

**Louvain School of Management**

# **Gender effect of the brand name on the perception of consumers**

Auteur : Virginie Verstraeten  
Promoteur(s) : Nicolas Kervyn de Meerendré  
Année académique 2018-2019

## **Abstract**

The objective of this paper is to understand whether the grammatical gender termination of a brand name can have an effect on how the brand is perceived by consumers.

The theoretical part of this paper describes the brand name as one of the main elements to have a good brand strategy and defends the fact that grammatical gender has an influence on abstract thought. Considering this, the fact of giving a brand name with certain gender features would influence how the brand is perceived by consumers.

Moreover, having gender features within a brand name would make feel the consumer of this same gender closer to the brand.

Our empirical research had as first objective to prove the hypothesis, based on the literature research, about the effect of the gender of a brand name on potential consumers' perception. The second objective was to prove the effect of grammatical gender on thought. The empirical research includes two different experiments to analyse the hypothesis previously mentioned.

The first experience was run on French native speakers and its aim was to see whether the termination by -a or -o had an effect on how people would perceive the brand, as having more feminine or masculine attributes. Nevertheless, the results of this experience failed to support our hypothesis.

The second part of our empirical research focused on proving the effect of grammatical gender on abstract thought. For this experiment, two category of participants were chosen, one being French native speakers and the other category being Spanish native speakers. The idea was to compare several neutral items, having opposite grammatical gender in French and Spanish, to some masculine or feminine silhouettes. The objective was to see if, subconsciously, the grammatical gender would influence the thought of participants on how similar both representations were. In this case, the experience run on French speakers rejected any influence of grammatical gender on thought, whereas the experiment on Spanish speakers did not reject our hypothesis. No clear conclusions were drawn out of this second experiment.

This paper has been supervised by the professor Nicolas Kervyn de Meerendré, who I would like to thank for the help and support.

Abstract	i
Introduction	1
PART I: LITERATURE RESEARCH	3
Chapter 1: Important concepts within brand development	3
1. Concept of Brand	3
1.1. Definition of Brand	3
1.2. Purpose of a brand and the importance of having an adequate branding strategy	3
2. Importance of the brand name on the image perceived by consumers	5
2.1. Brand image: Impact on consumer's purchase behaviour	5
2.2. Repercussion of the brand name on the brand image	7
2.3. Globalisation: Adapting a Brand name to a variety of cultures and languages	9
2.4. Example of Brand names aligned/not aligned with the desired brand image	11
Chapter 2: Consumers' perception: The effect of language and anthropomorphism on Cognition	12
1. Influence of language on abstract thought	12
2. Distortion of perception: The importance of grammatical gender on brand image	14
2.1. Definition of grammatical gender	14
2.2. Effects of phonetic and grammar on perception	14
2.3. Choice of the Grammatical gender of a word	16
3. From the word in itself to its perception: <i>Lemma vs Grammatical Gender</i>	18
3.1. Importance of the lemma within the cognitive process of naming and sentence production	18
3.2. Influence of articles and morphemes on the image given by a word	19
4. Impact of anthropomorphism on Brand Image	21
4.1. Concept of Anthropomorphism	21
4.2. Causes and effects of anthropomorphism	23
4.3. Usage of Anthropomorphism in Marketing	24
Chapter 3: The effect of a brand's name on the perceived gender of a product and the challenge between choosing Gender neutral Products and gender customized products in our current society	26
1. Challenge: The choice of a brand name to fit the categorical schema in consumer's minds	26

2. Evolution of our society: From fixed gender roles to gender neutral products and its effects on the choice of a brand name	30
PART II: EMPIRICAL RESEARCH	33
Experiment 1: Testing the effect of a brand name's gender on thoughts with French speaking participants	33
1.1. Description of experiment	33
1.2. Participants	34
1.3. Procedure	34
1.4. Methodology and Results	35
1.5. Discussion	38
Experiment 2: Testing words with grammatical gender on thought: Spanish Speakers vs French Speakers	40
2.1. Description of the experiment	40
2.2. Participants	41
2.3. Procedure	41
2.4. Methodology and Results	42
2.5. Discussion	47
PART III: CONFRONTATION OF THE LITERATURE WITH THE EMPIRICAL EVIDENCE	49
1. Empirical evidence of the importance of the grammatical gender of a brand name on potential consumers' perception	49
2. Empirical Evidence about the effect of grammatical gender of words on abstract thought	51
Conclusion	54
1. Managerial Implications	54
2. Limitations and recommendations for future research	55
Bibliography	57
Appendix	62

## Introduction

In the literature there is a lot of information about how the grammatical gender might impact people's thoughts and the importance of brand names in marketing, but there is no much information about how the gender of a brand name might influence the image perceived of a brand. This has brought me to my research question: **What is the effect of the gender of a brand name on consumers' perception?**

It is important to have a strong brand image as it is a source of competitive advantage and the most important element to produce the desired brand image is the brand name. Indeed, the brand name is the most representative symbol of a brand and is the one that triggers a certain association in consumers' mind. For this reason it is very important to think about the right name for a brand in order to succeed in the market.

Furthermore, depending on the grammatical gender of a noun naming a certain object this object can be perceived differently. This shows that language has a powerful influence on how humans perceive an object. This makes it interesting to research on whether this would also influence a certain brand name and, based on this, whether a consumer would be more attracted to a feminine or masculine brand name. It is of interest to research on this subject because this might have some consequences on our current society as adapting brand names to the targeted consumers' gender is a type of gender variation and, nowadays, gendered products are subject to many confrontations.

This thesis follows a research typology, where the objective is to contribute to new knowledge about the influence of grammatical gender on peoples' perception and how to use it in marketing, focusing specially on brand names. This paper has a theoretical and a practical part. The objective of the theoretical part is to collect the available information of previous research about this topic. The information found is mostly based on electronic articles of scientific journals and books researching on language and perception.

The second part of the paper is the research of empirical evidence to collect new data that would contribute to bring new knowledge about the subject. In this empirical research, two experiences can be found, first one refers to French speakers and evaluates whether they perceive a brand name ending in -a or -o differently. The second experience

compares French to Spanish speakers in how they perceive some neutral objects having different grammatical gender in Spanish and French. The third part of this paper focuses in confronting the literature with the empirical research.

Finally the paper concludes with the potential improvements of this paper to be considered to further research on this topic.

---

*PART I: LITERATURE RESEARCH*

---

## **Chapter 1: Important concepts within brand development**

### **1. Concept of Brand**

#### ***1.1. Definition of Brand***

Our society, nowadays, has become very materialistic, we are in an era of consumption. Never though, for consumers to buy a product or a service they need to find a meaning for doing so. A brand gives that meaning to the consumer by adding value to the product or service that is being purchased (Kapferer, 2008).

There is an agreed legal definition for the term brand, which says a brand is a “sign or set of signs certifying the origin of a product or service and differentiating it from competition” (Kapferer, 2008, p.10). These signs are the source of why a consumer might want to buy one specific brand more than another one, even for a higher price. From the financial point of view, brands are a type of intangible and conditional assets which produce financial benefits over a long period of time. Brands and its value depends on the product and service offered, as well as everything that surrounds it and can variate throughout time (Kapferer, 2008).

#### ***1.2. Purpose of a brand and the importance of having an adequate branding strategy***

The purpose of creating a brand is to establish a stronger relationship with the customers. Getting loyal customers by evoking emotions within the customers has an effect on repeat purchases and so, producing a potentially more stable revenue on longer term (Kapferer, 2008).

An effective brand strategy can be a strong competitive advantage:

An effective brand strategy provides a central unifying idea around which all behaviour, actions and communications are aligned. It works across products and services, and is effective over time. The best strategies are so differentiated and powerful that they deflect the competition (Wheeler, 2012, p.12).

Branding has become an important part of the strategy of companies in all sectors. Indeed, having a strong brand means loyalty and stable future sales which attracts investors as investing in these brands becomes less risky. Moreover, having a powerful brand could represent a barrier of entry for new entrants in an industry (Kapferer, 2008).

From the consumer standpoint, it is practical to purchase the same brand over and over as there is a guarantee to find the same quality and save time by rapidly identifying the desired product or finding the wanted service (Kapferer, 2008).

In regards to the literature, branding can be defined as having four different functions. Firstly, it has an identification function by which the consumer can easily identify a product or service that he already knows. Secondly, linked to the first one, branding has a search cost reduction function, meaning that it helps the consumer identify and purchase not only products that he already knows but also new ones. This is done by facilitating purchase information such as specific attributes of certain products by brand association or communication. Thirdly, branding has the function of representing quality before the consumers purchase the product or service. Finally, the fourth function is linked to the decrease of the risk of social exclusion by which a brand reduces the probability of the consumer being rejected by a particular social group (Roper & Round, 2012).

By having a strong brand strategy a company could build the best product/service experience to have a higher perceived value of their brand than its competitors. The marketing environment is constantly changing, the customers' have higher changing expectations and companies need to constantly adapt to them. Due to this, marketing strategies of companies need to evolve constantly, especially the communication strategy. That's why, today's marketers should focus on what customers perceive through their experience with the brand instead of communicating the functions and attributes of the product or service. In order to increase loyalty, the primary communication marketing process should be *perception management* with its main focal point on *branding* (Rossi, Thrassou, & Vrontis, 2011).

The brand strategy is built on a vision and needs to be aligned with its business strategy, its values and business culture. What's more, it has to reflect a deep knowledge about the needs of the customer (Wheeler, 2012).

## **2. Importance of the brand name on the image perceived by consumers**

### ***2.1. Brand image: Impact on consumer's purchase behaviour***

A brand is "a set of mental associations, held by the consumer, which add to the perceived value of a product or service" (as cited in Kapferer, 2008, p.10). As pointed out by Kotler (as cited in Kapferer, 2008) a brand is any name or symbol that aims to represent the uniqueness in terms of attributes, values and culture that a company offers to consumers through their products or services. The companies aim to transmit a certain representation of the brand but the actual image of the brand is what is perceived by the customers (Kapferer, 2008).

The brand image has been thoroughly studied since the 20<sup>th</sup> century. Indeed, in this increasing competitive market world, companies need to understand in deep the behaviour of the consumers and educate these about their brand to build a strong marketing strategy (Zhang, 2015). "Brand image is important for companies' future profit and their long-term cash flow, companies' coalition and acquisition decisions, their stock price, sustainable competitive advantage and their success in the market" (Cengiz, Dulger, Ozkara, Tiltay, & Torlak, 2014, p.62)

Brand image is characterized by the strength, uniqueness and favourability of brand associations. This term of brand associations refers to the meaning of certain brands for consumers that is found by linking the product information of the brand to the representation existing in consumers' mind (Yang & Wang, 2010).

Keller in 1993 (as cited in Lee & Leh, 2011) mentions that in order to produce a positive image of a brand, marketing campaigns need to build a strong association between the uniqueness of the brand in itself and the memories of the consumers about the brand. But, it is important that the potential consumers know about the brand before to respond positively to a marketing campaign. Increasing brand awareness is, then, the first step to

take and could also benefit the company by reducing brand extension costs and achieving higher sales faster when creating a new product (Zhang, 2015).

Regarding Lee & Leh (2011) consumers' confidence in a brand depends, among others, on the social image associated to the fact of purchasing and owning the brand. And the more confidence a customer has in a brand the more they are willing to pay for it (Lassar, Mittal & Sharma, 1995).

Zhang (2015) argues that the purchase decision of the consumers is not based on the product itself anymore, but on the brand image. The brand image has a strong effect on customer satisfaction and customer loyalty, which are the best indicators of a consumer's behaviour. Consumer's satisfaction represents the customer's evaluation of its experience with the brand compared to the performance expected. Whenever the experience with a product or service exceeds the expectation of the consumers, there is consumer satisfaction and could lead to consumer loyalty in a longer term. Customer loyalty is the term used when the consumer has a repeated purchasing behaviour generated by its satisfaction and trust in the brand. As performance is one of the main components of the brand image, a company could analyse the repercussion its own brand image has on customer satisfaction by evaluating the difference between users' and non-users' perception towards the brand (Zhang, 2015).

Brand credibility is influenced by the expertise, trustworthiness and attractiveness of the brand. This credibility affects the consumers purchase decisions and the effect is larger the stronger, unique and favourable is the brand image. Moreover, the closer the brand image is from the self-conception of the consumer the more the consumer will prefer the brand and the better the consumer will think about it (Zhang 2015). In some cases, the fact of purchasing a certain brand is done because the brand image is an extension of the own consumer's image and in some cases even helps to enhance the consumers' self-confidence (Yang & Wang, 2010). The more a brand is close to the desired self-image of a consumer, the more attracted it is to purchase the brand (Yang & Wang, 2010; Zhang, 2015).

Brand image is an important component to take into account when analysing consumers' purchase intention, which is necessary to ensure long term survival. Nowadays, brand image can be strongly influenced by information technology as it can be seen, for example, through electronic word of mouth. Indeed, many consumers previous to their purchase search for information about a certain product or brand on the Internet and form a certain brand image perception based on what they found, especially in on-line reviews and opinions (Cengiz et al., 2014).

## ***2.2. Repercussion of the brand name on the brand image***

In the literature most of definitions of the term "brand" refers to the name as the main element of it. Keller (1998) defines a brand as "the name with the power to influence". Kapferer (2012) describes it as the "name that symbolizes a long term engagement, crusade or commitment to a unique set of values, embedded into products, services and behaviours, which make the organization, person or product stand apart or stand out" (Kapferer, 2012, p.12). It is capital for managers to understand the importance of the function of a brand name to make decisions about their brands. Companies need to choose the right name that could trigger certain associations in consumers mind and then reinforce these associations by using marketing programmes (Keller, 1998).

In order to analyse the importance of a brand's name on the brand image we have to consider the functions of the name for the consumers. The name of a brand has four different objectives: rational, relationship, habitual and symbolic. Within the rational objective we can find the functions previously described as identification, the search cost reduction, the quality signalling and the risk reduction. Secondly, the relationship objective which refers to the emotional attachment and relation of the consumer to the brand name. Thirdly, the habitual objective which makes a consumer choose a certain brand with reduced cognitive activity. Finally, the symbolic objective where the name acts like an association symbol for consumers (Roper & Round, 2012).

Roper & Round (2012) studied the consequences of changing the name of a well-established brand on these functions previously described. The results of their studies

revealed that the relational function was strongly affected when there is a change of name. This was due because consumers couldn't identify the brand anymore nor trust its quality, some of them even got to think the brand was a fake copy. No intensive advertising nor promotional campaign were able to avoid this effect. The relationship function is also affected by this change and so is the habitual function. In this case consumers have the feeling they are starting a new relationship with the brand and that their habits have been forced to change. In other words, the research of Roper & Round (2012) confirms that the consumer is concerned about the brand name more than the whole brand entity.

Choosing a brand name for a new product is primordial to build a strong brand equity, the right choice of a name can help to increase brand awareness and create the right brand image for a new product. The choice of the name can follow different strategies. First possible strategy focuses on the reinforcement of the brand awareness by choosing a name that refers to the category of the product. Some examples of brand names following this first strategy are *JustJuice Juices* or *Newsweek* weekly news magazine. Second strategy, on the other hand, focuses on building a strong image by choosing a name that refers to the positioning of the product or service. By using a suggestive brand name it is easier to build a strong brand image for a new product because potential consumers associate the name to the positioning which strengthen their memory of the brand. An example is *Accenture* which comes from "Accent on the future". This last strategy has a drawback though, it could complicate the marketing communication if there is a future repositioning of the brand because of the strong link between the suggestive brand name and original positioning in consumers' memory (Heckler, Houston, & Keller, 1998).

The brand name is an essential part of a brand communication because it can directly refer to the meaning of the brand in the memory of the consumer. This element is also the hardest one to change for the marketers. For Keller (2008) a brand name has to be chosen respecting six different criteria. First criteria being the brand name needs to be easily memorable, to do so the name has to be easily pronounced and spelled. Second criteria is about familiarity and meaningfulness of the name which refers to choosing a name that makes reference to something already existing in the consumers' mind. The name has to

be different and unique, it cannot be already existing. The rest of criteria being likability, transferability, adaptability, and protectability in mind (Keller, 2008).

Moreover, consumers can, in some cases, find meaning in some made-up brand names with random combinations of syllables and not only in real words. Some sound of certain letters can also induce a certain meaning to the consumers, for example certain words beginning with letters as *b, c, d, g, k, p* and *t* which are phonemic elements (plosives) are seen as more specific names and less abstract. On the other hand, other names starting with *c* or *s* which are softer elements (sibilants) tend to give a romantic and serene image (Keller, 2008).

Keller (2008) also refers to a study that proved there is a link between the characteristics of some letters of a brand name and the features of the products. Indeed, for toilet paper and cleansing products it had been found that the harder the consonant and the more vowel pith, the more the consumers had a perception the product was harsher.

### ***2.3. Globalisation: Adapting a Brand name to a variety of cultures and languages***

Nowadays globalisation of markets brings up contradictory ideas between marketers about the level of customisation versus standardisation that global brands should follow. Levitt (1983) believes that seeing the economy as several standardised markets, and follow then a standardisation strategy, is more costly effective. Levitt (1983) also thinks that a market should be approached as one big global market as the cultural differences will be disappearing and converging into one global culture where no local adaption would be necessary (Alashban, Balazs, Hayes, & Zinkhan, 2002).

On the other hand, some other marketers believe that total globalisation and convergence to one and only culture is not yet happening and that it is more profitable to adapt to the different needs of the market's segments. Regarding these thinkers, they argue that brands targeting and adapting to several segments achieve higher revenues (Alashban et al., 2002).

This argument also refers to the name of a brand. Using a standard name globally can benefit a brand by having big economies of scale in marketing, a consistent message and building a strong international brand image. For this reason, some authors believe that the brand name and brand message should remain the same, but other authors disagree (Alashban et al., 2002).

As the economy is evolving to an economy of free markets, only the strongest brand names will remain. When a brand decides to expand to a foreign market it needs to carefully think about its brand name. Indeed, the name has to induce desirability, memorability, has to be relevant to the product or service and distinctive to the name of the competitors. Nevertheless, one name could satisfy all these characteristics in one country in a specific language and not trigger the same meaning in another one (Francis, Lam & Walls, 2002).

For the Chinese language, for example, the basic unit of the written language is a character and the combination of these give words. The problem with the Chinese language is that different combinations of characters can be pronounced the same but mean totally different things. In this case, it is complicated to keep the same meaning, pronunciation and connotations of a brand name in China as the original one in English if there is no phonetic or semantic adaption of the brand name (Francis et al., 2002). A choice needs to be sometimes done to adapt the pronunciation and the meaning of a brand name to certain markets in order to avoid negative connotations and misunderstandings. There is a high probability that a certain brand name in its original language doesn't transmit the same meaning than in a foreign one (Alashban et al., 2002).

Alashban et al. (2002) states that the more competition and buyers within the market, the less standardised is the brand name across borders. Indeed, when there is a high density of buyers, brands prefer to adapt the name because otherwise they would have a difference in product quality and prices across countries under the same brand name. This could decrease the overall quality perception of the brand. In the same way, the broader the distribution channels, the greater the brand-name variation as a wider range of distribution channels means there are more different market segments. By localising the brand names, the companies have the opportunity to add benefits to the name to give

them a more powerful meaning in the new market than the original ones (Francis et al., 2002).

#### ***2.4. Example of Brand names aligned/not aligned with the desired brand image***

It's not easy to translate a brand name from one language to another as there are many significant linguistic aspects to take into consideration and a minor error could affect the brand image in a whole market. An example of a well-adapted brand name is the case of Coca cola in China, the Chinese brand name is Ke-kou-ke-le in Mandarin and ho-hauho-lohk in Cantonese. These names, when pronounced, sound close to the original brand name and, at the same time, has an appreciative meaning in the other language which is "tasty and happy" (Francis et al., 2002).

There are many cases that proof the importance for marketers to learn about a country and its language before choosing the name of the brand in a certain country. Many mistakes in choosing a brand name have happened because of a lack of understanding of the local culture. One case is the one of Unilever that found out that its brand "Le Sancy Soap" sounded phonetically in some Asian local dialects like "death to you". Another case is the one that happened the first time Mercedes-Benz entered the Chinese market with the name "Bensi" which means "rush to die". Finally, Vicks introduced its cough drops in Germany and forgot to remember that Germans pronounce "V" like "f", so the brand name pronounced in German had sexual connotations (Baker & Hart, 2008).

## **Chapter 2: Consumers' perception: The effect of language and anthropomorphism on Cognition**

### **1. Influence of language on abstract thought**

Before understanding whether a brand name can have an effect on how a consumer perceives a certain brand, product or service it is necessary to understand the importance of the effect of language on human's mind. "Language is a powerful tool in shaping thought about abstract domains and one's native language plays an important role in shaping habitual thought" (Boroditsky, 2001, p.1). There are two concepts that are important to understand when talking about this subject, the doctrine of *Linguistic Relativism* and *Linguistic Determinism*. The first one, *Linguistic Relativism* defends that the meaning of words and their syntactic construction can vary a lot between languages. An example that explains this term is the one where a tribe, instead of naming the directions "right", "left", "up" or "down" to explain where is an object, they always use "north", "south", "east" or "west". The people in this tribe are always aware of where the cardinal points are. The term of linguistic determinism, which emerged by the ideas of Benjamin Lee Whorf, is a little more extreme, stating that language completely shapes someone's thought. This concept also believes that language can affect how people perceive and conceptualize the world. In order to understand this concept of *linguistic determinism* let's give the example of a tribe in Africa. This tribe's language includes only three numbers: "one", "two" and "many", the people living in this tribe are not able to understand the difference between 4 and 5. The first concept explains that language can influence how people perceive things or ideas like small variations, whereas the second term explains how language can totally change the way someone understands the world (Holmes & Wolff, 2010).

The idea of language influencing people's abstract thought can be very controversial. To understand it in more detail it is interesting to analyse how perception can differ between people speaking different languages. Many questions can arise related to this topic like: How bilinguals and monolinguals thought can be different by the influence of language? How can language limit some ways of expressing or describing something? How can someone represent something that has not a word in their own language? These questions

are important to understand how a brand name can have a variety of meanings to people based on the language they use.

Kousta, Vigliocco, & Vinson (2008) defended the hypothesis that language has an effect on cognition besides the ones related to understanding and speaking a language. Meaning that language has an effect on someone's thoughts based on the language they speak. These authors tried to prove this by conducting an experiment that would analyse how different English monolinguals and Italian Bilinguals perceived some conceptual ideas. Nevertheless, contrary to what was expected, these authors' results showed no difference between these two types of participants, not enabling them to confirm this hypothesis.

On the other hand, Bassetti (2007) conducted another experiment involving bilingual children speaking Italian and German and monolinguals speaking only German. This experiment showed that monolinguals kids' representation of certain objects were strongly influenced by the gender of the words, whereas the bilingual kids were less influenced.

Another experiment run by Bassetti (2007) involved, on one hand, Spanish-English bilingual speakers and, on the other hand, German-English bilingual speakers. These languages containing words that had opposite grammatical gender to name a same object. During this experience, feminine or masculine names were allocated to certain objects. It was perceived that when the names allocated to the object matched in gender with the noun naming the object in their first native language, the participants made the link more easily between the name and the object. For example, whenever the Spanish speaker would be presented the object "apple", which is feminine in Spanish, together with the name "Sara", which is a feminine name, the participant remembered the name faster than when "apple" was given a masculine name like "Mario". And the opposite happened with the German participant. In other words, even if the speakers knew two languages, their perception was influenced by their native language.

One of the experiments of Boroditsky (2001) was about how the conception about time of mandarin speakers varied from the ones speaking English. It was observed that for mandarin speakers time was conceived as vertical in their mind, whereas English

speakers thought about time horizontally. This research also defends the idea of the native language having a strong influence on a person's thoughts.

Overall, "Given that language can affect thinking, linguistic relativity holds that speakers of different languages think differently." (Holmes & Wolff, 2010)

## **2. Distortion of perception: The importance of grammatical gender on brand image**

### ***2.1. Definition of grammatical gender***

*Grammatical gender* may be defined by Matthews, 1997 (as cited in Comrie, 1999) as "a system in which the class to which a noun is assigned is reflected in the forms that are taken by other elements syntactically related to it."

In other words, *grammatical gender* is defined by Cubelli, Job, Lotto & Paolieri (2011) as a specific characteristic of nouns with its main functions being syntactic and morphological. This concept was first named by Vygotsky (1962).

In many languages, grammatical gender is divided into two or more categories and their respective modifications in nouns are followed by syntactic changes in the words with which they are combined (os et al., 2011).

In Spanish, for example, the masculine nouns *hombre* "man" and *cuchillo* "knife" require the masculine article form which is "el", whereas the feminine nouns *cuchara* "spoon" or *mujer* "woman" require the article "la", which is the feminine form. It is very important in a gendered language to have a correlation between the noun's grammatical gender and the other words accompanying it in the sentence (Comrie, 1999).

### ***2.2. Effects of phonetic and grammar on perception***

Grammatical gender can affect the perception of artefacts, animals, or other objects in monolingual speakers of gendered languages. This can be easily observed since the age of eight, but it varies depending on the type of objects and the language that is spoken (Bassetti, 2007). In the tests undertaken by Bassetti (2007), for example, Italian speakers

were much more influenced than the German speakers by the grammatical gender of the words. Overall, we can say that grammatical gender has an effect on cognition for monolingual speakers.

As explained earlier, Bassetti (2007) ran an experiment where people speaking different gendered languages were presented several objects with a name. It resulted from this experiment that the participants tend to remember more easily the names for which the gender matched the object noun's grammatical gender. Moreover, Bassetti (2007) also found that bilinguals speaking a genderless language were still influenced by the grammatical gender of their first language.

He also found that bilingual children differed from monolingual children on how they perceived an object:

Speaking two languages that assign the opposite gender to the same object affects concepts of objects, so that Italian native-speaking children who know German think of the same objects differently from Italian native speaking monolingual children (Bassetti, 2007).

Moreover, in some languages when you change the grammatical gender of a word you can affect the meaning and refer to two different things. For example, in Italian the word "cassette" is masculine and means drawer, whereas "cassetta", which is feminine, means box. So grammatical gender can be the characteristic that changes the meaning of a word and if grammatical gender can have an effect on the meaning of words it could also influence the object categorization (Cubelli et al., 2011).

"Language is highly interconnected with other cognitive processes such as vision and categorisation and influences other functional network in a top-down fashion" (Athanasopoulos, Boutonnet, & Thierry, 2012, p.73). The categorisation and perception of an object is unconsciously affected by the syntactic characteristics of its noun, even if such characteristics are not relevant in the situation (Athanasopoulos et al., 2012).

Regarding Boroditsky & Schmidt (2000), people think about an object's gender based on the grammatical gender of the word that names the object. When a person speaking a genderless language, like English, is compared to a person speaking Arabic, which language has a gender, you can see that they have a different ways of perceiving certain objects. For example, nouns like necklace or perfume are masculine in Arabic and are perceived by people speaking this language more masculine items than by people speaking English (Flaherty, 2001).

A category such as grammatical gender, which is constantly thought as something general, has a lot of importance in the way of communicating in a community. This category can make people speaking different languages personify or imagine objects and other representations differently. For example, the author Jakobson (1959) refers to the fact that in different languages, where some words are contrary in gender, poems can be understood differently (as cited in Cubelli et al., 2011).

Regarding Cubelli et al. (2011), some words that relate in grammatical gender are rated as having more semantic similarities than words having contrary grammatical gender. People perceive syntactic and meaning of words as an only representation. Taking this into consideration, we can conclude that grammatical gender is always accessed by the speaker to process the meaning of a word and affects the final representation of the object in its mind. "If gender influences meaning processing, then the gender of objects' noun should affect object categorization" (Cubelli et al., 2011, p.452).

### ***2.3. Choice of the Grammatical gender of a word***

In general, the meaning of words and grammatical gender seems to be unpredictably in relation but in many cases the classification of the gender of words are based on systems that take into account the semantic characteristics of the nouns. What's more, the fact that people tend to remember more a name that is coherent with an object's grammatical gender gives the idea that there is an actual link with the choice of the gender of a word and its semantic meaning (Cubelli et al., 2011).

Cubelli et al. (2011) mention that many languages classify nouns in two or more grammatical gender categories and believe that these categories might not influence the conceptual representation of the items named, but it can influence the semantic processing of these items which helps object categorisation. This means that any choice of a lexical entry, like ending a noun by -o or -a, has an effect on how the meaning of a certain noun is processed. This is due to the fact that people's mind refer to the gender whenever they see the lexical entry. Furthermore, some authors believe that the choice of the grammatical gender is randomly given in any language and does not follow any rule, whereas other authors, like Cubelli et al. (2011), believe that in some cases these choices might be influenced by some stereotypes that make people perceive an object with some masculine or feminine characteristics. In many cases it is believed that the choice of grammatical gender is linked to the semantic meaning of the noun (Cubelli et al., 2011).

Furthermore, the choice of the noun's gender for a same object varies depending on the language, such as the noun sun is masculine in Spanish (*sol*) and feminine in German (*sonne*). Does this mean that there are patterns of choosing a certain grammatical gender in each language and is influenced by the culture and ideas? Or is it totally random? Athanasopoulos et al. (2012) defend that the grammatical gender assigned to a noun is totally arbitrary unless there is the case of natural gender distinction.

Cubelli et al. (2011) say that the choice of the gender of a noun is neither completely random nor completely motivated. What they mean is that gender is generally independent from any semantic meaning but in some occasions gender classification seems to be based on semantic properties as biological sex or animacy. Indeed, in some cases, some relation between grammatical gender classification and the categories of the nouns can be observed. In Serbian, for example, nouns referring to vegetables are generally masculine. On the other hand, in Italian nouns naming fruits or cities are mostly feminine whereas trees or river names are generally masculine. Moreover, in many languages, the nouns that are subordinate to another term normally adopt the gender of the whole subgroup of this term. As an example, "colour" in Spanish is masculine and in consequence, all the colours independently are also masculine, like "yellow", "green", "black" or any other colour (Cubelli et al., 2011).

In an experiment undertaken by Boroditsky and Schmidt (2000) they analysed the gender given to some objects by English speakers, whose language has no grammatical gender. It was observed during this experiment that many of the genders given to the nouns, especially the ones referring to animals, agreed with the grammatical gender given for that word in other gendered languages, like Spanish or German.

### **3. From the word in itself to its perception: *Lemma vs Grammatical Gender***

#### ***3.1. Importance of the lemma within the cognitive process of naming and sentence production***

Every language consists in a big amount of lexical items, also called lemmas, which all together form the lexicon of the language. Each of these lemmas is an independent unit of the lexicon of a language and is composed by one or several morphemes. A morpheme is the minimum unit of language that can have a meaning on their own. We can differentiate two kind of morphemes, free morphemes and bound morphemes, the first ones can be words in itself and the second ones can't stand on their own. Regarding this definition, "achievements", "achieves" and "achieve" are three different lexical items of the lexicon of the English language. The first lexical item "achievements" consists in three different morphemes, which are "achieve", "-ment" and "-s", the first one being a free morpheme. The second lemma "achieves" has only two morphemes, one free and one bounded and the last lemma "achieve" is a free morpheme (Mccray, 1998).

It is important to distinguish words from lexical items, a lexical item can be formed of different words but have only one unique meaning. For example, "look up" like "look up in the book" is a lexical item, which is formed by two words, and has a unique meaning "search". Whereas, a word can have different meanings depending on the context (Mccray, 1998).

In order to understand the importance of the different parts of a word it is important to describe the cognitive process behind the construction of a sentence. How do people choose from their mental lexicon the lexical items to build a sentence? Regarding Huijbers

& Kempen (1983), each lexical item is chosen based on the meaning that the speaker builds in its mind while thinking or perceiving. This choice is made in two steps, during the first look-up from the speaker at the lexicon it selects a number of lexical items that has the right syntactic shape and right meaning to express the speakers' intention. The second time it accesses the lexicon is to associate to the lexical item the right phonological and morphological form. In other words, when building a sentence the speaker first chooses from the lexicon the lexical items that put together can express its intention and after it chooses the phonetic and morphology needed to express its intention in the right form.

Current theories divide the process of naming the object that we see into four steps: first step being creating the illustration of the presented object in our minds, followed by the formation of an intangible semantic code where the features of the object in question are included, next step is creating an abstract representation of the phonology of the name of the object, and finally the last one is pronouncing the name out loud. In other words, in the process of giving the name of an object, human's mind first identifies the object, then recognizes its features and, based on this, finally selects the word that names the item (Huijbers & Kempen, 1983).

### ***3.2. Influence of articles and morphemes on the image given by a word***

As stated before, the process of building a sentence or naming an item can be divided into two steps, the first one being the selection of lexical items that syntactically fit together to express the speaker's intention and, the second step, being the choice of the morphemes and phonology. Based on this, the speaker chooses the bounded morpheme, including the right morpheme associated to the grammatical gender of the lexical items during the second access to the language lexicon (Huijbers & Kempen, 1983). It is believed that gender information is retrieved during the first step of the lexicalisation process and this leads to activating some agreed targets for that gender including the definite articles (Flaherty, 2001).

Some of these agreed targets include phonological or morphological endings of words. For example, Flaherty (2001) realised an experiment with four years old kids speaking

French, these kids were introduced to a clear female martian figure with a name finishing in *-on* (morpheme associated with the masculine gender in French). There was a clear conflict between the natural gender of the item and the name given to the figure. The results of the experiment showed that the 4 year old kids selected the article based on the phonological principle instead of the semantic one. Further experiments of Flaherty (2001) showed that speakers tended, in a subconscious way, to categorise the objects as feminine or masculine based on the grammatical gender of the nouns naming these objects more than its gender attributes.

In some languages having grammatical gender the construction of the sentences have to follow some rules, each noun's determiners, its pronouns or following adjectives have to adapt their form to the respective noun's grammatical gender. For example, in Spanish "casa" meaning "house" is a feminine word, and a sentence with "house" in Spanish would be "la casa es roja". We can see here that the determinant is feminine "la", and the adjective "rojo" meaning "red" adapts its form to "roja", by changing the bounded morpheme "-o" to "-a". In the case of a sentence with a masculine word like "coche" we would have "el coche es rápido" meaning "the car is fast". Here we have a masculine determinant "el" and the adjective "rápido" with the bounded morpheme "-o" in this case (would be "rápida" in feminine).

This also happens in French. When you build a sentence with the word "chaise" which means "chair" and has a feminine grammatical gender you adapt the other words of the sentence accordingly. In the sentence "La chaise est belle", meaning "the chair is beautiful" you have the word "la" which is a feminine determinant and the adjective "belle" is in its feminine form. Whereas in the sentence "Le salon est beau", which means "the living room is beautiful" and where "salon" is a masculine noun, you can observe that the determinant "le" accompanying the word "salon" is in the masculine form and the adjective "beau" also.

Already in Latin the opposition was felt. The nouns in *-us* were usually masculine, and from them arose the ending *-o* of the Spanish masculine. On the basis of Latin nouns ending in *-a*, most of which were female, the termination *-a*, of the female Spanish arose. In general, in Spanish language, all words finishing with the bounded morpheme *-a* have

a feminine grammatical gender and all words finishing by *-o* have a masculine grammatical gender. This has of course exceptions, for example, when a certain word is part of a certain category where all the nouns of this category are from a certain gender. As mentioned before, this is the case in Spanish with the category of colours, “colour” is masculine in Spanish so all the colours’ nouns have masculine gender: *lila, malva, rosa, violeta* (Rosenblat, 1962).

Compared to Spanish, in French it is less easy to identify the terminations of the words which are associated with feminine or masculine grammatical gender but some authors have researched on this. For example, the names that carry the ending *-ette* such as “cigarette” (cigarette) or “pommette” (cheekbone) are usually feminine, while those ending in *-ier* such as “cendrier” (ashtray) or “pommier” (apple tree) are almost always masculine (Desrochers, Desrochers, & Paivio, 1989). Other terminations of the masculine gender are *-ge, -ent, -me, -o, -re, -on* and *-eur*, but the French language has many different terminations of either masculine or feminine noun’s. Nevertheless, 95% of words ending in *-on* in French are masculine (Desrochers, 1986).

Furthermore, it is interesting to understand how these terminations can affect the representation of gender neutral objects. Ervin (1962) conducted an experiment in order to understand this. In this experiment he asked Italian speakers to rate certain words differing only on their termination, some finishing in *-o*, a common masculine gender marker, and others in *-a*, a feminine gender marker. The results demonstrated that participants gave more masculine connotations to the nouns ending in *-o* and feminine connotations to the ones finishing in *-a*.

#### **4. Impact of anthropomorphism on Brand Image**

##### ***4.1. Concept of Anthropomorphism***

After understanding more thoroughly how language can affect abstract thought and the role of grammatical gender it is worth explaining a last concept in order to understand how a certain object, item or artefact can be perceived with some human

features such as gender characteristics. The notion of anthropomorphism will help us understand this effect.

Guthrie (1993) defines the act of anthropomorphising as “seeing the human in non-human forms and events, pervades human judgement” (as cited in Aggarwal & McGill, 2007, p.468). Another definition to this concept is given by Gray, Gray, & Wegner (2007) and says “Anthropomorphism is a process of inductive inference whereby people attribute to non-humans distinctively human characteristics, particularly the capacity for rational thought (agency) and conscious feeling” (as cited in Epley, Heafner, & Waytz, 2014, p.113).

Epley et al. (2014) take these definitions and put them together by saying that the essence of anthropomorphism is to perceive any kind of human features in a non-human agent no matter whether this last one exists or is part of someone’s imagination. The idea is that any of these non-human artefacts, objects, animals, natural forces, religious representations or any other possible agent are somehow perceived, either physically or by the way it acts, as a human.

People, in general, tend to see human attributes within nature, like when they see faces in the clouds, or compare some animal actions to humans’ actions, like associating human feelings or emotions to animals. But this doesn’t happen only with natural things, but also with objects and artefacts, such as giving a name to a car or seeing a bottle of coca-cola similar to a feminine body (Aggarwal & McGill, 2007). For Epley et al. (2014), anthropomorphising is not only based on allowing certain physical attributes to a non-human, but it is about giving it some characteristics that are purely human, regarding human’s actions, such as the capacity to feel, to believe or to think.

The act of anthropomorphising can be divided in three levels: partial, literal, and accidental. The first form of anthropomorphism is partial, the one where important human traits are given to a certain artefact but the artefact is not believed to be human. Literal anthropomorphism consists in believing that a non-human agent is a human and happens usually out of a mistake, such as confusing some object in the dark with a person.

And, finally accidental anthropomorphism, which is normally considered as a form of coincidence by the agent, where some important human elements are observed in a non-alive object (Aggarwal & McGill, 2007).

It is important to consider that not all objects can be easily anthropomorphised, in order for this effect to happen the non-human agents need to have certain features. An item is more likely anthropomorphised whenever it moves at a human pace or has a similar form to human bodies (Aggarwal & McGill, 2007).

#### ***4.2. Causes and effects of anthropomorphism***

People believing in religion refer to God as a human, people talk to their pets like they were humans, and people curse and get mad with their technological devices whenever these don't respond (as if it was a person) (Akalis, Cacioppo, Epley, & Waytz, 2008). But, what are the determinants that stimulate this phenomena? Depending on the person and the situation, the tendency to anthropomorphise is higher than in other circumstances. In some religious cultures anthropomorphising is part of their community and, in general, kids tend to anthropomorphise much more than adults (Akalis et al., 2008).

Akalis et al. (2008) see two main causes that motivate anthropomorphism: sociality and effectance. The sociality motivation is based on the fact that humans need to be in contact with other humans and, as soon as this social connexion is missing, people try to recreate this connexion by finding humanlike traits in non-human agents, such as believing in a god or considering their pet as more human. This means that people who are lonely for a longer period should have a greater tendency to anthropomorphise non-human agents. The other main motivational cause of this phenomena is effectance, where people use the concept of human as a source to understand, control or predict the actions of other agents. In other words, humans use their own experience and knowledge about human beings in order to feel like being in control and understand its environment and the agents surrounding them. Through anthropomorphism the non-human agent can be perceived as more humanlike, this gives the feeling of greater understanding of our environment

and greater sense of control. Overall, the effectance motivation increases with the need of predicting and being in control, as anthropomorphising can satisfy this need, people tend to anthropomorphise more in these situations, such as in cases of uncertainty (Akalis et al., 2008).

But, does seeing humanlike traits in a non-human agent influence the way that humans perceive this agent? Epley et al. (2014) conducted some research to analyse whether people would trust more an autonomous driven car more whenever this car had more humanlike features. The results concluded that, indeed, participants of this experiment believed this autonomous vehicle to be more competent as more anthropomorphic features it was associated with.

Overall, the fact of attributing humanlike features to non-human agents seems to make this agent look like it is more under the control of its acts and gives the impression that it will perform in a more competent way (Epley et al., 2014). The results of the different experiments of Epley et al., (2014) showed that the participants not only trusted more their autonomous driving car when it presented more humanlike traits, but also were more relaxed whenever there was an accident, and blamed less the vehicle in this situation. There is no specific attribute that is needed to make people feel this way, the simple act of naming the vehicle will give the feeling that the agent is more human (Epley et al., 2014).

### ***4.3. Usage of Anthropomorphism in Marketing***

For marketers, it is very useful that people see human features not only in humans but also in artefacts. Marketers tend to encourage consumers to anthropomorphise brands and products in order to create a feeling of attachment between the consumer and the brand. In many occasions, marketers present the product as a human or designs an anthropomorphised representation of the product, such as the Michelin man. Brands are given this way a certain image and personality that can influence the way people perceive it (Aggarwal & McGill, 2007).

Aggarwal & McGill (2007) talk about how the evaluation of a product or brand is influenced by anthropomorphism. People evaluate things based on a schema based process, every person has a certain schema in their head, which includes certain features they expect from a certain object, a certain brand or any category. The evaluation of an item is affected by the degree to which the item's features fit the ones of the category schema (level of congruity). In other words, whenever congruity is perceived between the item and the mental schema of the person, a feeling of satisfaction is perceived by the consumer, leading to a positive evaluation of the product or brand. On the other hand, if there is incongruity perceived between the item and the schema, the effect will be the contrary, the consumer will have a feeling of disappointment and evaluate the product or brand negatively (Aggarwal & McGill, 2007).

“Marketers encourage consumers to anthropomorphise a product, consumers bring to mind their schema for the type of person suggested and that product is evaluated in part by how well its features fit that schema” (Aggarwal & McGill, 2007, p.469). This phenomena happens because people like to see recognisable characteristics in objects, it feels more familiar to them and this brings them satisfaction. They tend to anthropomorphise products because it gives them the feeling of understanding the image that surrounds the product and enables them to create some relationship with the product that feels comforting (Aggarwal & McGill, 2007). What's more, consumers tend to trust certain kind of products more when they are attributed humanlike traits, such as the case of the autonomous vehicle (Epley et al., 2014). Anthropomorphising help marketers to make consumers trust their products and brands more.

Anthropomorphising is broadly used by marketers in many different ways. One way is using techniques such as referring to the product by *he* or *she* instead of *it*, naming the product with a humanlike name or even representing it in commercials or images as if it was able to talk or walk (Epley et al., 2014).

### **Chapter 3: The effect of a brand's name on the perceived gender of a product and the challenge between choosing Gender neutral Products and gender customized products in our current society**

#### **1. Challenge: The choice of a brand name to fit the categorical schema in consumer's minds**

When building a brand it is important to have a strong strategy to influence the consumers' purchasing behaviour (Rossi et al., 2011; Zhang, 2015). We have seen in the literature that, more than the product or the service in itself, the main aspect to take into consideration is how the consumer perceives the brand (Kapferer, 2008; Rossi et al., 2011). A strong branding strategy will produce some strong mental associations with the brand in consumers' mind (brand image), these associations being attached to real experiences that consumers feel they can have with a product or service belonging to a certain brand (Lee & Leh, 2011). These mental associations can be attained through different marketing elements such as the brand name or any other symbol that is associated to the brand (Kapferer, 2008).

This brand strategy is primordial to building a strong brand image which is a powerful competitive advantage (Cengiz et al., 2014; Rossi et al., 2011; Wheeler, 2012). The brand image can increase the awareness of the brand which can evolve to consumer loyalty for a variety of products or services under the name of the same brand (Kapferer, 2012; Roper & Round, 2012). Moreover, brand awareness can cut down many marketing costs and brand extension costs, increasing in many cases the sales of new products under the same brand name (Zhang, 2015).

The stronger is the image of a brand the more credibility there is, meaning that the customers trust the brand and is attracted to it. This effect is stronger the more unique and stronger the brand image is perceived by the customers (Zhang, 2015). The literature also mentions the importance of the brand fitting the customers' self-conception, this means that customers buy and trust more those brands that have certain features that are similar to how they perceive themselves (Yang & Wang, 2010).

As mentioned throughout the theory, the brand name is one of the most important elements to build a strong brand image. Indeed, this symbol is the main one triggering the associations with the brand in consumers' mind (Kapferer, 2012; Keller, 1998; Roper & Round, 2012). The name of a brand has four objectives: building a relationship between the consumer and the brand, making the consumer acquire the habit of buying the brand, a symbolic objective and, finally, a rational objective that indicates the quality of the brand and makes consumers recognise the brand automatically (Roper & Round, 2012). It is, therefore, very important to choose the right name when building a brand as consumers care more about the brand name than the whole brand entity in itself (Roper & Round, 2012).

The choice of the brand name can have an effect on the level of brand awareness and on the image of the brand's products or services (Heckler et al., 1998). To avoid any negative mental association to the brand many aspects need to be taken into account when choosing this name. It is important to be aware of all the needs of its targeted customers such as their culture and habits and, most important, the language of the market that the brand is entering (Alashban et al., 2002; Francis et al., 2002). Indeed, many authors have researched about the effect of languages on abstract cognition and it is believed that, in some occasions, people speaking different languages can think differently about a same thing. So, besides understanding thoroughly the market's culture, there has to be a deep analysis into the local language of the market as some small changes in the letters, pronunciation or even ending of the brand name could influence how the consumer perceives the features of the brand (Bassetti, 2007; Boroditsky, 2001; Holmes & Wolff, 2010).

It is important, when thinking about the brand name, to consider how the process of naming happens. When naming an object, the human's mind first identifies the object, then recognises the features of this object and, only after, it selects from its language lexicon the word that corresponds to the object that he was thinking about (Kempen & Huijbers, 1983). Referring to brands, when a consumer sees an object, it identifies it, then recognises the features of it and, only then, it can link the object to a certain brand name. The association is faster the easier the features come to the consumers' mind. It is important when building the brand name, which represents a certain object or service,

that some of the features of these objects are present in the name. This would enable the consumer to link this object to the brand name faster and trigger the brand image in customers' mind (Heckler et al., 1998). Some examples of brand names' are: *Patagonia* and *Amazon*. *Patagonia*, which refers to the south region of mountains in Chile and Argentina, is a clear representation of the products that are sold by this brand: outdoor clothes to hike, trek or any other outdoor sports. *Amazon* refers to the Amazonia, which is the river with the largest collection of flora and fauna in the world, and Amazon wants to be perceived as having the largest collection of retail items on internet.

Moreover, in the process of communicating and building sentences, the human's mind works in two steps, during the first step it access the lexicon to choose the different lexical items that have the right syntax and meaning to communicate its intention and, during the second step, it chooses the right phonological and right morphemes that need to be used to transmit correctly this intention (Huijbers & Kempen, 1983).

During this research, papers have shown that there is an effect of language on abstract thought especially regarding grammatical gender. In several languages, nouns are classified into two or more categories based on gender which has a syntactic and morphological function (Cubelli et al., 2011; Vygotsky, 1962). This function is reflected on the other elements with which they are combined in a sentence (Comrie, 1999). For example, in Spanish "the car is beautiful" is said "el coche es bonito". As the noun "car" is masculine in Spanish, the rest of the sentence adapts to this grammatical gender, such as "el" is a masculine article and "bonito" is present in its masculine form.

If we consider grammatical gender, it is believed that the gender is accessed during the first access to the lexicon and, based on this, during the second access the phonological and morphological ending of words are chosen to fit this gender (Huijbers & Kempen, 1983). We will analyse in our empirical research if the other way around also works: How does the understanding and representation happen in human's mind whenever someone hears a word? How does the effect that a bound morpheme, such as the grammatical gender, can have on the perception of an item?

Human's perception on things is highly influenced by a phenomena called "Anthropomorphism", by which human's tend to see familiar human traits in non-human agents (Aggarwall & McGill, 2007; Epley et al., 2014). Based on the context and the features of an object we can notice different levels of this effect (Aggarwal & McGill, 2007). This phenomena increases when someone suffers of a lack of human connexion or when there is feeling of effectance. The effectance effect is the term that explains that people tend to trust more non-human agents whenever these have human traits, this is due to the fact that humans feel more under control when they recognise traits that they have more knowledge about (Akalis et al., 2008; Epley et al., 2014).

Marketers are aware of this and use this effectance effect to attract more customers. They motivate their consumers to anthropomorphise their products by giving them, through marketing, some human characteristics. These characteristics can be given, for example, by giving a name to an artifact, making it look like humans or by representing them doing things that only humans can do, such as talking. Some examples of this techniques can be seen in the Michelin man, the Frosties tiger or the Duracell rabbit (Aggarwal & McGill, 2007).

Consumers have a tendency to purchase items that have congruity with their mental schema of the product, the schema having a self-reflection of their own human features. The more there is schema congruity within the category of the product, the more the product is evaluated positively. This can also happen with a brand, if the brand image is capable of recalling human features within the product or service provided, it will be better evaluated by the consumers because they will feel the brand closer to themselves (Aggarwall & McGill, 2007; Yang & Wang, 2010).

If anthropomorphising increases the interest of consumers and if naming a non-human agent already gives an anthropomorphising effect, then, whenever a new brand is being created, the brand name needs to be thought thoroughly (Aggarwal & McGill, 2007; Epley et al., 2014). There has to be a strong brand strategy focused on finding a name that will be able to recall certain human features that are close to the ones in the mind of the targeted consumers.

Throughout the literature, many studies have proven that the grammatical gender of the noun naming a certain item's influences how this item is perceived. It was shown in many cases that when a noun was feminine or masculine, the representations or associations regarding the features of this item were more feminine or masculine respectively (Basseti, 2007; Cubelli et al., 2011) . These studies, nevertheless, were done considering what is believed in a certain society to be "feminine" or "masculine" features (Bem, 1972; Guastello & Guastello, 2013; Williams, 2014).

## **2. Evolution of our society: From fixed gender roles to gender neutral products and its effects on the choice of a brand name**

When developing new products and brands, marketers try to satisfy the mental schema in the potential consumer's mind that we mentioned before (Yang & Wang, 2010). In many cases, when referring to different genders, they try to adapt the features of their products to the gender of the targeted group. This is important because the more features the brand or object has close to the consumers' self-reflection, the better evaluation will this brand be given by the consumer (Aggarwal & McGill, 2007).

A gendered product is the one where the basic characteristics are accepted by both genders but its image and identity is adapted to one sex by adapting the design, promotion or adding any specific symbols (Alreck, 1994).

Nowadays, due to changes in our society regarding gender, more and more products are gender neutral but, in many cases, this is not the right way to proceed because opposite genders have different mental schemas due to different needs or desires. Consumers prefer products that are congruent with their perceived schema of femininity or masculinity (Mackie, Smith, & Worth, 1992).

Mackie et al. (1992) researched and concluded that people with stronger masculine features tend to prefer products that are described in a more masculine way, whereas more feminine people preferred products described in feminine terms. The best way of

marketing is not being gender neutral but to practice gender differentiation with a strong gender awareness (Mackie et al., 1992).

To satisfy all consumers it is important to ensure that gender issues are raised and considered (Williams, 2014). The issue is that not everyone sees themselves in the same way, the evaluation of the product is highly influenced by how the consumers' perceive their own gender (Mackie et al., 1992).

The words and symbols that categorise a certain product as masculine or feminine will depend on the culture and society around the roles of gender where the products will be sold. In the 21<sup>st</sup> century in most countries it is difficult to describe the sex roles, this is not homogenous as it used to be. This makes it harder to know which symbols to use when gendering a product or a brand, it is tougher to associate a certain image to being exclusively feminine or masculine. Older generations differentiate clearly the sex roles in their mind and for them the brand should give a gendered image according to these roles. On the other hand, younger generations' roles of gender don't have clear differentiations. Nowadays, wearing pink or blue is not a matter of gender anymore. Nevertheless, even though society doesn't stick to the belief of traditional sex roles prescription, they might still follow the core requirements (Alreck, 1994).

Moreover, when developing some gender neutral products, like softwares or technical products, these products end up not being totally neutral because of the bias of having more men employees than female ones in these kind of industries. This, together with the fact that women tend to not express their ideas strongly in these kind of environment, gives place to a "gender neutral product" that is actually missing the needs of women. However, presence of women in business and in the technological field has increased in the last years making them an important audience that cannot be ignored when considering these products (Williams, 2014).

Gender characterised products have as objective to increase market penetration within the targeted gender segment which should be more profitable than targeting the whole market. This can be done through adapting the product to one of the genders needs or just

changing its brand image. Gendering is a way of differentiating the brand, this can be done by adapting the packaging, the promotions or the advertisement. A curious fact is that men care a lot about the gender features of a brand, they would never buy a feminine brand, whereas women don't care that much and could accept buying a masculine brand (Alreck, 1994).

The Bem Sex Role Inventory (BSRI) was a measure of masculinity and femininity developed in the 1970's by Sandra Bem to research gender roles, and divided these in 4 groups: androgynous (high masculine/high feminine), masculine (high masculine, low feminine), feminine (high feminine, low masculine) and undifferentiated (low masculine/low feminine) (as cited in Auster & Ohm, 2000). Auster & Ohm (2000) researched the validity of the roles, found in the BSRI, three decades after because society and gender roles were changing drastically as women were joining more the workforce and their educational achievements were increasing. When analysing these traits 30 years after, some desirability for "feminine" or "masculine" traits had changed, 19 out of the 20 masculine traits were more desirable for women in 1999 compared to 1970, such traits as *Dominant, Independent or Act like a leader*. Between the 15 most desirable traits by women for themselves there are 7 feminine traits and 8 that were considered masculine traits in 1974. And 4 out of the top 5 rated desired traits are masculine (independent, individualistic, defends own beliefs, and self-sufficient) and only one was considered feminine (loyal) (Auster & Ohm, 2000).

Considering today's society and changes in gender roles it is difficult to know how to adapt a product or service to a certain targeted gender. But consumers tend to purchase brands that have similar traits to how they perceive themselves, so gendered products are necessary in marketing. This should be also considered for the name of a brand, if a brand name is perceived as more feminine, women might be more attracted to purchase its products and vice versa for men. The only challenge here is to find which features the brand name wants to trigger in consumers' mind to make it sound more feminine or more masculine.

---

*PART II: EMPIRICAL RESEARCH*

---

## **Experiment 1: Testing the effect of a brand name's gender on thoughts with French speaking participants**

### **1.1. Description of experiment**

Experiment 1 was designed to test whether the ending of a brand's name by *-a* or *-o* had an effect on people's perception about a brand having a more feminine or masculine connotation. To do so, some French speakers were asked to rate how much a brand name fitted a certain description of a brand image, this description referring to a feminine image in some of the cases and a masculine one in some others.

For each one of the descriptions, adjectives that were usually perceived as a characteristic of one of the genders were used. For example, in the case of a feminine image, the expected brand would be described as "elegant", "sweet", "loyal" or other adjectives which, regarding Auster & Ohm (2000) were perceived as feminine traits. On the other hand, in order to describe a masculine brand, words as "dominant", "ambitious" or "aggressive" were used as they were perceived as more masculine traits (Auster & Ohm, 2000).

During this experiment, four different scenarios were carried out on the different participants. The first scenario consisted in presenting the brand name "SCARIVA" with a description of a feminine brand, the second one was comparing the same brand name with a masculine description, the third one was matching "SCARIVO" to a masculine description and, the last one, was comparing "SCARIVO" with a feminine description.

The second part of the experiment was asking the participants to give another brand name that would fit the description (*See appendix 1 to see the full questionnaire*).

Running this experiment, the expectation was to find that a brand name ending in *-a* would be perceived by the participants as a brand having more feminine traits and, in consequence, that the name would be given a higher rate when being matched with a description including feminine features. On the other hand, a brand name ending in *-o*

was expected to be perceived as a more masculine brand and, in consequence, receiving a higher rate when being matched with a masculine description. Finally, the opposite two scenarios, such as a brand name ending in *-o* associated with a feminine description or a brand name ending in *-a* in association with a masculine description were expected to be given lower rates by the participants.

Moreover, we thought that the brand names given by the participants would also follow this idea, the descriptions with feminine traits would be given brand names ending in *-a* and the masculine descriptions, on the contrary, would be given brand names ending with *-o*. Unfortunately, due to the lack of answers we have not been able to analyse this second part of the experiment.

### **1.2. Participants**

This experiment was run on 107 French speakers from either Belgian or French nationality. Other French countries were not considered to avoid any inconsistencies related to different cultural ideas about gender roles. The age of the participants ranged between 19 and 47 years old with the mean being of 23 years ( $M=23,24$  years old). All participants were randomly selected with the purpose of having independent observations. No incentives were given to participate in the experiment and the whole form was completed in less than five minutes.

### **1.3. Procedure**

Every participant was sent an on-line form, written in French, where one of the previously explained scenarios would randomly be presented. The participants were told the purpose of the experiment was to understand how attractive was the brand name and logo to a certain brand image that we wanted to give to consumers. Each participant would rate from 1 to 7 the attractiveness of the brand name for the description given (1 meaning low, and 7 high). The answer was recorded together with their age, gender and nationality. Nationality was important to ensure that French was the native language of all of the participants and avoid any biases linked to the language comprehension.

#### 1.4. Methodology and Results

The data recorded was thoroughly analysed by using a two-way ANOVA (Analysis of Variance) using SPSS statistics. The two-way ANOVA model compares the mean of different groups around two independent factors, first independent factor being the ending of the brand name (-a or -o) and the second independent factor being the gendered traits of the expected brand image given (having feminine or masculine traits). The main purpose of the model is to analyse whether there is an interaction between the two factors (independent variables) on the dependent variable (Laerd, 2018). In this experience, the dependent variable is each one of the scores given by the participants for the given scenario.

In order to proceed with this statistical model six assumptions had to be confirmed. The first four requirements being first, the continuity of the dependent variable, second, that the independent variables had to be categorical (*See Appendix 2*), third, the independence of the observations, and fourth, there should not be any outliers (Laerd, 2018). These conditions were easily confirmed by observing the data. The other two assumptions had to be proved by using the SPSS statistical program. The fifth assumption, being the normality of the residuals, was confirmed by using the Shapiro-Wilk test of normality ( $p = 0.162 > 0.05$ , *see table 1*), the results of Shapiro-Wilk were used instead of the Komolgorov-Smirnov (*See table 1*) because the dataset is smaller than 2000 elements (Laerd, 2018). You can also observe the normality of the residuals through graphs (*See appendix 3*).

Tests of Normality						
	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Standardized Residual for Values	,091	107	,028	,982	107	,162

a. Lilliefors Significance Correction

*Table 1-Tests of normality, output data from SPSS statistics. It is shown that the residuals are distributed normally regarding the Shapiro-Wilk test.*

Finally, the sixth assumption, the homogeneity of variance was tested applying the Levene test and equality of variances were assumed (based on the mean,  $p=0.625 > 0.05$ , see table 2).

### Levene's Test of Equality of Error Variances<sup>a,b</sup>

		Levene Statistic	df1	df2	Sig.
Values	Based on Mean	,587	3	103	,625
	Based on Median	,419	3	103	,740
	Based on Median and with adjusted df	,419	3	100,527	,740
	Based on trimmed mean	,568	3	103	,637

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Dependent variable: Values

b. Design: Intercept + Gender\_name + Description + Gender\_name \* Description

Table 2- Levene Test. Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

After these tests we can trust that using the ANOVA model we will find a valid result.

In order to understand the experience, let's define the **null hypothesis** of this ANOVA test as: the average value of the ratings for the different scenarios are the same, meaning there is no interaction between the two independent variables. This null hypothesis would not support our initial hypothesis saying that the ending of a brand name by "o" or "a" has actually an effect on the participant's perception about a certain brand image. We expect with this experience to be able to reject this null hypothesis.

#### Hypothesis:

- H0 (null hypothesis): No interaction between the independent variables, no link between the brand's terminations and the kind of description regarding gender.
- H1: Rejection of the null hypothesis. There might be an interaction between the two independent variables. The ending of the brand name by "a" or "o" possibly have an effect on the customers' gender perception of a brand.

The results of the two-way ANOVA (seen in table 3) do not enable us to reject the null hypothesis. There is no statistically significant interaction between the ending of the brand name presented and the gender-related image of the brand [ $F(1, 103)=0.153, p = 0,696 > 0,05$ , see table 3] (Marshall, n.d.).

### Tests of Between-Subjects Effects

Dependent Variable: Values

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	25,415 <sup>a</sup>	3	8,472	4,562	,005
Intercept	1061,848	1	1061,848	571,848	,000
Gender_name	10,416	1	10,416	5,610	,020
Description	16,619	1	16,619	8,950	,003
Gender_name * Description	,284	1	,284	,153	,696
Error	191,258	103	1,857		
Total	1355,000	107			
Corrected Total	216,673	106			

a. R Squared = ,117 (Adjusted R Squared = ,092)

Table 3- Test of Between-Subjects Effects. Shows clearly no significant interaction between the gender of the brand name and its description.

Moreover, when we calculate the mean and variance of the values (from 1 to 7) given by the participants for each scenario we find that all the values are similar, all around a value of 3. Indeed, the brand name SCARIVO for a masculine description of a brand received an average rate of 3,86 ( $\bar{x}=3,86; \sigma=1,84$ ) and SCARIVA for the same description received an average rate of 3,34 ( $\bar{x}=3,34; \sigma=1,98$ ).

What's more, some values are contrary to what we expected from the experience. For example, SCARIVA for a feminine description of a brand received an average value of 2,43 ( $\bar{x}=2,43; \sigma=1,26$ ), while SCARIVO for a feminine description received an average value of 3,16 ( $\bar{x}=3,16; \sigma=2,23$ ) which is higher.

Through this experience we have not been able to reject the null hypothesis and cannot accept then the alternative which defends that there is an interaction between the independent variables having an effect on the dependent variable.

## 1.5. Discussion

The experiment did not give the results that we expected but we cannot conclude yet that our initial hypothesis is wrong. During this experiment we used adjectives to describe an image of a brand in a more feminine or masculine way. We based the choice of these adjectives on a research that analysed the masculinity and femininity on the American Society during the years 2000, which used the Bem Sex Role Inventory (Bem, 1974) and has as an objective to find which traits were still meeting the Bem Sex Role Inventory of 1974, three decades later. During our experiment then chose the adjectives that still complied with the BSRI in 2000.

The results of this experiment may be caused by the wrong choice of adjectives. Gender and its roles within society have evolved during the past twenty years (Guastello & Guastello, 2013). Indeed, according to Guastello & Guastello (2013) many of the traits considered in the Bem Sex Role Inventory (Bem, 1974) are now considered neutral traits, for example the characteristics “independent”, “individualistic” , “leader” or even “ambitious” are not seen as masculine anymore, but neutral.

The increasing feminist waves have influenced the evolution of the roles of gender within society (Hermsen & Vanneman, 2011) by also changing the expectations of the different sex roles. Nowadays, in most western countries there is no more obligation for the woman to handle the house and kids, nor the father to go to work, roles can be reversed.

Moreover, the research was based on the American society and our experiment was done on French and Belgian citizens, it is important to think about the difference in culture and habits between these two regions and consider this as a potential reason of why these adjectives would not be associated the same way, in these countries, with one or the other gender.

During this experience we've only considered two possibilities, an adjective either being a feminine trait or either being a masculine one and haven't taken into consideration multiple views of gender patterning.

On the other hand, the root of the word “SCARIV-” might also have influenced the perception of the participants. Indeed, some comments of the participants said *SCARIV-* reminded them to the word “Scary”.

Finally, the fact that French language has many different terminations for masculine or feminine grammatical gender makes it harder for participants to link the -a or -o to feminine or masculine gender respectively. This experiment could maybe be repeated on Spanish speakers and find results more coherent with our initial expectations.

## **Experiment 2: Testing words with grammatical gender on thought: Spanish Speakers vs French Speakers**

### **2.1. Description of the experiment**

This second experiment was undertaken in order to analyse whether the grammatical gender can influence how a certain object is perceived in human's mind. In order to understand this phenomena we've run two separate experiments on two separate groups, one of Spanish speakers and one of French speakers. Each individual of the Spanish and French group received six images of neutral objects, each of these images being compared with either an image of a feminine silhouette or a masculine silhouette. The experience had two approaches, one quantitative and one qualitative approach. For the quantitative approach, the participants were asked to rate from 1 to 9 how similar they considered both representations (with 1 meaning low similarity and 9 high). Moreover, to make sure that the perception of the object was really influenced by the grammatical gender, and not because of the object itself, the objects represented had opposite grammatical gender in Spanish and in French. The qualitative part of the experiment asked the participants to give adjectives that would describe the similarities that both images had (the object and the silhouette).

For the quantitative approach it was expected for both groups to give a higher rate whenever the grammatical gender of the object in their own language would suit the gender of the silhouette and give a lower rate when these were the opposite. For example, in the case of the image of a bed, the word bed in Spanish is "cama" which has a feminine grammatical gender, whereas in French it is "lit" and has a masculine grammatical gender. In the case were the representation of a bed was compared with a feminine silhouette it was expected that Spanish speakers would rate higher in similarity than French speakers and the opposite would happen if the bed was compared with a man silhouette.

For the second part of the experience, the qualitative approach, it was thought that people would give an adjective considered feminine or masculine whenever the grammatical gender of the represented object and the gender of the silhouette would be the same, meaning that if the grammatical gender of the object is masculine and the silhouette also,

a masculine adjective would be given to describe both. For example, in the case where the bed is compared to a masculine silhouette it was expected that French speakers would have given an adjective such as “strong” to describe both because bed in French has a masculine grammatical gender.

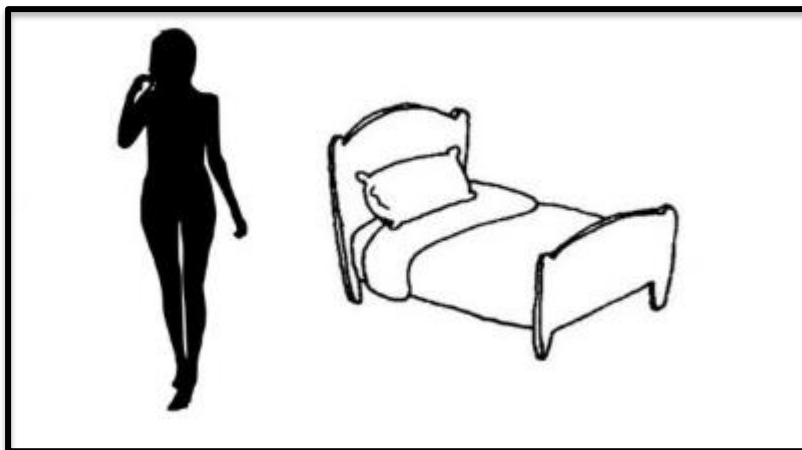
## **2.2. Participants**

For this experience we had a total number of 96 native French speakers and 53 native Spanish speakers. Only native speakers were taken into consideration and not people speaking both languages to avoid any false results. The ages of the participants ranged between 19 and 40 years old for the French speaking group, with an average age of 24.09 and between 18 and 41 for the Spanish speaking group with an average age of 25,04.

All participants were randomly selected with the purpose of having independent observations. No incentives were given to participate in this experiment.

## **2.3. Procedure**

Every participant of each group was sent an on-line form, written in French for the French speakers (*See full French questionnaire in appendix 4*) and in Spanish for the Spanish speakers (*See full Spanish questionnaire in appendix 5*), where six scenarios would randomly be presented. The participants were told the purpose of the experiment was for a thesis which topic was “Understand the perception of consumers and the importance of marketing”. Each participant was asked in this survey to rate from 1 to 9 the similarity between the represented object in the image and the silhouette of a person (sometimes the silhouette of a man and sometimes of a woman, *see Graphical image 1*). The images representing the objects that were compared to the peoples’ silhouettes in this experiment represented 6 different neutral objects (bed, tomato, map, stairs, streetlight and car), one for each scenario.



*Graphical image 1- Example of experiment 2: comparison of a neutral object (bed) to a feminine silhouette.*

The answer was recorded together with their age, gender and nationality. Nationality was important to ensure that French was the native language of all the participants and avoid any bias linked to the language comprehension. All other results given by other nationalities were erased of the data.

## **2.4. Methodology and Results**

From this two surveys we got two different datasets, one for the Spanish speakers and another one for the French speakers' participants. Both dataset were analysed using SPSS statistics program. Once the data was recorded the first step to follow was to have a first view of the data and clean it up to avoid any biases, we erased all data collected from non-native speakers and deleted all responses where participants didn't complete the survey till the end. We expect from this experiment to be able to reject the null hypothesis.

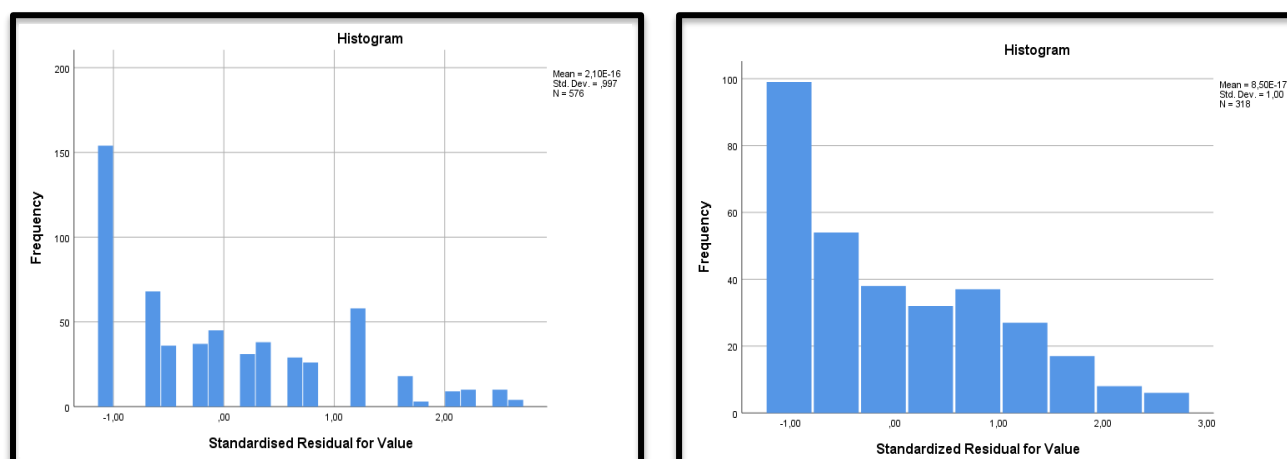
### **Hypothesis**

- *H0: Null Hypothesis- there is no difference in perception based on the grammatical gender of an object's name and its similarity to a human's gender.*
- *H1: The hypothesis 0 is rejected. People might perceive a certain object as closer to one gender when the grammatical gender of the object's noun matches this gender.*

The idea was to analyse both datasets using a two-way ANOVA (Analysis of Variance) with the first independent variable being the grammatical gender of the object's name, the

second independent variable referring to the gender of the silhouette shown in each case to the participant. The dependent variable is here the value given by the participants to the level of similarity found between both representations. With the two-way ANOVA the idea was to analyse whether the interaction between both independent variables would have an effect on the dependent variable.

In order to proceed with this statistical model six assumptions had to be checked. The first four requirements being: first, the continuity of the dependent variable, second, the independent variables had to be categorical, third, the independence of the observations, and fourth, there should not be any outliers (Laerd, 2018). These conditions were easily confirmed by observing the data. The other two assumptions had to be proved by using the SPSS statistical program. Unfortunately, the fifth assumption, being the normality of residuals was rejected for both experiences, as we can see through the Histogram of Standardised Residuals (*see graphical image 2*) and through the values of skewness and kurtosis (French speakers experience: **Z skewness= 7,12**; **Z Kurtosis= -1,88**; *see appendix 6*) (Spanish speakers experience: **Z skewness= 5,27**; **Z Kurtosis= -1,84**; *see appendix 7*).



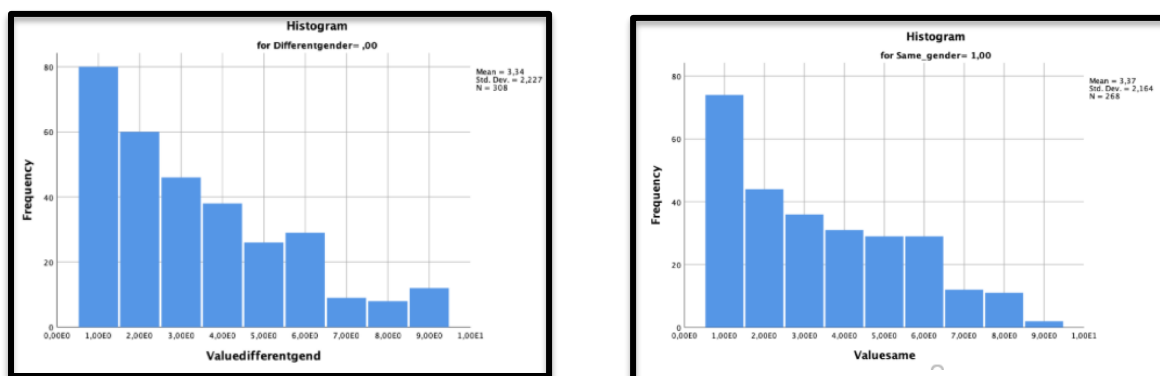
*Graphical image 2- Graphical image of standardised residuals of experience with native French speakers on the left and Spanish speakers on the right.*

As normality of residuals is a must for using ANOVA statistical tests and we reject here normality, the analysis was finally done with a non-parametric statistical test, the Kruskal-Wallis Test. This test does not assume normality and is much less sensitive to outliers. This test is a univariate test, so we need to transform our two independent variables into one (Laerd, 2018). In this case the independent variable will be a categorical variable indicating whether the grammatical gender of the object fits the gender of the silhouette represented ( $S=1$  if same gender,  $S=0$  if different gender).

In order to run the Kruskal Wallis Test we need to confirm some other assumptions (Laerd, 2018):

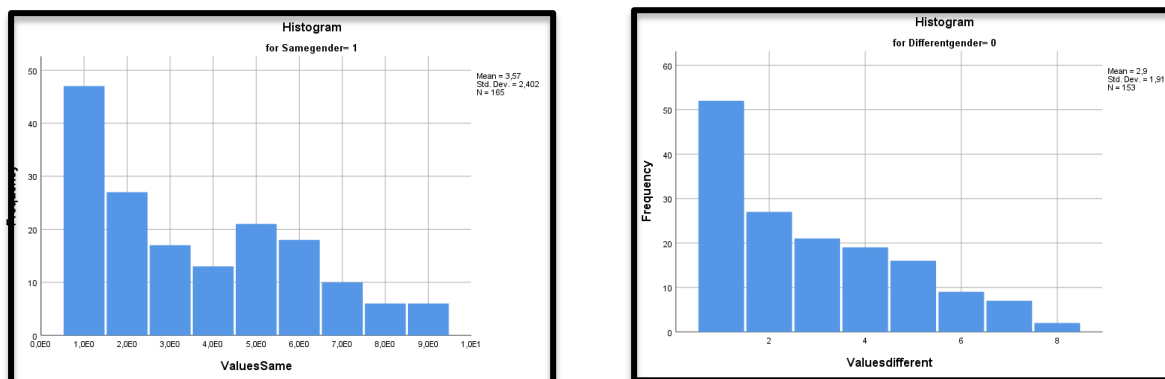
- *Assumption 1: The dependent variable is measured at the continuous and ordinal level.*
- *Assumption 2: The independent variable needs to consist of two or more categorical, independent groups.*
- *Assumption 3: Independence of observations.*
- *Assumption 4: In order to understand how to interpret the results, it is important to consider whether the distributions of each group have the same shape, which would mean they have the same variability.*

In the experience ran on French speakers the shape of the values of both categories ( $S=1$ , same gender of the object's name and the silhouette;  $S=0$  if different gender) were not totally the same (See graphical image 3).



Graphical image 3- French speakers experience- Comparison of the shapes of the distribution of values for both categories, on the left ( $S=0$ , different genders) and on the right ( $S=1$ , gender corresponds).

On the experience ran on Spanish speakers the shape of the values of both categories ( $S=1$ , same gender of the object's name and the silhouette;  $S=0$  if different genders) also differ (See graphical image 4).



Graphical image 4- Spanish speakers experience- Comparison of the shapes of the distribution of values for both categories, on the left ( $S=0$ , different genders) and on the right ( $S=1$ , gender corresponds).

As the shapes of both categories are different for both experiments, the Kruskal Wallis test will enable us to only compare mean ranks.

We can observe in the next graphical image (number 5) the results of the test with French speakers' participants. When observing the mean rank we can see that its values for both categories are very similar, this shows that there is no much difference between the sceneries where the grammatical gender of the represented object is the same as the gender of the given silhouette or when they are different, not being able to reject our null hypothesis. The Kruskal-Wallis H test shows that there is no statistically significant difference in the values when having an object with a certain grammatical gender next to a silhouette having the same gender or next to a silhouette having the opposite gender ( $\chi^2(1) = 0,068$ ;  $p = 0,794 > 0,05$ )<sup>1</sup>.

<sup>1</sup> Even if in this case ANOVA should not be used, we ran the test with ANOVA on SPSS statistics and similar results were found.

Ranks				Test Statistics <sup>a,b,c</sup>	
	samegender	N	Mean Rank		Value
Value	0	308	286,84	Kruskal-Wallis H	,068
	1	268	290,41	df	1
	Total	576		Asymp. Sig.	,794

Graphical image 5- French speakers experience- Results of the Kruskal Wallis H Test.

In the following graphical image (*number 6*), you can observe the results run on the Spanish speakers' participants. When observing the mean rank we can see that the values for both categories differ much more than in the experience with the French speakers, here we can observe that the sceneries where the grammatical gender of the represented object is compared to a silhouette having the same gender is given a higher value of similarity by the participants, enabling us to reject our null hypothesis for at least some of the cases. The Kruskal Wallis H test shows, in this case, that there is a statistically significant difference in the values between the categories ( $\chi^2(1) = 5,008$ ;  $p = 0,025 < 0,05$ )<sup>2</sup>.

Ranks				Test Statistics <sup>a,b,c</sup>	
	GenderMatch	N	Mean Rank		Value
Value	0	153	147,76	Kruskal-Wallis H	5,008
	1	165	170,38	df	1
	Total	318		Asymp. Sig.	,025

Graphical image 6- French speakers experience- Results of the Kruskal Wallis H Test.

When analysing these experiences by scenario, regarding the objects represented, we can observe that in the Spanish experience, for each scene where the grammatical gender of

<sup>2</sup> Even if in this case ANOVA should not be used, we ran the test with ANOVA on SPSS statistics and similar results were found.

the object was the same than the gender of the silhouette, the average value is higher than the ones where the silhouette's gender was the opposite.

On the other hand, in the French experience, only the values for tomato and bed respected this criteria. The average value given by French speakers on the similarity between a tomato (feminine in French) and a feminine silhouette is 2.63, whereas compared to a masculine silhouette it receives a value of 2.15, both values being, nevertheless, very low. For the Spanish speakers the average value given to the similarity between a tomato (masculine in Spanish) and a feminine silhouette was of 1.91, while compared to a masculine silhouette it was given an average value of 2.55. Similar results are found with the case of the bed.

These differences are very small to conclude that there is a certain effect of the independent variable on the values given.

## **2.5. Discussion**

After analysing the results of these two experiments we find ourselves with opposite results for both experiments, the experience with the French speakers makes us reject our theory that says that people perceive the representation of an object and the silhouette as more similar whenever the grammatical gender of the object is the same as the gender of the silhouette shown. On the other hand, the second experience does not reject our theory.

It is important to take into consideration here that the experience with French speakers was done on 96 participants, whereas the Spanish experiment had only 53 participants, which makes the French experience more precise. Moreover, this experience was about rating similarities between both representations leaving the participants to rate these similarities based on any attribute they wanted. Even if in the description the name of the object was named, the participants might have found similarities regarding the shape of the object, the silhouette or their personal preferences about an object and their own gender.

In order to analyse the values of the Spanish experience, that supports our initial hypothesis, the adjectives gathered during the second part of the experience, which were used by the participants to describe the similarities between the representations, have to be observed. This helps to understand whether these values are due to similarities in perception of the grammatical gender and the gender of the silhouette or if it is due to some random cause.

By taking into account this second part of the experience we cannot conclude whether our null hypothesis should be supported or not. In some cases, such as the case of the stairs (feminine in Spanish), when they are compared to a feminine silhouette adjectives like “curved” or “beautiful” are used but in other cases adjectives like “strong” and “aggressive” are also used which correspond more to masculine features. Finally, the adjective “elegant”, which is associated with a feminine attribute, is used by Spanish participants to compare stairs to a woman, but also when compared to a man silhouette. The results were similar for the other scenarios. For these reasons we cannot confirm that the reason of the values given by the Spanish speakers is related to the grammatical gender of the represented objects.

Another potential reason why we have different results for the Spanish and French speakers experiment is that in the French language there are many terminations for words having masculine grammatical gender, and same for feminine grammatical gender. This could confuse people and make it harder for them to spot the grammatical gender of a word. Whereas Spanish language has two terminations that are the most commonly used, which are *-a* for feminine grammatical gender and *-o* for masculine grammatical gender.

---

*PART III: CONFRONTATION OF THE LITERATURE WITH THE EMPIRICAL  
EVIDENCE*

---

### **1. Empirical evidence of the importance of the grammatical gender of a brand name on potential consumers' perception**

In the literature, it was often mentioned that it is important that the brand image fits the categorical schema of the consumers' that are targeted, as the more congruity with this categorical schema the more positive is the brand evaluated by the consumers (Yang & Wang, 2010). The theory also mentions the effectance effect on anthropomorphism, which says that people tend to trust more non-human agents whenever they feel these have some human features. This effect is stronger whenever the traits are more familiar to the person because it gives them a feeling of being in control (Aggarwall & McGill, 2007; Yang & Wang, 2010). Whenever a brand image is capable of recalling human features it will also have this effect and will be better perceived by consumers that will feel closer to the brand.

As the brand name is considered the most important element of a brand strategy it is important to carefully choose the right one in order to give the desired image to the brand (Kapferer 2012; Keller, 1998; Roper & Round, 2012). As giving a name increases this effect of anthropomorphism, this name should recall the features that are expected in the minds of the targeted consumers.

In the literature, it says that the more the name represents some of the object features, the faster the brand name comes to consumers' mind, triggering a certain brand image (Heckler et al., 1998). So, if a certain product has some masculine or feminine features, and these features are represented in the brand name, then the brand image, containing these characteristics, will be triggered faster in consumers' mind.

The idea of our first experiment was to prove these theories by showing that the gender of a brand name has an effect on how the brand and its products are perceived by consumers. Nevertheless, the results of this experiment has not enabled us to prove this

theory. Our empirical evidence of our first experiment rejected our hypothesis that considered that a brand name ending by *-a* or *-o* would have an effect on how the brand name would be perceived in matter of gendered features.

The first experiment consisted in presenting the brand name SCARIVA or SCARIVO to the participants together with a description of the image that we supposedly wanted to give the brand. One of these descriptions referring to a more feminine image and the other description to a more masculine one. The idea was to receive higher values for SCARIVA when this one was associated to a feminine description and higher values for SCARIVO when associated to a masculine description. Contrary to what we expected, all names were given a similar value for how they fitted each one of the descriptions. These results go against the belief that the features regarding the grammatical gender of a word affects the perception of consumers about the brand and its products.

When thinking about the name it is important to consider that, when building a sentence or naming a word, human's mind accesses the lexicon twice when communicating. It is believed that the gender of a word is accessed during the first lexicon access and has an effect on the rest of the form of the words in the sentence (Kempen & Huijbers, 1993). With our empirical evidence we tried to understand whether the form of the word, in this case the brand name, would also have an effect on how the object that the word is referring to is perceived. Unfortunately, we weren't able to prove this effect, but this might be because of other external causes.

Theory says consumers prefer products that are congruent with their perceived schema of femininity or masculinity (Mackie et al., 1992). The best way to market products is not being gender neutral but practicing differentiation with a strong cultural gender awareness. The problem, nowadays is that it is not easy to understand the roles and features of each gender, as different cultures and people see genders differently (Mackie et al., 1992). This could be one of the reasons why the first experiments rejected our hypothesis, because nowadays there is no clear features describing one or the other gender. As mentioned before, the descriptions were built using adjectives that were considered feminine or masculine in the year 2000 in United States. The culture has

evolved differently in the US and Europe in matter of gender roles and gender beliefs since the year 2000. Furthermore, French language is very complex regarding ending of words, there are a lot of different terminations that can be considered of masculine or feminine gender, not like in other languages, as Spanish, where most of the words finish either in *-a* or in *-o*.

Finally, the experiment was only based on 107 participants, which is, overall, a small sample to compare to a whole population.

## **2. Empirical Evidence about the effect of grammatical gender of words on abstract thought**

We've seen in the literature that language can influence abstract thought, meaning it can have an effect on how someone perceives the world and its items. *Linguistic relativism* and *linguistic determinism* are two terms that try to explain this belief, the first idea defends that language can slightly affect how something can be perceived, whereas the second term believes language can totally shape someone's thought and how people conceptualize the world (Wolff & Holmes, 2010).

Many different experiments have been run to prove this effect of language on peoples' mind. Kousta et al. (2008) or Boroditsky (2001) tried to compare the way people, speaking different native languages, think differently about one same concept. Bassetti (2007) evaluated how monolinguals and bilinguals differed in their way of thinking. These experiments have shown some important differences in the way of thinking between these different participants that differed on the native language they spoke.

Moreover, when focusing more on the different parts that build the lexicon of a language we can notice that the grammatical gender of words have an important impact on the whole sentence and, at same time, on the message that is transmitted. Many researchers have developed some interest on studying whether grammatical gender of words have a certain influence on perception and abstract thought. Bassetti (2007) found through its research that grammatical gender has an effect on cognition of monolinguals' speakers, and that depending on the language spoken people are more or less influenced by

grammatical gender (Italian speakers are more influenced by grammatical gender than Germans). It is expected, in consequence, that a feminine noun will trigger a feminine representation of an item in people's minds and a masculine noun will trigger a masculine one (Bassetti, 2007; Cubelli et al., 2011).

With the empirical evidence found during the second experiment we cannot conclude anything specific because we had contradictory results. Indeed, during this second experience we run the same experiment on two types of participants, first type being Spanish native speakers and, second one, French native speakers. The idea was to introduce different neutral items which noun had opposite grammatical gender in Spanish and in French. These items were then presented together with a human silhouette, in some cases a masculine silhouette and in others a feminine one. The idea was to make participants give a value to range the grade of similarities between both representations.

Following the idea that is written in the literature, which defends that language affects cognition and that grammatical gender affects how items are perceived, we should find a higher value for items and silhouettes for which the noun's grammatical gender of the item matches the gender of the silhouette. In other words, we expected that participants would, subconsciously, give higher value when the noun that names a certain object had the same grammatical gender in their native language as the silhouette gender given.

Overall, in both experiments the values were low, so no strong similarities were really found between the items and the silhouettes by neither one of the participants. Nevertheless, the results of the experiment run on the French speakers' were totally opposite to what was expected. The average of values are higher when the grammatical gender of the noun was in opposition of the silhouettes' gender, rejecting our initial idea. This first part of the experiment does not help us to support that grammatical gender has an effect on abstract thought.

On the other hand, the quantitative results of the experiment ran on Spanish speakers do support our theory. Indeed, for each one of the cases, the average value was higher

whenever the silhouettes' gender matched the one of the noun naming the different neutral items. But, when analysing the qualitative part of the experiment we cannot conclude that the values given were the result of the grammatical gender of the nouns. This experience has several flaws, such as the fact that there were only 53 Spanish native speakers' participants, which, in this case, is a very small sample.

This second part of our second experience enabled us to reject the null hypothesis, supporting our initial theory, but does not enable us to conclude strictly whether grammatical gender has an effect on how items are perceived or whether grammatical gender of a noun can have an effect on cognition.

The differences of the results between the two types of participants might be the cause of the fact that, in Spanish the termination *-a* is very common for words having a feminine grammatical gender and *-o* for words having masculine grammatical gender, whereas in the case of French language there are many terminations used for both grammatical gender, not only *-a* and *-o*.

Furthermore, as this experience presents images, participants might have focused only on the shape and form of both representations and tried to consciously find similarities only based on the image. Nevertheless, this experience had an objective to evaluate the effect on abstract thought and, because of this, no clues about focusing on language were given to participants. Moreover, presenting the experience in a different way could have given biased results.

## Conclusion

### 1. Managerial Implications<sup>3</sup>

We've learned from the literature that the brand name is one of the main elements of a brand strategy and it has a strong impact on how a certain brand and its products or services are perceived by the consumers. A good brand name can lead to many benefits, such as having a strong brand awareness or reducing marketing costs. Which makes us believe that, when building a new brand, a strong focus should be given to the name of the brand.

Moreover, when finding the brand name it is very important to consider the kind of targeted consumer, its habits, its expectations and its language. Language is the main element to take into account, as a certain name could have different meanings in two different countries. It's important that the brand name represents some of the features that are present in the consumers' mental schema. The more congruent the name is with the consumers' expectation the better image will this brand have. This name also needs to be able to differentiate itself from other brands, the more unique the better the consumer will recall the brand.

Language can affect abstract thought and grammatical gender can have an effect on the mental representation of an item having certain gender features. This mental representations and perceptions provoked by grammatical gender is influenced strongly by the effect of anthropomorphism and the need of humans to try to find human traits in every unanimated item. The simple task of naming an item can increase this effect. But, nevertheless, the brand name needs to be supported by strong marketing campaigns in order to increase the effect of anthropomorphism.

The conclusion to the theoretical research was that the termination of a brand name could influence how the brand would be perceived by consumers, in this case being perceived as a brand that targets a consumer of a certain gender. It is important to consider whether

---

<sup>3</sup> These managerial implications are based on the theoretical research because our empirical research does not prove our initial hypothesis.

the targeted consumer is a women or a men and adapt accordingly the termination of the brand name. As mentioned before, the language needs to be well analysed, the usual feminine terminations in one language could variate from the ones in another language.

## **2. Limitations and recommendations for future research**

Contrary to our expectations, our empirical research has not enabled us to prove the hypothesis stated at the beginning. The first experiment failed to prove that a brand name ending in *-a* would be considered a better matching brand name for a feminine brand image and that a brand name ending in *-o* would be better perceived as a brand name for a brand with masculine connotations.

In the theoretical research we can read about the perks of having gendered products and the effect of how consumers feel closer to the brand if this one has gendered features. Nevertheless, nowadays it is difficult to find which features are considered masculine or feminine, as this variates a lot depending on the culture of the country and the background of the person. Some people could consider a certain trait as feminine and another one masculine. This makes it harder also to draw conclusions out of experiences studying the gender perception.

As the first experience failed, the second experience had as an objective to analyse whether grammatical gender had an effect on abstract thought. With this experiment we were not able to draw a conclusion as we had opposite results from the experience run on Spanish native speakers and the one run on French native speakers.

To research more about this subject it would be important to take into account several limitations on these experiences. The first limitation was the number of participants to both of the experiences, which did not reach more than 107 participants for the first experience, and 149 for the second one. Moreover, the main limitation to this experiment is the fact that the adjectives used to describe the different genders were based on a research done approximately twenty years ago in the United States. Expectations about genders' features and roles variate a lot from country to country and have evolved a lot in these past years. Unfortunately, there is no research that is more recent to this date nor a

similar experiment run on European citizens. For further research, new data on sex roles believes should be undertaken before making a new analyse about our main subject.

Furthermore, the objective of the second experiment was to analyse whether grammatical gender influenced abstract thought and perception in people. This had to be done in a way that the participants were unconscious that we were analysing the effect of grammatical gender on their mental representation of different items. This explains why we've run this experience by comparing images. Nevertheless, this might have pushed the participants to focus only on the representation of the item and its form provoking the participant to ignore the noun naming the item and by consequence ignoring the subconscious effect of grammatical gender. Maybe in later experiments it could be interesting to make the experience in English, which is a genderless language, and without any images to avoid any conscious thought on grammatical gender but also avoid graphical distractions.

Finally, for future research it would be also interesting to repeat these experiences on French speakers but using other terminations and evaluate the different results. Indeed, the French language has many terminations, and not only *-a* and *-o* for nouns having one or the other grammatical gender. And for Spanish speakers, the experiment should be repeated on a bigger amount of participants.

## Bibliography

- Kapferer, J. (2012). *The new strategic brand management: Advanced insights and strategic thinking* (5<sup>th</sup> edition). London: Kogan Page.
- Kapferer, J. (2008). *The new strategic brand management: Creating and sustaining brand equity long term* (4<sup>th</sup> edition). London: Kogan Page.
- Wheeler, A. (2012). *Designing brand identity: An essential guide for the whole branding team* (4<sup>th</sup> edition). Hoboken, NJ : John Wiley & Sons.
- Roper, S., & Round, G. (2012). Exploring consumer brand name equity: Gaining insight through the investigation of response to name change. *European Journal of Marketing*, 45(7/8), 938-951. doi: 10.1108/03090561211230115.
- Rossi, M., Thrassou, A., & Vrontis, D. (2011). Italian wine firms: Strategic branding and financial performance. *International Journal of Organizational Analysis*, 19(4), 288-304. doi: 10.1108/19348831111173423.
- Zhang, Y. (2015). The Impact of Brand Image on Consumer Behavior: A Literature Review. *Open Journal of Business and Management*, 3, 58-62. doi: 10.4236/ojbm.2015.31006.
- Cengiz, H., Dulger, M.F., Ozkara, B.Y., Tiltay, M.A., & Torlak, O. (2014). The effect of electronic word of mouth on brand image and purchase intention: An application concerning cell phone brands for youth consumers in Turkey. *Journal of Marketing Development and Competitiveness*, 8(2), 61-68. doi: 0.1108/02634501211231946.
- Yang, Z., & Wang, X. (2010). The Effect of Brand Credibility on Consumers' Brand Purchase Intention in Emerging Economies: The Moderating Role of Brand Awareness and Brand Image. *Journal of Global Marketing*, 23(3), 177-188. doi: 10.1080/08911762.2010.487419.
- Lee, G.C., & Leh, F.C.Y. (2011). Dimensions of customer-based brand equity: a study on malaysian brands. *Journal of Marketing Research and Case Studies*, 2011, 1-10. doi: 10.5171/2011.821981.
- Lassar, W., Mittal, B., & Sharma, A. (1995). Measuring Customer-Based Brand Equity. *Journal of Consumer Marketing*, 12 (4), 11-19. doi: 10.1108/07363769510095270.

- Keller, K.L. (1998). *Strategic brand management building, measuring and managing brand equity*. Upper Saddle River, NJ: Prentice Hall.
- Keller, K.L. (2008). *Strategic brand management: Building, measuring, and managing brand equity*. (3rd edition). Upper Saddle River, NJ: Prentice Hall.
- Heckler, S., Houston, M., & Keller, K. (1998). The Effects of Brand Name Suggestiveness on Advertising Recall. *Journal of Marketing*, 62(1), 48-57. doi: 10.2307/1251802.
- Levitt, T. (1983). The globalization of markets. *Harvard Business Review*, 25 (3), 17-19. doi:10.1002/tie.5060250311.
- Alashban, A.A., Balazs, A.L., Hayes, L.A., & Zinkhan G.M. (2002) International brand-name standardization/adaptation: antecedents and consequences. *Journal of International Marketing* 10(3), 22-48. doi: 10.1509/jimk.10.3.22.19544.
- Francis, J.N.P., Lam, J.P.Y., & Walls, J. (2002). The impact of linguistic differences on international brand name standardization: A comparison of english and chinese brand names of fortune -500 companies. *Journal of International Marketing* 10(1), 98-116. doi: 10.1509/jimk.10.1.98.19528.
- Baker, M., & Hart, S. (2008). *The Marketing Book* (6<sup>th</sup> edition). Oxford: Elsevier Ltd.
- Boroditsky, L. (2001). Does language shape thought? Mandarin and English speakers' conceptions of time. *Cognitive Psychology*, 43(1), 1-22. doi: 10.1006/cogp.2001.0748.
- Holmes, K.J., & Wolff, P. (2010). Linguistic relativity. *Wires Cognitive Science*, 2(3), 253-265. doi: 10.1002/wcs.104.
- Kousta, S.T., Vigliocco, G., & Vinson, D. P. (2008). Investigating linguistic relativity through bilingualism: The case of grammatical gender. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 34(4), 843-858. doi: 10.1037/0278-7393.34.4.843.
- Bassetti, B. (2007) Bilingualism and thought: Grammatical gender and concepts of objects in Italian-German bilingual children. *International Journal of Bilingualism*, 11(3), 251-273. doi: 10.1177/1367006907011003010.

- Comrie, B.J. (1999). Grammatical gender systems: A linguist's assessment. *Journal of Psycholinguistic Research*, 28(5), 457-466. doi: 10.1023/A:1023212225540.
- Cubelli, R., Job, R., Lotto, L., & Paolieri, D. (2011). The effect of grammatical gender on object categorization. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 37(2), 449-460. doi: 10.1037/a0021965.
- Athanasopoulos, P., Boutonnet, B., & Thierry, G. (2012). Unconscious effects of grammatical gender during object categorisation. *Brain Research*, 1479, 72-79. doi: 10.1016/j.brainres.2012.08.044.
- Boroditsky, L., & Schmidt, L.A. (2000). Sex, Syntax, and Semantics. *Proceedings of the Annual Meeting of the Cognitive Science Society*, 22. Retrieved from <https://escholarship.org/uc/item/0jt9w8zf>.
- Flaherty, M. (2001). How a Language Gender System Creeps into Perception. *Journal of Cross-Cultural Psychology*, 32(1), 18-31. doi: 10.1177/0022022101032001005.
- McCray, A.T. (1998). The nature of lexical knowledge. *Methods Inform Med*, 37(4-5), 353-360. Retrieved at <https://www.ncbi.nlm.nih.gov/pubmed/9865033>.
- Kempen, G., & Huijbers, P. (1983). The lexicalization process in sentence production and naming: Indirect election of words. *Cognition*, 14(2), 185-209. doi: 10.1016/0010-0277(83)90029-X.
- Rosenblat, A. (1961). Morfología del género en español: comportamiento de las terminaciones -o, -a. *Nueva Revista de Filología Hispánica*, 16, 31-80. doi: 10.24201/nrfh.v16i1/2.1468.
- Desrochers, A., Desrochers, S., & Paivio, A., (1989). L'effet de la fréquence d'usage des noms inanimés et de la valeur prédictive de leur terminaison sur l'identification du genre grammatical. *Canadian Journal of Psychology*, 43(1), 62-73. Doi : 10.1037/h0084253.
- Desrochers, A. (1986). Genre grammatical et classification nominale. *Canadian Journal of Psychology*, 40(3), 224-250. doi : 10.1037/h0080095.
- Ervin, S. M. (1962). The connotations of gender. *Word*, 18(1/3), 249-261. doi: 10.1080/00437956.1962.11659776.

- Gray, H., Gray, K., & Wegner, D.M. (2007). Dimensions of mind perception. *Science*, *315*(5812), 619. doi: 10.1126/science.1134475.
- Aggarwal, P., & McGill, A.I. (2007). Is that car smiling at me? Schema congruity as a basis for evaluating anthropomorphized products. *Journal of Consumer Research*, *34*(4), 468–479. doi: 10.1086/518544.
- Epley, N., Heafner, J., & Waytz, A. (2014). The mind in the machine: Anthropomorphism increases trust in an autonomous vehicle. *Journal of Experimental Social Psychology*, *52*, 113-117. doi: 10.1016/j.jesp.2014.01.005.
- Akalis, S., & Cacioppo, J. T., Epley, N., & Waytz, A (2008). When we need a human: Motivational determinants of anthropomorphism. *Social Cognition*, *26*(2), 143-155. doi: 10.1521/soco.2008.26.2.143.
- Alreck, P.L. (1994). Commentary: A New Formula for Gendering Products and Brands. *Journal of Product & Brand Management*, *3*(1), 6-18. doi: 10.1108/10610429410053059.
- Mackie, D. M., Smith, J., & Worth, L. T., (1992). Gender schematicity and preference for gender-typed products. *Psychology & Marketing*, *9*(1), 17-30. doi: 10.1002/mar.4220090104.
- Williams, G. (2014). Are you sure your software is gender neutral? *Interactions (ACM)*, *21*, 36-39. doi: 10.1145/2524808.
- Auster, C. J., & Ohm, S. C. (2000). Masculinity and femininity in contemporary American society: A reevaluation using the Bem Sex-Role Inventory. *Sex Roles: A Journal of Research*, *43*(7-8), 499-528. doi:10.1023/A:1007119516728.
- Laerd Statistics. (2018). Two-way ANOVA in SPSS Statistics. Retrieved March 20, 2019 from <https://statistics.laerd.com/spss-tutorials/two-way-anova-using-spss-statistics.php> .
- Laerd Statistics. (2018). Kruskal-Wallis H Test using SPSS Statistics. Retrieved May 25, 2019 from <https://statistics.laerd.com/spss-tutorials/kruskal-wallis-h-test-using-spss-statistics.php> .

Marshall, E. (n.d.). Two-way (between groups) ANOVA. Retrieved March 20, 2019 from <https://www.sheffield.ac.uk/polopoly fs/1.531212!/file/MASH Twoway ANOVA SPSS.pdf> .

## Appendix

### **Appendix 1: Experience 1- Questionnaire**

---

#### Start of Block: Intro

Bonjour,

Dans le cadre d'une étude en marketing, nous nous intéressons à la perception des marques sur base de leur nom et de leur logo.

Sur la page suivante nous allons vous présenter un logo de marque ainsi que l'image que cette marque cherche à transmettre.

Nous vous demandons de prendre quelques secondes pour vous faire une opinion de la marque sur base de son nom et logo. Ensuite, lisez la description de l'image voulue par la marque.

Pour terminer, exprimez votre opinion sur la qualité du logo étant donné l'image recherchée en répondant aux questions.

#### End of Block: Intro

---

#### Start of Block: Scariva

La marque proposée s'appelle « La Scariva », voici son logo :



SCARIVA

L'image recherchée est celle d'une marque ambitieuse et indépendante qui soit également capable de se montrer dominante et agressive.

Diriez-vous que le **nom de marque et le logo** proposés correspondent à l'image recherchée ?

- 1 Pas du tout (1)
  - 2 (2)
  - 3 (3)
  - 4 (4)
  - 5 (5)
  - 6 (6)
  - 7 Tout à fait (7)
- 

Pourriez-vous proposer un autre nom de marque qui corresponde mieux à l'image recherchée ?

---

End of Block: Scariva

---

Start of Block: Scarivo

La marque proposée s'appelle « La Scarivo », voici son logo :



SCARIVO

L'image recherchée est celle d'une marque ambitieuse et indépendante qui soit également capable de se montrer dominante et agressive.

Diriez-vous que le **nom de marque et le logo** proposés correspondent à l'image recherchée ?

- 1 Pas du tout (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 Tout à fait (7)
- 

Pourriez-vous proposer un autre nom de marque qui corresponde mieux à l'image recherchée ?

---

**End of Block: Scarivo**

---

**Start of Block: Demo**

Pour terminer, pourriez-vous svp répondre à quelques questions démographiques :

---

Age Age

---

**Gender Sexe**

- Masculin (1)
- Féminin (2)
- Autre (3)
- 

**Language Langue maternelle**

- Espagnol (1)
- Français (2)
- Autre (3) \_\_\_\_\_
- 

**Merci pour votre participation**

**End of Block: Demo**

---

## ***Appendix 2: Description of the factors of experience 1***

### **➔ Univariate Analysis of Variance**

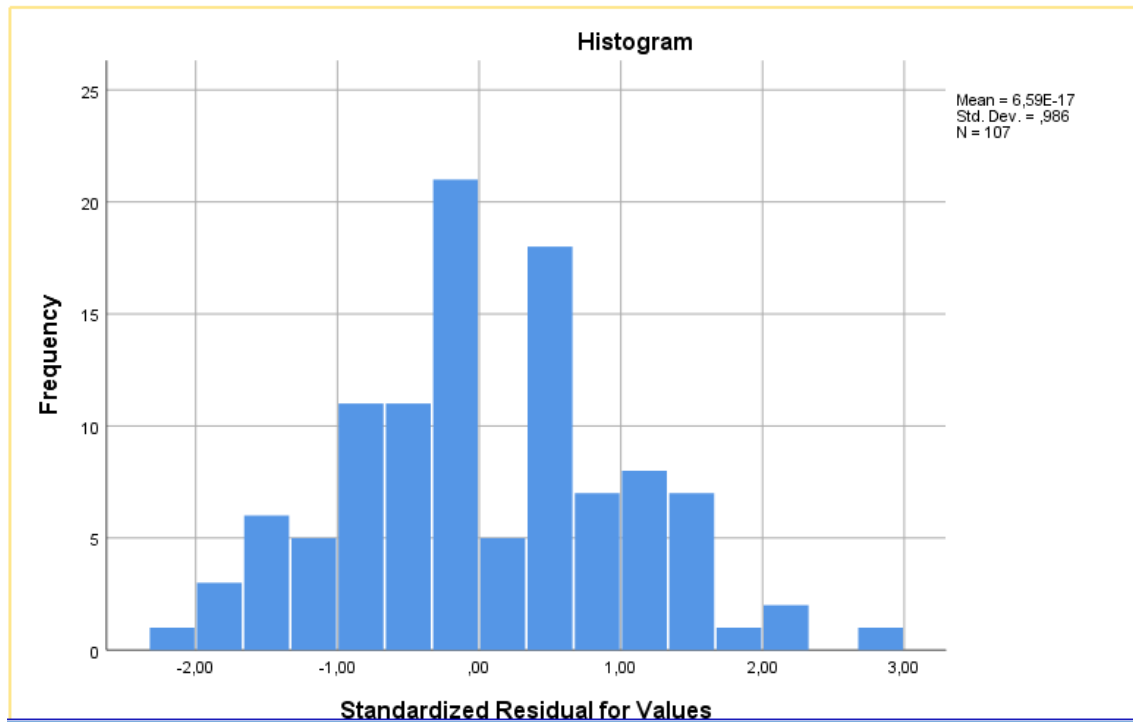
#### **Warnings**

Post hoc tests are not performed for Gender\_name because there are fewer than three groups.

Post hoc tests are not performed for Description because there are fewer than three groups.

#### **Between-Subjects Factors**

		Value Label	N
Gender_name	0	Masculin	53
	1	Feminine	54
Description	0	Masculine_de scription	62
	1	Feminine_de scription	45

***Appendix 3: Experience 1- Testing normality of residuals through graphics.*****Standardized Residual for Values**

## **Appendix 4: Experience 2- Full French questionnaire**

---

### **Start of Block: Intro**

Q1 Merci de participer à cette expérience qui sera utilisée dans le cadre d'un mémoire réalisé à la Louvain School of management (UCLouvain) portant sur la perception du consommateur et l'importance du marketing. Au total, il y a 6 questions ouvertes auxquelles je vous demande de répondre en toute sincérité et avec le plus de détails possible. Dans le cas de la description d'une idée, utilisez autant d'adjectifs que possible.

### **End of Block: Intro**

---

### **Start of Block: WomanStairs**

WomanStairs Les deux images ci-dessous représentent un escalier et une personne. Notez de 1 à 9 le rapport entre ces deux représentations, 1 signifiant peu et 9 beaucoup. Expliquez ce que vous trouvez que ces deux représentations ont en commun en utilisant le maximum d'adjectifs possibles (par exemple: élégant/e, laid/e, agressif/ve, beau/belle, fort/e, lent/e, rapide, etc.).



WomanStairs closed Notez de 1 à 9 le rapport entre les deux représentations que vous venez de voir, 1 signifiant peu et 9 beaucoup.

- 1 Peu de rapport (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 (7)
- 8 (8)
- 9 Beaucoup de rapport (9)

---

WomanStairs Open Expliquez ce que vous trouvez que ces deux représentations ont en commun en utilisant le maximum d'adjectifs possibles (par exemple: élégant/e, laid/e, agressif/ve, beau/belle, fort/e, lent/e, rapide, etc.).

---

**End of Block: WomanStairs**

---

**Start of Block: ManStairs**

ManStairs Les deux images ci-dessous représentent un escalier et une personne. Notez de 1 à 9 le rapport entre ces deux représentations, 1 signifiant peu et 9 beaucoup. Expliquez ce que vous trouvez que ces deux représentations ont en commun en utilisant

le maximum d'adjectifs possibles (par exemple: élégant/e, laid/e, agressif/ve, beau/belle, fort/e, lent/e, rapide, etc.).



---

ManStairs Closed Notez de 1 à 9 le rapport entre les deux représentations que vous venez de voir, 1 signifiant peu et 9 beaucoup.

- 1 Peu de rapport (1)
  - 2 (2)
  - 3 (3)
  - 4 (4)
  - 5 (5)
  - 6 (6)
  - 7 (7)
  - 8 (8)
  - 9 Beaucoup de rapport (9)
-

ManStairs Open Expliquez ce que vous trouvez que ces deux représentations ont en commun en utilisant le maximum d'adjectifs possibles (par exemple: élégant/e, laid/e, agressif/ve, beau/belle, fort/e, lent/e, rapide, etc.).

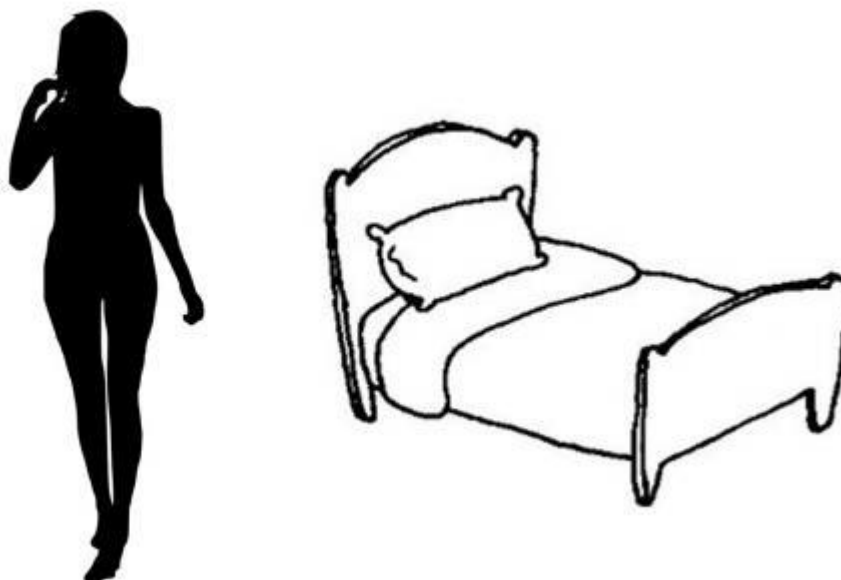
---

End of Block: ManStairs

---

Start of Block: WomanBed

WomanBed Les deux images ci-dessous représentent un lit et une personne. Notez de 1 à 9 le rapport entre ces deux représentations, 1 signifiant peu et 9 beaucoup. Expliquez ce que vous trouvez que ces deux représentations ont en commun en utilisant le maximum d'adjectifs possibles (par exemple: élégant/e, laid/e, agressif/ve, beau/belle, fort/e, lent/e, rapide, etc.).



WomanBed closed Notez de 1 à 9 le rapport entre les deux représentations que vous venez de voir, 1 signifiant peu et 9 beaucoup.

- 1 Peu de rapport (1)
  - 2 (2)
  - 3 (3)
  - 4 (4)
  - 5 (5)
  - 6 (6)
  - 7 (7)
  - 8 (8)
  - 9 Beaucoup de rapport (9)
- 

WomanBed open Expliquez ce que vous trouvez que ces deux représentations ont en commun en utilisant le maximum d'adjectifs possibles (par exemple: élégant/e, laid/e, agressif/ve, beau/belle, fort/e, lent/e, rapide, etc.).

---

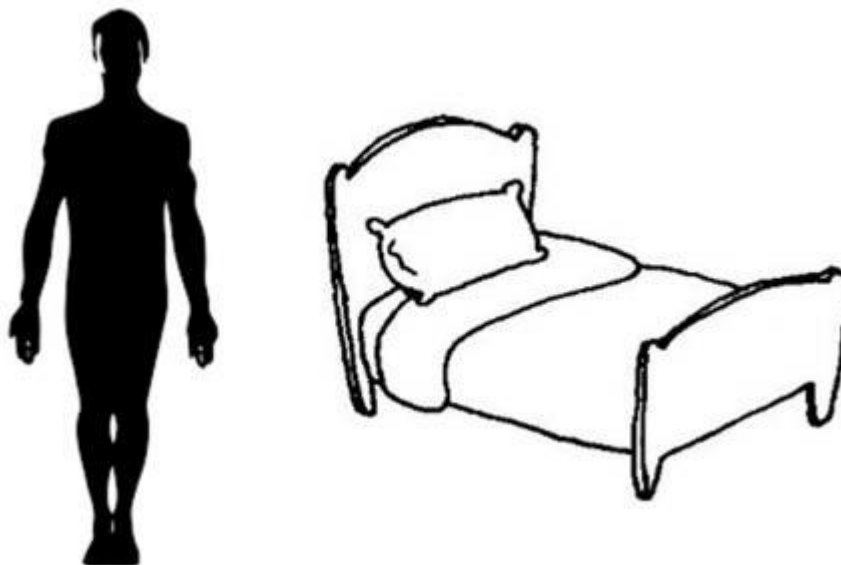
End of Block: WomanBed

---

Start of Block: ManBed

ManBed Les deux images ci-dessous représentent un lit et une personne. Notez de 1 à 9 le rapport entre ces deux représentations, 1 signifiant peu et 9 beaucoup. Expliquez ce que vous trouvez que ces deux représentations ont en commun en utilisant le maximum

d'adjectifs possibles (par exemple: élégant/e, laid/e, agressif/ve, beau/belle, fort/e, lent/e, rapide, etc.).



---

ManBed closed Notez de 1 à 9 le rapport entre les deux représentations que vous venez de voir, 1 signifiant peu et 9 beaucoup.

- 1 Peu de rapport (1)
  - 2 (2)
  - 3 (3)
  - 4 (4)
  - 5 (5)
  - 6 (6)
  - 7 (7)
  - 8 (8)
  - 9 Beaucoup de rapport (9)
-

ManBedopen Expliquez ce que vous trouvez que ces deux représentations ont en commun en utilisant le maximum d'adjectifs possibles (par exemple: élégant/e, laid/e, agressif/ve, beau/belle, fort/e, lent/e, rapide, etc.).

---

End of Block: ManBed

---

Start of Block: WomanMap

WomanMap Les deux images ci-dessous représentent une carte du monde et une personne. Notez de 1 à 9 le rapport entre ces deux représentations, 1 signifiant peu et 9 beaucoup. Expliquez ce que vous trouvez que ces deux représentations ont en commun en utilisant le maximum d'adjectifs possibles (par exemple: élégant/e, laid/e, agressif/ve, beau/belle, fort/e, lent/e, rapide, etc.).



WomanMap closed Notez de 1 à 9 le rapport entre les deux représentations que vous venez de voir, 1 signifiant peu et 9 beaucoup.

- 1 Peu de rapport (1)
  - 2 (2)
  - 3 (3)
  - 4 (4)
  - 5 (5)
  - 6 (6)
  - 7 (7)
  - 8 (8)
  - 9 Beaucoup de rapport (9)
- 

WomanMap open Expliquez ce que vous trouvez que ces deux représentations ont en commun en utilisant le maximum d'adjectifs possibles (par exemple: élégant/e, laid/e, agressif/ve, beau/belle, fort/e, lent/e, rapide, etc.).

---

End of Block: WomanMap

---

Start of Block: ManMap

ManMap Les deux images ci-dessous représentent une carte du monde et une personne. Notez de 1 à 9 le rapport entre ces deux représentations, 1 signifiant peu et 9 beaucoup. Expliquez ce que vous trouvez que ces deux représentations ont en commun en utilisant

le maximum d'adjectifs possibles (par exemple: élégant/e, laid/e, agressif/ve, beau/belle, fort/e, lent/e, rapide, etc.).



---

ManMap closed Notez de 1 à 9 le rapport entre les deux représentations que vous venez de voir, 1 signifiant peu et 9 beaucoup.

- 1 Peu de rapport (1)
  - 2 (2)
  - 3 (3)
  - 4 (4)
  - 5 (5)
  - 6 (6)
  - 7 (7)
  - 8 (8)
  - 9 Beaucoup de rapport (9)
-

ManMap open Expliquez ce que vous trouvez que ces deux représentations ont en commun en utilisant le maximum d'adjectifs possibles (par exemple: élégant/e, laid/e, agressif/ve, beau/belle, fort/e, lent/e, rapide, etc.).

---

End of Block: ManMap

---

Start of Block: WomanTomato

WomanTomato Les deux images ci-dessous représentent une tomate et une personne. Notez de 1 à 9 le rapport entre ces deux représentations, 1 signifiant peu et 9 beaucoup. Expliquez ce que vous trouvez que ces deux représentations ont en commun en utilisant le maximum d'adjectifs possibles (par exemple: élégant/e, laid/e, agressif/ve, beau/belle, fort/e, lent/e, rapide, etc.).



WomanTomato closed Notez de 1 à 9 le rapport entre les deux représentations que vous venez de voir, 1 signifiant peu et 9 beaucoup.

- 1 Peu de rapport (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 (7)
- 8 (8)
- 9 Beaucoup de rapport (9)
- 

WomanTomato open Expliquez ce que vous trouvez que ces deux représentations ont en commun en utilisant le maximum d'adjectifs possibles (par exemple: élégant/e, laid/e, agressif/ve, beau/belle, fort/e, lent/e, rapide, etc.).

---

End of Block: WomanTomato

---

Start of Block: ManTomato

ManTomato Les deux images ci-dessous représentent une tomate et une personne.  
Notez de 1 à 9 le rapport entre ces deux représentations, 1 signifiant peu et 9 beaucoup.  
Expliquez ce que vous trouvez que ces deux représentations ont en commun en utilisant

le maximum d'adjectifs possibles (par exemple: élégant/e, laid/e, agressif/ve, beau/belle, fort/e, lent/e, rapide, etc.).



---

ManTomato closed Notez de 1 à 9 le rapport entre les deux représentations que vous venez de voir, 1 signifiant peu et 9 beaucoup.

- 1 Peu de rapport (1)
  - 2 (2)
  - 3 (3)
  - 4 (4)
  - 5 (5)
  - 6 (6)
  - 7 (7)
  - 8 (8)
  - 9 Beaucoup de rapport (9)
-

ManTomato open Expliquez ce que vous trouvez que ces deux représentations ont en commun en utilisant le maximum d'adjectifs possibles (par exemple: élégant/e, laid/e, agressif/ve, beau/belle, fort/e, lent/e, rapide, etc.).

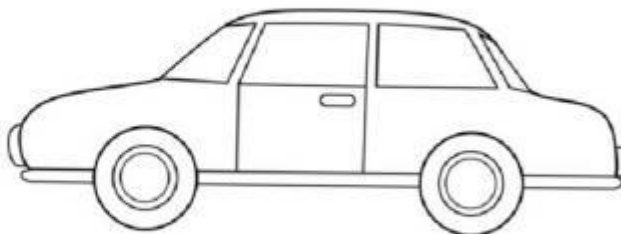
---

End of Block: ManTomato

---

Start of Block: WomanCar

WomanCar Les deux images ci-dessous représentent une voiture et une personne. Notez de 1 à 9 le rapport entre ces deux représentations, 1 signifiant peu et 9 beaucoup. Expliquez ce que vous trouvez que ces deux représentations ont en commun en utilisant le maximum d'adjectifs possibles (par exemple: élégant/e, laid/e, agressif/ve, beau/belle, fort/e, lent/e, rapide, etc.).



WomanCar closed Notez de 1 à 9 le rapport entre les deux représentations que vous venez de voir, 1 signifiant peu et 9 beaucoup.

- 1 Peu de rapport (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 (7)
- 8 (8)
- 9 Beaucoup de rapport (9)
- 

WomanCar open Expliquez ce que vous trouvez que ces deux représentations ont en commun en utilisant le maximum d'adjectifs possibles (par exemple: élégant/e, laid/e, agressif/ve, beau/belle, fort/e, lent/e, rapide, etc.).

---

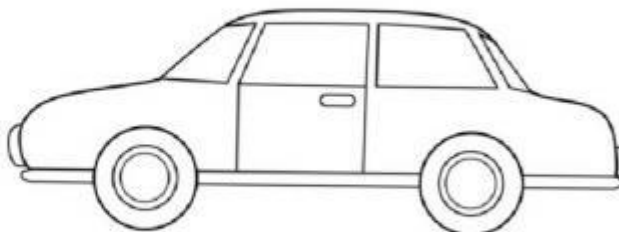
End of Block: WomanCar

---

Start of Block: ManCar

ManCar Les deux images ci-dessous représentent une voiture et une personne. Notez de 1 à 9 le rapport entre ces deux représentations, 1 signifiant peu et 9 beaucoup. Expliquez ce que vous trouvez que ces deux représentations ont en commun en utilisant le

maximum d'adjectifs possibles (par exemple: élégant/e, laid/e, agressif/ve, beau/belle, fort/e, lent/e, rapide, etc.).



---

ManCar closed Notez de 1 à 9 le rapport entre les deux représentations que vous venez de voir, 1 signifiant peu et 9 beaucoup.

- 1 Peu de rapport (1)
  - 2 (2)
  - 3 (3)
  - 4 (4)
  - 5 (5)
  - 6 (6)
  - 7 (7)
  - 8 (8)
  - 9 Beaucoup de rapport (9)
-

ManCar open Expliquez ce que vous trouvez que ces deux représentations ont en commun en utilisant le maximum d'adjectifs possibles (par exemple: élégant/e, laid/e, agressif/ve, beau/belle, fort/e, lent/e, rapide, etc.).

---

End of Block: ManCar

---

Start of Block: WomanLamp

WomanLamp Les deux images ci-dessous représentent un lampadaire et une personne. Notez de 1 à 9 le rapport entre ces deux représentations, 1 signifiant peu et 9 beaucoup. Expliquez ce que vous trouvez que ces deux représentations ont en commun en utilisant le maximum d'adjectifs possibles (par exemple: élégant/e, laid/e, agressif/ve, beau/belle, fort/e, lent/e, rapide, etc.).



WomanLamp closed Notez de 1 à 9 le rapport entre les deux représentations que vous venez de voir, 1 signifiant peu et 9 beaucoup.

- 1 Peu de rapport (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 (7)
- 8 (8)
- 9 Beaucoup de rapport (9)
- 

WomanLamp open Expliquez ce que vous trouvez que ces deux représentations ont en commun en utilisant le maximum d'adjectifs possibles (par exemple: élégant/e, laid/e, agressif/ve, beau/belle, fort/e, lent/e, rapide, etc.).

---

End of Block: WomanLamp

---

Start of Block: ManLamp

ManLamp Les deux images ci-dessous représentent un lampadaire et une personne. Notez de 1 à 9 le rapport entre ces deux représentations, 1 signifiant peu et 9 beaucoup. Expliquez ce que vous trouvez que ces deux représentations ont en commun en utilisant

le maximum d'adjectifs possibles (par exemple: élégant/e, laid/e, agressif/ve, beau/belle, fort/e, lent/e, rapide, etc.).



---

ManLamp closed Notez de 1 à 9 le rapport entre les deux représentations que vous venez de voir, 1 signifiant peu et 9 beaucoup.

- 1 Peu de rapport (1)
  - 2 (2)
  - 3 (3)
  - 4 (4)
  - 5 (5)
  - 6 (6)
  - 7 (7)
  - 8 (8)
  - 9 Beaucoup de rapport (9)
-

ManLamp open Expliquez ce que vous trouvez que ces deux représentations ont en commun en utilisant le maximum d'adjectifs possibles (par exemple: élégant/e, laid/e, agressif/ve, beau/belle, fort/e, lent/e, rapide, etc.).

---

End of Block: ManLamp

---

Start of Block: Demo

Q20 Nous arrivons à la fin de ce questionnaire, merci de remplir les informations démographiques suivantes pour finir.

Age Age

---

Gender Sexe

Masculin (1)

Féminin (2)

---

Language Langue maternelle

Espagnol (1)

Français (2)

Autre (3) \_\_\_\_\_

---

Q25 Merci beaucoup de votre participation!

End of Block: Demo

## **Appendix 5: Experience 2- Full Spanish questionnaire**

---

### **Start of Block: Intro**

Q1

Le agradezco de antemano por participar en esta experiencia que se utilizará como parte de una tesis sobre la percepción del consumidor y la importancia del marketing para la Escuela de Administración Louvain School of Management (UCLouvain) . En total, hay 6 preguntas abiertas a las que le pido que responda con toda sinceridad y con el mayor detalle posible. En el caso de la descripción de una idea, use tantos adjetivos como sea posible.

### **End of Block: Intro**

---

### **Start of Block: WomanStairs**

WomanStairs

A continuación hay dos imágenes representando una escalera y una persona. Evalúe de 1 a 9 el nivel de semejanza entre ambas representaciones, significando 1 poca semejanza y 9 mucha. Después explique lo que encuentre que estas dos representaciones tienen en común usando tantos adjetivos como sea posible (por ejemplo: elegante, feo/a, agresivo/a, bello/a, fuerte, lento/a, rápido/a, etc.).



WomanStairs closed Evalúe del 1 al 9 la relación entre las dos representaciones que acaba de ver, 1 significando poca y 9 mucha.

- 1 Poca relación (1)
  - 2 (2)
  - 3 (3)
  - 4 (4)
  - 5 (5)
  - 6 (6)
  - 7 (7)
  - 8 (8)
  - 9 Mucha relación (9)
- 

#### WomanStairs Open

Explique, utilizando el máximo número de adjetivos posibles, lo que encuentre que estas dos representaciones tienen en común (por ejemplo: elegante, feo/a, agresivo/a, bonito/a, fuerte, lento/a, rápido/a)

---

---

---

---

---

**End of Block: WomanStairs**

---

**Start of Block: ManStairs**

ManStairs A continuación hay dos imágenes representando una escalera y una persona. Evalúe de 1 a 9 el nivel de semejanza entre ambas representaciones, significando 1 poca semejanza y 9 mucha. Después explique lo que encuentre que estas dos representaciones tienen en común usando tantos adjetivos como sea posible (por ejemplo: elegante, feo/a, agresivo/a, bello/a, fuerte, lento/a, rápido/a, etc.).



ManStairs Closed Evalúe del 1 al 9 la relación entre las dos representaciones que acaba de ver, 1 significando poca y 9 mucha.

- 1 Poca relación (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 (7)
- 8 (8)
- 9 Mucha relación (9)

---

ManStairs Open Explique, utilizando el máximo número de adjetivos posibles, lo que encuentre que estas dos representaciones tienen en común (por ejemplo: elegante, feo/a, agresivo/a, bonito/a, fuerte, lento/a, rápido/a)

---



---



---



---



---

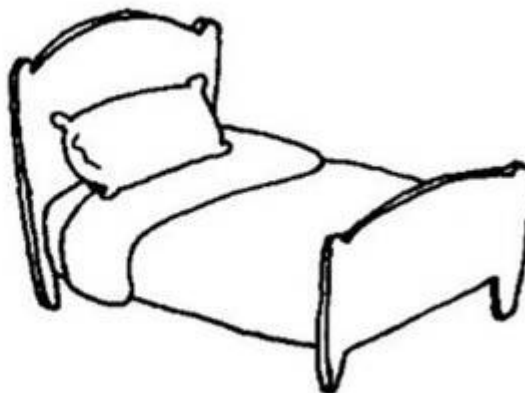
End of Block: ManStairs

---

Start of Block: WomanBed

WomanBed A continuación hay dos imágenes representando una cama y una persona. Evalúe de 1 a 9 el nivel de semejanza entre ambas representaciones,

significando 1 poca semejanza y 9 mucha. Después explique lo que encuentre que estas dos representaciones tienen en común usando tantos adjetivos como sea posible (por ejemplo: elegante, feo/a, agresivo/a, bello/a, fuerte, lento/a, rápido/a, etc.).



WomanBed closed Evalúe del 1 al 9 la relación entre las dos representaciones que acaba de ver, 1 significando poca y 9 mucha.

- 1 Poca relación (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 (7)
- 8 (8)
- 9 Mucha relación (9)

---

WomanBed open Explique, utilizando el máximo número de adjetivos posibles, lo que encuentre que estas dos representaciones tienen en común (por ejemplo: elegante, feo/a, agresivo/a, bonito/a, fuerte, lento/a, rápido/a)

---



---



---



---



---

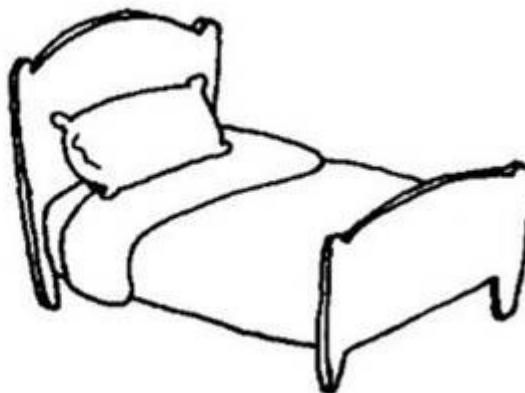
End of Block: WomanBed

---

Start of Block: ManBed

ManBed A continuación hay dos imágenes representando una cama y una persona. Evalúe de 1 a 9 el nivel de semejanza entre ambas representaciones,

significando 1 poca semejanza y 9 mucha. Después explique lo que encuentre que estas dos representaciones tienen en común usando tantos adjetivos como sea posible (por ejemplo: elegante, feo/a, agresivo/a, bello/a, fuerte, lento/a, rápido/a, etc.).



---

ManBed closed Evalúe del 1 al 9 la relación entre las dos representaciones que acaba de ver, 1 significando poca y 9 mucha.

- 1 Poca relación (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 (7)
- 8 (8)
- 9 Mucha relación (9)

---

ManBed open Explique, utilizando el máximo número de adjetivos posibles, lo que encuentre que estas dos representaciones tienen en común (por ejemplo: elegante, feo/a, agresivo/a, bonito/a, fuerte, lento/a, rápido/a)

---



---



---



---



---

End of Block: ManBed

---

Start of Block: WomanMap

WomanMap A continuación hay dos imágenes representando una mapa y una persona. Evalúe de 1 a 9 el nivel de semejanza entre ambas representaciones,

significando 1 poca semejanza y 9 mucha. Después explique lo que encuentre que estas dos representaciones tienen en común usando tantos adjetivos como sea posible (por ejemplo: elegante, feo/a, agresivo/a, bello/a, fuerte, lento/a, rápido/a, etc.).



WomanMap closed Evalúe del 1 al 9 la relación entre las dos representaciones que acaba de ver, 1 significando poca y 9 mucha.

- 1 Poca relación (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 (7)
- 8 (8)
- 9 Mucha relación (9)

---

WomanMap open Explique, utilizando el máximo número de adjetivos posibles, lo que encuentre que estas dos representaciones tienen en común (por ejemplo: elegante, feo/a, agresivo/a, bonito/a, fuerte, lento/a, rápido/a)

---



---



---



---



---

**End of Block: WomanMap**

---

**Start of Block: ManMap**

ManMap A continuación hay dos imágenes representando una mapa y una persona. Evalúe de 1 a 9 el nivel de semejanza entre ambas representaciones,

significando 1 poca semejanza y 9 mucha. Después explique lo que encuentre que estas dos representaciones tienen en común usando tantos adjetivos como sea posible (por ejemplo: elegante, feo/a, agresivo/a, bello/a, fuerte, lento/a, rápido/a, etc.).



ManMap closed Evalúe del 1 al 9 la relación entre las dos representaciones que acaba de ver, 1 significando poca y 9 mucha.

- 1 Poca relación (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 (7)
- 8 (8)
- 9 Mucha relación (9)
- 

ManMap open

Explique, utilizando el máximo número de adjetivos posibles, lo que encuentre que estas dos representaciones tienen en común (por ejemplo: elegante, feo/a, agresivo/a, bonito/a, fuerte, lento/a, rápido/a)

---

---

---

---

---

End of Block: ManMap

---

Start of Block: WomanTomato

WomanTomato A continuación hay dos imágenes representando un tomate y una persona. Evalúe de 1 a 9 el nivel de semejanza entre ambas representaciones, significando 1 poca semejanza y 9 mucha. Después explique lo que encuentre que estas dos representaciones tienen en común usando tantos adjetivos como sea posible (por ejemplo: elegante, feo/a, agresivo/a, bello/a, fuerte, lento/a, rápido/a, etc.).



WomanTomato closed Evalúe del 1 al 9 la relación entre las dos representaciones que acaba de ver, 1 significando poca y 9 mucha.

- 1 Poca relación (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 (7)
- 8 (8)
- 9 Mucha relación (9)
- 

WomanTomato open

Explique, utilizando el máximo número de adjetivos posibles, lo que encuentre que estas dos representaciones tienen en común (por ejemplo: elegante, feo/a, agresivo/a, bonito/a, fuerte, lento/a, rápido/a)

---

---

---

---

---

End of Block: WomanTomato

---

Start of Block: ManTomato

ManTomato A continuación hay dos imágenes representando un tomate y una persona. Evalúe de 1 a 9 el nivel de semejanza entre ambas representaciones, significando 1 poca semejanza y 9 mucha. Después explique lo que encuentre que estas dos representaciones tienen en común usando tantos adjetivos como sea posible (por ejemplo: elegante, feo/a, agresivo/a, bello/a, fuerte, lento/a, rápido/a, etc.).



ManTomato closed Evalúe del 1 al 9 la relación entre las dos representaciones que acaba de ver, 1 significando poca y 9 mucha.

- 1 Poca relación (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 (7)
- 8 (8)
- 9 Mucha relación (9)
- 

ManTomato open

Explique, utilizando el máximo número de adjetivos posibles, lo que encuentre que estas dos representaciones tienen en común (por ejemplo: elegante, feo/a, agresivo/a, bonito/a, fuerte, lento/a, rápido/a)

---

---

---

---

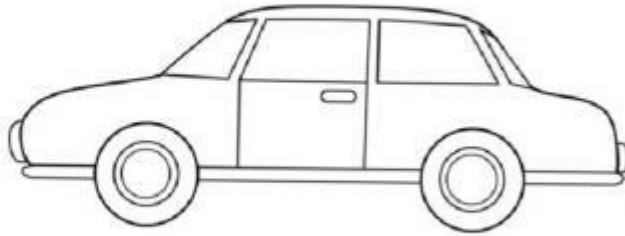
---

End of Block: ManTomato

---

Start of Block: WomanCar

WomanCar A continuación hay dos imágenes representando un coche y una persona. Evalúe de 1 a 9 el nivel de semejanza entre ambas representaciones, significando 1 poca semejanza y 9 mucha. Después explique lo que encuentre que estas dos representaciones tienen en común usando tantos adjetivos como sea posible (por ejemplo: elegante, feo/a, agresivo/a, bello/a, fuerte, lento/a, rápido/a, etc.).



WomanCar closed Evalúe del 1 al 9 la relación entre las dos representaciones que acaba de ver, 1 significando poca y 9 mucha.

- 1 Poca relación (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 (7)
- 8 (8)
- 9 Mucha relación (9)
- 

WomanCar open

Explique, utilizando el máximo número de adjetivos posibles, lo que encuentre que estas dos representaciones tienen en común (por ejemplo: elegante, feo/a, agresivo/a, bonito/a, fuerte, lento/a, rápido/a)

---

---

---

---

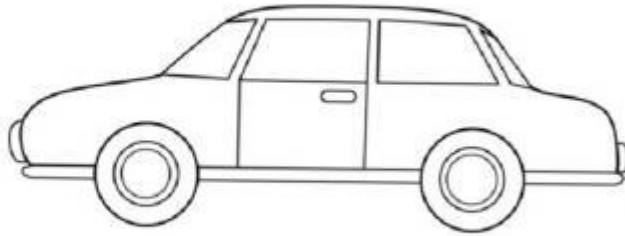
---

End of Block: WomanCar

---

Start of Block: ManCar

ManCar A continuación hay dos imágenes representando un coche y una persona. Evalúe de 1 a 9 el nivel de semejanza entre ambas representaciones, significando 1 poca semejanza y 9 mucha. Después explique lo que encuentre que estas dos representaciones tienen en común usando tantos adjetivos como sea posible (por ejemplo: elegante, feo/a, agresivo/a, bello/a, fuerte, lento/a, rápido/a, etc.).



ManCar closed Evalúe del 1 al 9 la relación entre las dos representaciones que acaba de ver, 1 significando poca y 9 mucha.

- 1 Poca relación (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 (7)
- 8 (8)
- 9 Mucha relación (9)
- 

#### ManCar open

Explique, utilizando el máximo número de adjetivos posibles, lo que encuentre que estas dos representaciones tienen en común (por ejemplo: elegante, feo/a, agresivo/a, bonito/a, fuerte, lento/a, rápido/a)

---

---

---

---

---

End of Block: ManCar

---

Start of Block: WomanLamp

WomanLamp A continuación hay dos imágenes representando una farola y una persona. Evalúe de 1 a 9 el nivel de semejanza entre ambas representaciones, significando 1 poca semejanza y 9 mucha. Después explique lo que encuentre que estas dos representaciones tienen en común usando tantos adjetivos como sea posible (por ejemplo: elegante, feo/a, agresivo/a, bello/a, fuerte, lento/a, rápido/a, etc.).



WomanLamp closed Evalúe del 1 al 9 la relación entre las dos representaciones que acaba de ver, 1 significando poca y 9 mucha.

- 1 Poca relación (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 (7)
- 8 (8)
- 9 Mucha relación (9)
- 

WomanLamp open

Explique, utilizando el máximo número de adjetivos posibles, lo que encuentre que estas dos representaciones tienen en común (por ejemplo: elegante, feo/a, agresivo/a, bonito/a, fuerte, lento/a, rápido/a)

---

---

---

---

---

End of Block: WomanLamp

---

Start of Block: ManLamp

ManLamp A continuación hay dos imágenes representando una farola y una persona. Evalúe de 1 a 9 el nivel de semejanza entre ambas representaciones, significando 1 poca semejanza y 9 mucha. Después explique lo que encuentre que estas dos representaciones tienen en común usando tantos adjetivos como sea posible (por ejemplo: elegante, feo/a, agresivo/a, bello/a, fuerte, lento/a, rápido/a, etc.).



ManLamp closed Evalúe del 1 al 9 la relación entre las dos representaciones que acaba de ver, 1 significando poca y 9 mucha.

- 1 Poca relación (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 (7)
- 8 (8)
- 9 Mucha relación (9)
- 

ManLamp open

Explique, utilizando el máximo número de adjetivos posibles, lo que encuentre que estas dos representaciones tienen en común (por ejemplo: elegante, feo/a, agresivo/a, bonito/a, fuerte, lento/a, rápido/a)

---

---

---

---

---

End of Block: ManLamp

---

Start of Block: Demo

Q20 Llegamos al final de este cuestionario, por favor antes de terminar complete los siguientes datos personales.

---

Age Edad

\_\_\_\_\_

---

Gender Género

Masculino (1)

Femenino (2)

---

Language Lengua materna

Español (1)

Francés (2)

Otro (3) \_\_\_\_\_

---

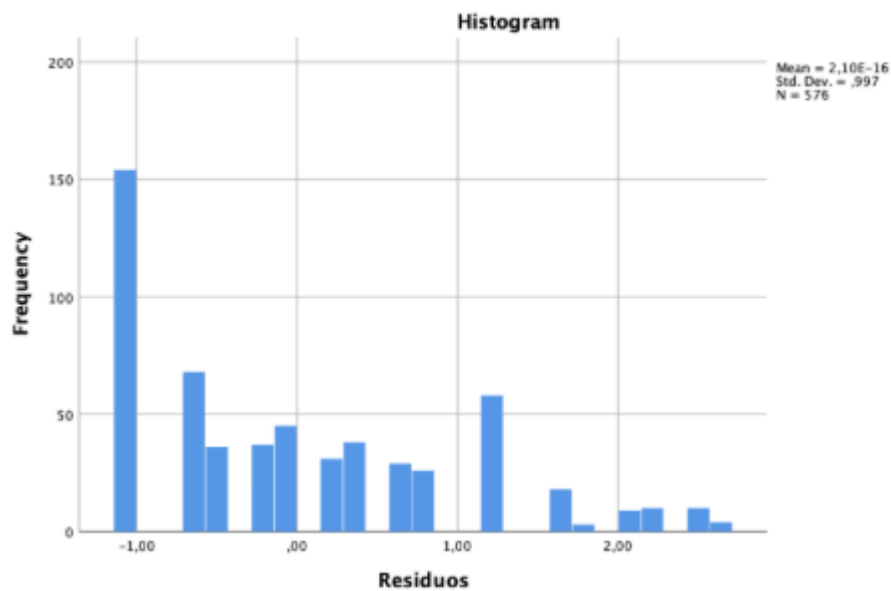
Q25 ¡Muchas gracias por participar en esta encuesta!

**End of Block: Demo**

---

***Appendix 6: Experience 2 with French speakers. Testing normality of standardized residual for values.***

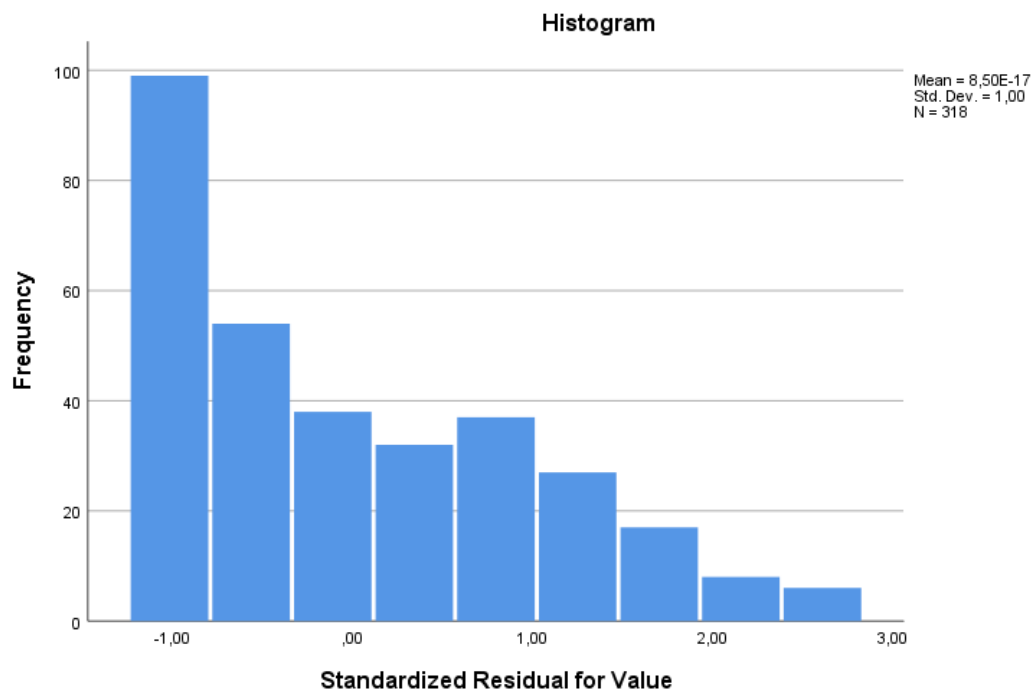
**Residuos**



**Descriptive Statistics**

	N Statistic	Minimum Statistic	Maximum Statistic	Mean Statistic	Std. Deviation Statistic	Skewness		Kurtosis	
						Statistic	Std. Error	Statistic	Std. Error
Residuos	576	-1,13	2,63	,0000	,99739	,726	,102	-,381	,203
Valid N (listwise)	576								

***Appendix 7: Experience 2 with Spanish speakers. Testing normality of standardized residual for value.***



**Descriptive Statistics**

	N Statistic	Minimum Statistic	Maximum Statistic	Mean Statistic	Std. Deviation Statistic	Skewness		Kurtosis	
						Statistic	Std. Error	Statistic	Std. Error
Standardized Residual for Value	318	-1,02	2,61	,0000	1,00000	,723	,137	-,502	,273

