see also table 8. This aspect leads us to reject hypothesis H2B and H3B.

Table 8: Effects of the two Independent Variables (Touch and Aesthetic) in the WTP range.

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	97,261 ^a	3	32,420	19,705	,000
Intercept	708,348	1	708,348	430,521	,000
Touch	88,979	1	88,979	54,080	,000
Aesthetic	6,244	1	6,244	3,795	,055
Touch * Aesthetic	2,038	1	2,038	1,239	,269
Error	125,045	76	1,645		
Total	930,654	80			
Corrected Total	222,306	79			

Notes: the p -value has to be smaller than 0.05 or 5%.

Estimated Marginal Means

Table 9: Estimated marginal mean for Touch. Dependent Variable WTP range.

Touch	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
No Touch	4,030	,203	3,626	4,434
Touch	1,921	,203	1,517	2,325

Table 10: Estimated marginal mean for Aesthetic. Dependent Variable WTP range.

Aesthetics	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Less Aesthetic	2,696	,203	2,292	3,100
More Aesthetic	3,255	,203	2,851	3,659

Table 11: Estimated marginal mean for Touch * Aesthetics. Dependent Variable WTP range.

Touch	Aesthetics	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
No Touch	Less Aesthetics	3,911	,287	3,339	4,482
	More Aesthetics	4,150	,287	3,579	4,721
Touch	Less Aesthetics	1,482	,287	,911	2,053
	More Aesthetics	2,360	,287	1,789	2,931

Estimated Marginal Means of Range

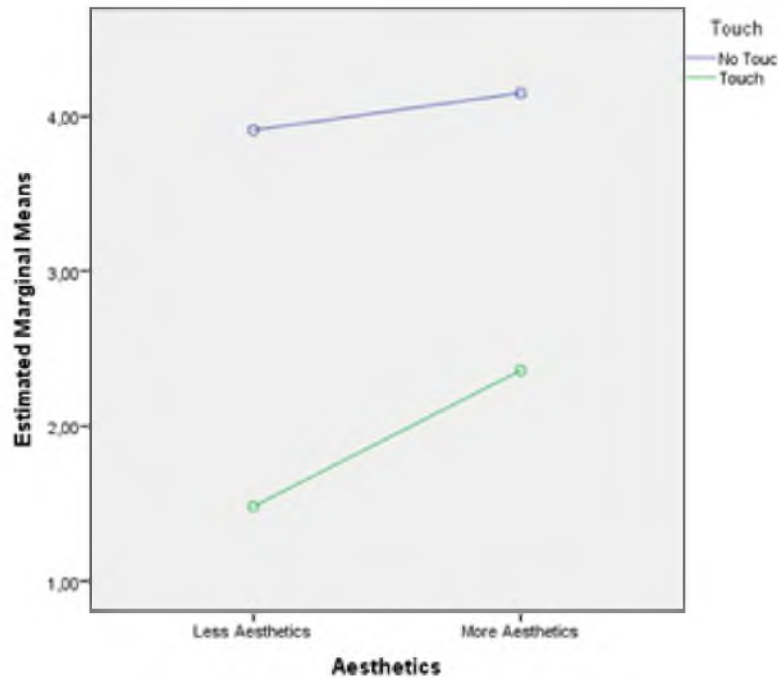


Figure 2: Graphic which evidences that there is no significant effect of the interaction between the two factors (touch and aesthetic) in the range of willingness to pay.

7.4 Exploratory Investigation into the Role of Gender in Minimum Price Setting and Range

In order to investigate whether gender plays an important role concerning the influence that this variable would have in participants' certain and uncertain value perceptions, a comparison between females and males was conducted. Due to the metric nature of both dependent variables, we devised independent samples t-tests.

Similarly to the ANOVA analysis, normally distributed data and homogeneity of the variances are required by the t-test (Field 2009: 326). The Shapiro-Wilk test, which provides insights into the data distribution, shows that either group is normally distributed with respect to the floor price. An identical conclusion was obtained in regards to the normal distribution the groups present related to participants' range of willingness to pay. Because t-tests are considered robust with regards to violations of these requirements, the decision to perform two t-tests was taken (Field 2009: 326). What is more, for further support to our results, the Mann-Whitney U test, which is usually presented as

the nonparametric alternative to the independent sample t-test, was also conducted (Field 2009: 548).

As part of the t-test two Leven Tests of homogeneity variances were performed. In both cases, the variances of the groups were found to be equal ($p > .05$ and $p > .05$).

Neither t-test showed statistically significant differences between female and male gender ($p > .05$ and $p > .05$). The Mann-Whitney tests support this result and again no statistically significant differences were found between the gender variable: with respect to neither the floor price ($p > .05$) nor to the range ($p > .05$). (Appendix A.3)

7.5 Exploratory Investigation about Participant's Perceptions and Evaluation of the Box of Chocolates Appearance

A total of nine Chi-squared tests were carried out. The aim was to investigate whether the groups (more aesthetic box of chocolates vs. less aesthetic box of chocolates) agreed or disagreed with the items and statements mentioned in the scale that appeared in our survey. As mentioned in previous points of the proposal research, the design was based on Hamburg et. al (2015) proposed scale, which enables us to obtain insights about how participants evaluate the box of chocolates through the aesthetic, functional and the symbolic dimension of a product design. Agreements or disagreements were measured on 5 point liker scale, ranging from 1 (strongly disagree) to 5 (strongly agree).

Those participants who were given the more appealing box of chocolates were expected to tend to agree fundamentally with the statements related to the Aesthetic dimension. The opposite effect was expected in regard with participants who interacted with the less aesthetic box of chocolates, and a stable pattern for both boxes of chocolates in the functionality and symbolic dimension were expected. Surprisingly, and taking under consideration the more aesthetic box of chocolates, not only the aesthetic dimension was highly valued but also the functional and symbolic dimension. Contrary to this situation, participants who interacted with the less aesthetic box of chocolates evaluated the aesthetic, functional and symbolic dimension of the box of chocolates in a negative manner.

A total of 9 statements were presented. Results regarding the groups' agreement and disagreement did not meet our expectations. Each Chi-squared test reveals statistically significant group differences. (See Appendix A.4)

7.6 Sample Characteristics

The sample of our experiment is constituted by 80 University students, in which 43, 3% are female participants and 53, 8% are male participants. Most of the students showed High School as their highest level of education since most of them are still studying to obtain their Bachelor's degree. Only 28,3% of our sample is constituted by students with a Bachelor's Degree as their highest level of education and the remaining 7,5% is constituted by students with a Master's Degree. The average age for both groups is almost equal to 21.32 for male participants and 21.21 for female participants. In relation to the level of income of the participants, and given that most of them are still university undergraduates, the only source of income comes probably from their parents: the average level of income is EU 768, 81.

VIII. DISCUSSION

8.1 Individuals' Certain and Uncertain Value Perceptions

To begin with, we investigated how the certain value perception, reflected in the floor price that participants are willing to pay, and the uncertain value perception, reflected in the difference between the ceiling price and the floor price, differ between a touch and a no touch condition. By accepting our first hypothesis, we confirm that after a touching scenario an asymmetric shift in participants' WTP threshold takes place. Thus, due to a greater increase in the floor price than in the ceiling price, a reduction in the range of consumers' willingness to pay occurred. In other words, it was noticed that through a touching condition, participants feel more certain and preferences are increased simultaneously. These first findings are consistent with Maier et. al (2014) predictions about the impact that certainty has in WTP thresholds and also with Peck & Shu (2009) findings which establish that the opportunity to "touch" a particular product which provides either a natural or a positive sensory feedback, leads individuals to experience a higher product valuation and attachment, which in turn generates the endowment effect.

However, different effects in the WTP thresholds were observed for our second and third hypothesis when the aesthetic dimension of our products was under analysis. Firstly, in our attempt to obtain insights into the influence that a box of chocolates' aesthetics dimension would have in both participants' floor price and WTP's range, a significant effect was noticed in the minimum price, which considerable increase from a no touch condition to a touch condition and simultaneously, no significant influence was observed in the WTP's range. Secondly, and similarly to this previous scenario, when analyzing the interaction effect between touch and aesthetics and its effects in our two dependent variables, a significant effect was again noticed in the floor price which considerably increased from an scenario where participants were not allowed to touch the box of chocolates to the other one, where they were allowed to do so, and no significant effect was detected in the range. The results obtained through the second and third hypothesis did not match our expectations about the asymmetric shift in the floor price and the ceiling price. A higher willingness

to pay (ceiling price and floor price) was put in evidence after a touch condition in the case of the more aesthetic box of chocolates, aspect which highlights a higher product evaluation or a higher product attachment, both of which can be signals of an endowment effect. Contrary to this situation, when participants touched the less aesthetic box of chocolates, there occurred a decrease in their willingness to pay and, due to a lower product evaluation, no attachment was experienced by the students and therefore no endowment effect took place. The results obtained through our second and third hypothesis remark the role that an appealing design has in consumers' evaluation. A higher willingness to pay for a more aesthetic product is consistent with Homburg et. al (2015) findings which predict a positive effect of an attractive product design, not only in individuals' willingness to pay but also in their purchase intention and WOM. Indeed, by analyzing individuals' responses through two contrasting scenarios, we extend Homburg et. al (2015) findings, which based their conclusions fundamentally on visual stimulus. Thus, we demonstrated that greater effects in product evaluation reflected in a higher willingness to pay can be particularly higher in a touch scenario than the effects in a no touch scenario or a scenario where only visual stimulus mediated.

The no significant effect detected in the WTP's range shows that a more aesthetic product design is not a synonym of consumers' lower uncertainty about preferences. In spite of the fact that a higher product valuation can be generated by an attractive design; this evaluation would be unconsciously formulated and may reflect the presence of a stimulus (aesthetics) that motivates an increase in consumers' willingness to pay which simultaneously has no significant effect in their levels of certainty. Investigations confirm that in almost all purchase situations consumers are not certain about what do they exactly expect from a particular product and their needs are not defined in a consciously manner (Ciccantelly & Magidson, 1993).

Based on previous foundations, we propose that an appealing design may be conceived as an external factor that leads individuals to experience in many situations the so called "impulse buying" which may motivate unplanned or non-rational purchase which are the result of no conscious evaluations. Literature based on the impulse buying of shoppers establish that numerous factors related to the shopping environment, the purchasers' personal features,

and the product itself, among others are the motives that lead shoppers to impulse buying (Muruganatham & Bhakat, 2013). Some authors, for example, highlight the importance of a product's appearance and background music in an unplanned purchase (Verplanken & Herabadi, 2001). Others considered the environment of the store as a determinant factor which influences consumers' emotional states which lead them to impulse buying inside the store (Xhu, 2007). In this sense, our argument advocate purpose aesthetic products as an external persuasive factor influencing impulse buying.

Finally, the no significant effect reflected in the WTP's range can also highlight a situation where uncertainty seems to generate pleasure or a situation where risks are positively evaluated (Maier et. al 2014). Is it always desirable for consumer to reduce levels of uncertainty in order to make sense of any situation in their lives? Probably not and many studies demonstrated that the state of uncertainty seems to be a source of pleasure that people experience unconsciously and tolerate in case they expect to gain pleasure from reducing it (Wilson et. al 2005).

8.2 Differences Between Male and Female Gender in Aesthetic Design Preferences

Motivated by the goal to find further support or explanations for higher product valuation that was noticed fundamentally with the more aesthetic box of chocolates, we test whether there exist significant differences between female and male participants considering our two dependent variables. Previous investigations remark the fact that, while women tend to pay more attention to affective features in product designs which are contemplated in the aesthetic and symbolic dimensions, men could be more concerned about product performance (Creusen, 2010). Other authors like De Klerk & Lubbe (2006), for example, remark that women, who have a pleasurable experience or feel stimulated by wearing a particular apparel item, will probably not be interested in other features of the product like its functionalist features. Thus, the aesthetic dimension of an apparel item should be determinant for female quality judgment. Following other findings which highlighted gender's differences in product preferences, we noticed significant differences between women and men when consuming luxury brands. Since the aesthetics dimension in almost

all these brands prove determinant, again higher preferences of women for an aesthetic pleasurable were evidenced (Stokburger- Sauer & Teichmann, 2013). All these previous findings highlight the fact that women and men are expected to have differences in their preferences for aesthetic designs. Women, more than men, should be especially concerned about the aesthetic dimension of an item. However, through our investigations no significant differences in gender preferences for aesthetics were detected. This no significant difference found between men and women can evidence the existence of defined ideas and stereotypes about gender features and preferences. The growing tendency observed in recent times of both men and women moving towards aesthetics in many aspects of their lives may constitute the first answer for our findings. Women, in their attempt to obtain a pleasurable experience through the consumption or usage of a particular item, are not the only ones who choose an aesthetic design. The increasing interest noticed in men for personal grooming and the amount of money they spend in aesthetic products, treatments and any item to improve their appearance, showed a tendency in which men have an increasing concern for beauty, not only of their own image but also in the appearance of their products' elections (Sturrock & Elkel, 1998). Therefore, it seems that aesthetics products in today's world are not items exclusive to women but also fall within men's preference.

Further support for the no significant differences noticed between women and men in their preferences for aesthetic design can find a justification in the average age that most of the participants of our experimental sample present (young university students with an average age of 21,27 years old). The increasing interest of people moving towards aesthetics seems to be more pronounced in the new generation. Previous studies confirm young people's tendency to use more expressive purchase criteria and inclinations to consume products for their hedonic characteristics. Thus, the symbolic dimension but, fundamentally their inclinations to choose aesthetics products were highlighted. (Henry, 2002; Wallendorf & Arnould, 1988).

8.3 The Way Participants Perceived the Experimental Object

In our attempt to measure participants' value perception of the more aesthetic box of chocolates and the less aesthetic one, surprising results were obtained using the scale provided by Homburg et. al (2015). Taking under analysis the more aesthetic box of chocolates, it is interesting to note that the aesthetic dimension of the box of chocolates design was positively valued, as it was expected as well as its functionalist and symbolic dimensions. These results are consistent with previous studies which postulated that when the aesthetic dimension of a certain product is positively valued, as in this case, this positive evaluation is expected to be extended to other features of the product and positive inferences about unknown aspects of the product emerge (Hassenzahl, 2008). The idea in which Dion (1972) based his study "What is beautiful is good" could also provide further support to our findings. It is important to emphasize that despite the fact that in both touch and no touch scenarios, positive evaluations of the more aesthetic box of chocolates design emerged. This higher value perception was particularly higher in the touch condition. The opposite scenario was detected with the less aesthetic box of chocolates where participants evaluated all the dimensions of the box design in a negative manner, which also confirms that individuals' experience with an unpleasant design can go against the evaluation of other features of the product related to this case with its functionalist and symbolic dimensions.

IX. GENERAL CONCLUSION

The present investigation provides theoretical insights to haptic literature about the relevant effect that the sense of touch has in consumers' certain value and uncertain value perceptions. Thanks to lower levels of uncertainty an endowment effect arises and an asymmetric shift in the floor and ceiling price takes place where the floor price experiences a greater increase as opposed to the ceiling price. However, the positive effects in individuals' levels of certainty may depend on the product category under analysis. The significant effect noticed in the floor price of an aesthetic design which considerable increase from a no touch condition to a touch condition, and the no significant effect detected in the uncertain value perception can highlight a situation where uncertainty seems to generate pleasure or a situation where risks are positively evaluated. Other explanation for this scenario can be based on the idea that the excellent product valuation observed for aesthetic products might be the result of an impulse based in an individuals' no conscious or rational product evaluation. Therefore, it seems always appropriate to improve the appearance of a given design and engage consumers to touch it due to positive reactions that individuals can experience.

Managerial contributions were obtained for every professional involved in the development of products' designs. Through our investigation we obtained insights into the role that an aesthetic item has in the current marketplace. Since it constitutes a mean to convey information about the product, it was detected how a pleasurable appearance, positive impacts in a particular product evaluation and how this positive evaluation can be extended to other features of a certain product. Our findings would also be an explanation for consumers' everyday situations in which they tend to base their products' election on their appearance. It is very common, for example, to choose clothes just because they look good. Beautiful appearance in some situations seems to be more important than other practical features of a certain item. Therefore, when having two products with almost identical characteristics, consumers are likely to choose the one with the best appearance.

Due to the growing interest of both men and women in aesthetics designs, the development of new products should contemplate their aesthetic dimensions both as an strategy to grab consumers' attention and improve consumers' product valuation and attachment, and also as a persuasive external stimulus for unplanned purchase. As a result, retailers and brands can be benefited not only by increasing sales but also by a great market positioning.

Our experimental sample constituted by participants with almost similar demographic characteristics represents a starting point for future research which should concentrate their efforts in analyzing how aesthetic product preferences and evaluation can vary between people of remarkable age differences, level of education and monthly level of income, and how the use of WTP as range can help obtain insights about certain and uncertain value perception variations among groups with different demographics characteristics.

X. APPENDIX

A.1 Survey

STUDY FOR A MARKETING MASTER THESIS

Hello! Please, answer the following questions.

1. How much would you be willing to pay for this box of chocolates?

The price below which you would buy the box of chocolates
in any case.

The price above which you would definitely no longer buy the
box of chocolates

2. For each question below, circle the response that best characterizes the appearance of the box of chocolates, where 1 = strongly disagree ; 2 = Disagree ; 3 = Neither Agree nor Disagree ; 4 = Agree ; 5 = Strongly Agree.

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
It is visually striking	1	2	3	4	5
It is good looking	1	2	3	4	5
It looks appealing	1	2	3	4	5
It is likely to perform well	1	2	3	4	5
It seems to be capable of doing its job	1	2	3	4	5

It seems to be functional	1	2	3	4	5
It would help me in establishing a distinctive image	1	2	3	4	5
It would be helpful to distinguish myself from the mass	1	2	3	4	5
It would accurately symbolize or express my achievements	1	2	3	4	5

3. Gender

Male

Female

4. Age

5. Monthly income

6. Highest level of education

High school

Some college

Bachelor´s Degree

Master´s Degree

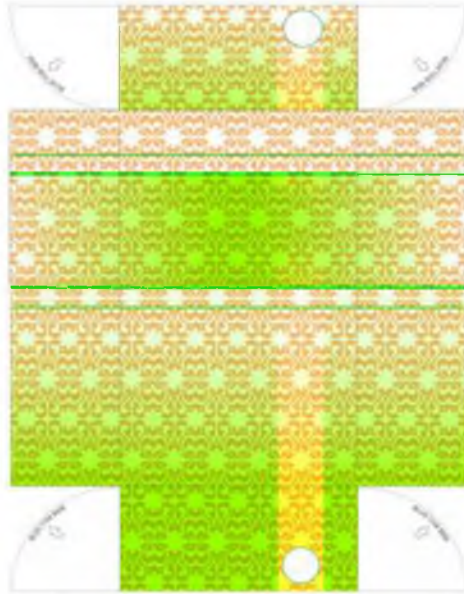
PhD´s Degree

Other

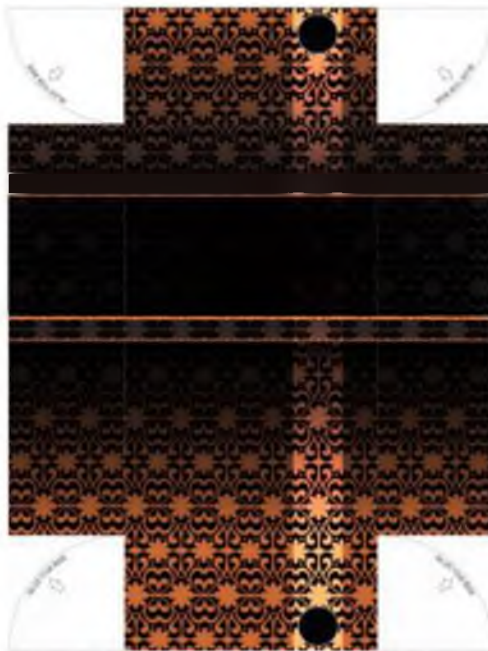
Thank you very much of participating in this survey!

A.2 Box of Chocolates Designs

A.2.1 Proposed Design for the Electric Green Box of Chocolates – Less Aesthetics



A.2.2 Proposed Design for the Brown Box of Chocolates – High Aesthetics



A.2.3 Final Results in Photographs

Presentation of Both Boxes of Chocolates



Final Result for the Brown Box of Chocolates – High Aesthetics



Final result for the Electric Green Box of Chocolates – Less Aesthetics



A.3 T- Test for Exploratory Investigation into the Role of Gender in Minimum Price Setting and Range.

Tests of Normality Previous t-Test.

Gender of participants		Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	Df	Sig.	Statistic	df	Sig.
Floor Price	Male	,214	37	,000	,770	37	,000
	Female	,214	43	,000	,787	43	,000
Range	Male	,178	37	,005	,933	37	,028
	Female	,167	43	,004	,942	43	,031

Note: Groups with p (value) < 0,05 differ from normal distribution.

Groups' Statistics

Gender of participants		N	Mean	Std. Deviation	Std. Error Mean
Floor Price	Male	37	2,4789	1,65410	,27193
	Female	43	2,7981	2,08708	,31828
Range	Male	37	2,9865	1,49582	,24591
	Female	43	2,9663	1,83711	,28016

Independent Samples T- Test

Looking at the level of significance of the precedent tables, it is advertised that neither t-Test showed a statistically significance between males and females

Independent Samples Tests

		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	t	Df
Floor Price	Equal variances assumed	,964	,329	-,749	78
	Equal variances not assumed			-,763	77,511
Range	Equal variances assumed	,321	,573	,053	78
	Equal variances not assumed			,054	77,783

Independent Samples Tests

		t-test for Equality of Means		
		Sig. (2-tailed)	Mean Difference	Std. Error Difference
Floor Price	Equal variances assumed	,456	-,31922	,42595
	Equal variances not assumed	,448	-,31922	,41862
Range	Equal variances assumed	,958	,02021	,37856
	Equal variances not assumed	,957	,02021	,37277

Independent Samples Tests

		t-test for Equality of Means	
		95% Confidence Interval of the Difference	
		Lower	Upper
Floor Price	Equal variances assumed	-1,16722	,52878
	Equal variances not assumed	-1,15272	,51428
Range	Equal variances assumed	-,73344	,77385
	Equal variances not assumed	-,72196	,76237

Mann-Whitney Test

Ranks				
Gender of Participants		N	Mean Rank	Sum of Ranks
Floor Price	Male	37	38,80	1435,50
	Female	43	41,97	1804,50
	Total	80		
Range	Male	37	41,46	1534,00
	Female	43	39,67	1706,00
	Total	80		

Test Statistics^a

	Floor Price	Range
Mann-Whitney U	732,500	760,000
Wilcoxon W	1435,500	1706,000
Z	-,611	-,345
Asymp. Sig. (2-tailed)	,541	,730

Notes: Mann-Whitney Test support our findings obtained through the t-Test. There is no statistically significance differences between gender with respect to neither the floor price ($p < .05$) nor with respect to the range ($p < .05$)

A.4 Chi-Squared Test for Exploratory Investigation about Participant's Perceptions and Evaluation of the Box of Chocolates Appearance.

A.4.1 Aesthetic Dimension Statements

Cross Tabulation of the statement *"It is visually striking"*

		Aesthetics		Total
		Less Aesthetics	More Aesthetics	
Striking	completely disagree	9	0	9
	Disagree	13	4	17
	neither agree nor disagree	11	7	18
	Agree	6	24	30
	completely agree	0	5	5
Total		39	40	79

Chi- Square test for the statement *"It is visually striking"*

	Value	Df	Asymptotic Significance (2-sided)
Pearson Chi-Square	30,446 _a	4	,000
Likelihood Ratio	36,873	4	,000
Linear-by-Linear Association	29,024	1	,000
N of Valid Cases	79		

Notes: p- value has to be smaller than 0.05 for a significant effect.

Cross tabulation for the statement “*It is good looking*”

		Aesthetics		Total
		Less Aesthetics	More Aesthetics	
good looking	completely disagree	6	0	6
	Disagree	18	2	20
	neither agree nor disagree	10	4	14
	Agree	5	21	26
	completely agree	0	13	13
Total		39	40	79

Chi- Square test for the statement “*It is good looking*”

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	44,212 ^a	4	,000
Likelihood Ratio	54,293	4	,000
Linear-by-Linear Association	41,080	1	,000
N of Valid Cases	79		

Notes: the p- value has to be smaller than 0, 05 or 5%.

Cross tabulation for the statement *“It looks appealing”*.

		Aesthetics		Total
		Less Aesthetics	More Aesthetics	
appealing	completely disagree	10	0	10
	Disagree	14	1	15
	neither agree nor disagree	14	11	25
	Agree	1	18	19
	completely agree	0	10	10
Total		39	40	79

Chi-Square Test for the statement *“It looks appealing”*

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	46,832 ^a	4	,000
Likelihood Ratio	60,025	4	,000
Linear-by-Linear Association	42,459	1	,000
N of Valid Cases	79		

Notes: the p value has to smaller than 0,05 or 5 %.

A.4.2 Functionalist Dimension Statements

Cross Tabulation for the statement *“It is likely to perform well”*

		Aesthetics		Total
		Less Aesthetics	More Aesthetics	
Is likely to perform well	completely disagree	4	0	4
	Disagree	12	2	14
	neither agree nor disagree	17	17	34
	Agree	5	19	24
	completely agree	0	2	2
Total		38	40	78

Chi- Square Test the statement *“It is likely to perform well”*.

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	21,272 ^a	4	,000
Likelihood Ratio	24,899	4	,000
Linear-by-Linear Association	20,626	1	,000
N of Valid Cases	78		

Notes: the p value has to smaller than 0,05 or 5 %.

Cross tabulation for the statement *“It seems to be capable of doing its job”*.

		Aesthetics		Total
		Less Aesthetics	More Aesthetics	
Capable of doing its job	completely disagree	1	0	1
	Disagree	8	2	10
	neither agree nor disagree	17	7	24
	Agree	13	25	38
	completely agree	0	6	6
Total		39	40	79

Chi- Square test for the statement *“It seems to be capable of doing its job”*

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	18,546 ^a	4	,001
Likelihood Ratio	21,698	4	,000
Linear-by-Linear Association	16,996	1	,000
N of Valid Cases	79		

Notes: the p value has to smaller than 0,05 or 5 %.

Cross Tabulation for the Statement “*It seems to be functional*”.

		Aesthetics		Total
		Less Aesthetics	More Aesthetics	
Funktional	completely disagree	4	2	6
	Disagree	15	14	29
	neither agree nor disagree	19	10	29
	Agree	1	10	11
	completely agree	0	4	4
Total		39	40	79

Chi- Square test for the statement “*It seems to be functional*”.

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	14,848 ^a	4	,005
Likelihood Ratio	17,634	4	,001
Linear-by-Linear Association	6,635	1	,010
N of Valid Cases	79		

Notes: the p value has to smaller than 0,05 or 5 %.

A.4.3 Symbolic Dimension Statements

Cross Tabulation for the statement *“It would help me in establishing a distinctive image”*

		Aesthetics		Total
		Less Aesthetics	More Aesthetics	
Would help to establish a distinctive image	completely disagree	7	1	8
	disagree	22	7	29
	neither agree nor disagree	10	11	21
	agree	0	17	17
	completely agree	0	4	4
Total		39	40	79

Chi- Square Test for the statement *“It would help me in establishing a distinctive image”*

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	33,299 ^a	4	,000
Likelihood Ratio	42,357	4	,000
Linear-by-Linear Association	30,317	1	,000
N of Valid Cases	79		

Notes: the p value has to smaller than 0, 05 or 5 %.

Cross Tabulation for the statement *“It would be helpful to distinguish myself from the mass”*

		Aesthetics		Total
		Less Aesthetics	More Aesthetics	
Would be helpful to distinguish myself from the mass	completely disagree	5	1	6
	Disagree	23	12	35
	neither agree nor disagree	10	15	25
	Agree	1	9	10
	completely agree	0	3	3
Total		39	40	79

Chi- Square test for the statement *“It would be helpful to distinguish myself from the mass”*

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	16,514 ^a	4	,002
Likelihood Ratio	18,942	4	,001
Linear-by-Linear Association	15,996	1	,000
N of Valid Cases	79		

Notes: the p value has to smaller than 0, 05 or 5 %.

XI. REFERENCES

- Anderson, Erin & Robertson, Thomas S. (1995). Inducing Multiline Salespeople to Adopt House Brands, *Journal of Marketing*, (59) 2, 16-31.
- Bloch, Peter. (1995). Seeking for the Ideal Form: Product Design and Consumer Response, *Journal of Marketing*, 59(3), 16-29.
- Bloch, Peter H. (1995). Seeking the Ideal Form: Product Design and Consumer Response, *Journal of Marketing*, (59) 3, 16-29.
- Chapman, Jonathan. (2009). 'Design for (emotional) durability', *Design Issues*, (25) 4, 29–35.
- Cincantelly, Susan & Madison, Jason. (1993). Consumer Idealized Design: Involving Consumers in the Product Development Process, *The Journal of Product Innovation and Management*, (10) 4, 341-347.
- Cooper, Tim. (2005). slower consumption: reflections on product life span and the 'throwaway society', *Journal of Industrial Ecology*, (9) 1-2, 51–67.
- Creusen Mariëlle E. H. & Schoormans Jan P. L. (2005), The Different Roles of Product Appearance in Consumer Choice, *Product Innovation Management*, (22)1, 63-81.
- Creusen, Mariëlle. E. H. (2010). The importance of Product Aspects in choice: The influence of Demographic Characteristics, *Journal of Consumer Marketing*, (27) 1, 26-34.
- De Klerk, Helena M. & Lubbe Stephna. (2006). Female's evaluation of apparel quality: Exploring the importance, *Journal of Fashion Marketing and Management: An international Journal*,(12) 1, 36-50.
- Dion, Karen; Berscheid, Ellen & Walster, Elaine. (1972). What is beautiful is good, *Journal of Personality and Social Psychology*, (24) 3, 285-290.
- Dommer Loughran Sara & Swaminathan Vanitha (2013). Explaining the Endowment Effect through ownership: The role of Identity, Gender, and Self-Threat, *Journal of Consumer Research*, (39) 5, 1034-1050.
- Dost Florian & Wilken Robert (2012). Measuring Willingness to Pay Revisited: When should we care?, *International Journal of Research in Marketing*, 29(2), 148–166.
- Erik Maier & Robert Wilken & Florian Dost, (2014). The Double Benefits of Consumer certainty: combining risk and range effects, *Marketing Letters*, (26) 4, 473-488.

- Fazio, Russell H & Zanna, Mark P. (1978). Attitudinal qualities relating to the strength of the attitude – behavior relationship, *Journal of Experimental Social Psychology*, (14) 4, 398-408.
- Field, Andy.(2009). *Discovering Statistics Using SPSS: and sex and rock 'n'roll*, 3th Edition, SAGE publications, Los Angeles, London, New Delhi, Singapore, Washington DC, p 359.
- Field, Andy (2009). *Discovering Statistics Using SPSS: and sex and rock 'n'roll*, 3th Edition, SAGE publications, Los Angeles, London, New Delhi, Singapore, Washington DC, p326.
- Field, Andy (2009). *Discovering Statistics Using SPSS: and sex and rock 'n'roll*, 3th Edition, SAGE publications, Los Angeles, London, New Delhi, Singapore, Washington DC , p326.
- Field, Andy (2009). *Discovering Statistics Using SPSS: and sex and rock 'n'roll*, 3th Edition, SAGE publications, Los Angeles, London, New Delhi, Singapore, Washington DC, P548.
- Georgantzis, Nikolaos & Navarro – Martinez Daniel. (2010). Understanding the WTA – WTP gap: Attitudes, feelings, uncertainty and personality, *Journal of Economic Psychology*, (31) 6, 895-907.
- Hanemann, W. Michael. (1984). "Welfare Evaluations in Contingent Valuation Experiments with Discrete Responses," *American Journal of Agricultural Economics*, 66 (3), 332–42.
- Hassenzahl, Mark. (2008). Aesthetics in interactive products: correlated and consequences of beauty, *Product Experience*, 287-302.
- Hekkert, (2006). Design aesthetics: principles of pleasure in Design, *Psychology Science*, (48) 2, 157 – 172.
- Hektner, Joel M; Schmidt, Jennifer A. & Csikszentmihaly Mihaly (2007), *Experience Sampling Method: Measuring the Quality of Everyday Life*, Sage Publications, California.
- Hornik, Jacob (1992). Tactile Stimulation and Consumer Response, *Journal of Consumer Research*, (19) 3, 449-458
- Hornik, Jacob (1992). Effects of physical contact on customers' shopping time and behavior, *Marketing Letters*, (3)1, 49-55.
- Horwitz, Jhon K. & McConnell, K. E. (2003). Willingness to accept, willingness to pay and the income effect, *Journal of Economic Behavior & Organization* (51) 4, 537-545.

- Isik, M. (2006). An experimental analysis of impacts of uncertainty and irreversibility on willingness-to-pay, *Applied Economics Letters*, (13) 2, 67–72.
- Joann Peck & Childers, Terry L. (2003). To Have and To Hold: The influence of Haptic Information on Product Judgments, *Journal of Marketing*, (67) 2, 35-48.
- Kahneman and Tversky, (1979), Prospect Theory: An Analysis of Decision under risk, *Econometria*,(47) 2, 263-292.
- Kahneman and Tversky, (1984). Choices, Values and Frames,*American Psychologist*, 39(4), 341-350.
- Kahneman Daniel, Knecht Jack L. & Thaler Richard H. (1991). Anomalies: The Endowment Effect, Loss Aversion and Status quo Bias, *The Journal of Economic Perspectives*, (5) 1, 193-206.
- Klatzky, Roberta L. & Lederman Susan J. (1992). Stages of manual exploration in haptic object identification, *Journal Perception & Psychophysics*,(52) 6, 661-670.
- Krishna Aradhna. (2010).*Sensory Marketing: Research on the Sensuality of Products*,Taylor & Francis Group, New York, p18.
- Krishna Aradhna (2010), *Sensory Marketing: Research on the Sensuality of Products*,Taylor & Francis Group, New York, 19-25.
- Krishna Aradhna (2011), An integrative review of sensory marketing: Engaging the senses to affect perception, judgment and behavior, *Journal of Consumer Psychology*, (22) 3, 332-351.
- Kumbar, Minu & Noble, Charles H. (2016). Beyond form and function: Why do consumer value product design? *Journal of Business Research*, (69), 613-620.
- Lederman, J. Susan & Klatzky, Roberta L. (1993). Extracting object properties through haptic exploration, *Acta Psychologica*, (84) 1, 29-40.
- Lederman, Susan J.& Klatzky, Roberta L. (1987). Hand movements: A window into haptic object recognition, *Cognitive Psychology*, (19) 3, 342-368.
- List, John A. (2003). "Does Market Experience Eliminate Market Anomalies?" *Quarterly Journal of Economics*, (118) 1, 41–71.
- List, Jhon A. & Hossain Tanjim (2012). The Behavioralist visits the Factory: Increasing Productivity Using Simple Framing Manipulations, *Journal Management Science*, (58) 12, 2151-2167.

- Marewedge, Carey K., Giblin, Collen E. (2015). Explanations of the Endowment effect: an integrative review, *Trends in cognitive sciences*, (19) 6, 339-348.
- Morales, Andrea C. & Fitzsimons Gavan J. (2007). Product Contagion: Changing Consumer Evaluations Through Physical Contact with "Disgusting" Products, *Journal of Marketing Research*, (44) 2, 272-283.
- Mugge, Ruth; Schifferstein, Hendrik N.J.; Schoormans, Jan P.L (2010) "Product attachment and satisfaction: understanding consumers' post-purchase behavior", *Journal of Consumer Marketing*, (27) 3, 271 – 282.
- Mumcu, Yigit and Kimzan, Halil Semith (2015), The effect of Visual Products Aesthetics on Consumers' Price Sensivity, *Procedia Economics and Finance*, (26), 528-534.
- Muruganantham, G and Bhakat, Ravi Shankar (2013), A Review of Impulse Buying Behavior, *International Journal of Marketing Studies*, (5) 3, 149-160.
- Nazlin, Imram. (1999), The role of visual cues in consumer perception and acceptance of a food product, *Nutrition & Food Science*, (99) 5, 224 – 230.
- Novemsky, Nathan & Kahneman (2005). The Boundaries of Loss Aversion, *Journal of Marketing Research*: (42) 2, 119-128.
- Page, Tom (2010). Product attachment and replacement: implications for sustainable design, *International Journal of Sustainable Design*, (2) 3, 265-282.
- Peck & Childers (2006). If I touch it I have to have it: Individual and environmental influences on impulse purchasing, *Journal of Business Research*, (59) 6, 765-769.
- Peck & Wings (2006). It Just Feels Good: Consumers' Affective Response to Touch and its influence on Persuasion, *Journal of Marketing*, (70) 4, 56-59.
- Peck, Joann & Childers, Terry L (2003). To Have and To Hold: The Influence of Haptic Information on Product Judgments, *Journal of Marketing*, (67) 2, 35-48.
- Peck, Joann & Shu, Suzanne B. (2009). The Effect of Mere Touch on Perceived Ownership, *Journal of Consumer Research*, (36) 3, 434-447.
- Peck, Joann & Terry L. Childers (2007). "Effects of Sensory Factors on Consumer Behaviors," in *Handbook of Consumer Psychology*, ed. Frank

- Kardes, Curt Haugtvedt, and Paul Herr, Mahwah, NJ: Erlbaum, New York.
- Perea Monsuwé, Toñita, Benedict , Dellaert, Benedict G.C.& Ko de Ruyter (2004). What drives consumers to shop online? A literature review, *International Journal of Service Industry Management*, (15) 1, 102-121
- Reb Jochen & Connolly Terry. (2007). Possession, feelings of ownership and the endowment effect, *Judgment and Decision Making*,(2) 2, 107-114.
- Samuelson William & Zeckhauser Richard. (1988). Status quo bias in decision making, *Journal of Risk and Uncertainty*, (1) 1, 7-59.
- Smith, Robert E. & Swinyard, William R. (1983). Attitude-Behavior Consistency: The Impact of Product Trial versus Advertising, *Journal of Marketing Research*, (20) 3, 257-267.
- Stokburger-Sauer, Nicola E. & Teichman , Karin (2013). Is Luxury just a female thing? The role of gender in luxury brand consumption, *Journal of Business Research*, (66), 889-896.
- Strahilevitz Michal & Lowenstein George. (1998). The Effect of Ownership History on the Valuation of Objects, *Journal of Consumer Research*, (25) 3, 276-289.
- Sturrock Fiona & Pioch Elkel (1998). Making himself attractive: the growing consumption of grooming products, *Marketing Intelligence & Planning*, (16) 5, 337 – 343.
- Van Dijk, E. & Van Knippenberg, D. (1996). Buying and selling exchange goods: loss aversion and the endowment effect, *Journal of Economic Psychology*, (17) 4, 517–524.
- Venkatesh Alladi & Meamber Laurie A. (2008). The aesthetics of consumption and the consumer as an aesthetic subject, *Consumption Market and Culture*,(11) 1,45-70.
- Verplanken, Bas & Herabadi, Astrid. (2001). “Individual differences in impulse buying tendency: Feeling and no thinking”, *European Journal of Personality*, (15), 71-83.
- Veryzer, Robert W. Jr. (1995). The Place of Product Design and Aesthetics in Consumer Research, *Advances in Consumer Research*,(22), 641-654.
- Wang, R. Venkatesh & Rabikar Chatterjee. (2007). Reservation Price as a Range: An Incentive-Compatible Measurement Approach, *Journal of Marketing Research*,(44) 2, 200-213.

- Weggman Mathieu, Lammers Irene & Akkeimans Henk. (2007). Aesthetics from a design perspective, *Journal of Organizational Change Management*, (20) 3, 346-354.
- Willis, Frank N. & Hamm, Helen K. (1980). The use of interpersonal Touch in securing compliance, *Journal of Nonverbal Behaviour*, (5) 1, 49-55.
- Wilson, Timothy; Centerbar David B.; Kermer Derborah A. & Gilibert Daniel T. The Pleasures of Uncertainty: Prolonging Positive Moods in Ways People Do Not Anticipate, *Journal of Personality and Social Psychology*, (88) 1, 5-21.
- Wu, Chenghuan & Shaffer, David R. (1987). Susceptibility to persuasive appeals as a function of source credibility and prior experience with the attitude object, *Journal of Personality and Social Psychology*, (52) 4, 677-688.
- Xhu, Yingjiao (2007). Impact of Store Environment on Adult Generation Y Consumers' Impulse Buying, *Journal of Shopping Center Research*, (14) 1, 39-56.