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A LOGO IS WORTH A THOUSAND WORDS

A Study of Heritage Brands through Logo Redesign

by

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Abstract

- Title:** A Logo is Worth a Thousand Words – A Study of Heritage Brands through Logo Redesign
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- Keywords:** Heritage brands; brand attitudes; perceived brand authenticity; logo redesign; brand management
- Thesis purpose:** The combined research on the effects of logo redesign on heritage brands is underdeveloped. Therefore, we contribute with insights to this nascent subject and provide inspiration for others to continue.
- Methodology:** This thesis uses quantitative methods with a mixed experimental design to test the impact of different logo versions on *Brand Attitudes* and *Perceived Brand Authenticity* for three fashion brands: two heritage (Burberry and Versace) and one non-heritage brand (Calvin Klein). The testing consists of two parts: (1) Pre-test and (2) main test. Pre-test consists of high-level analysis as well as questionnaire. In addition, questionnaires are used in main test. The results are analysed through a mixed ANOVA.
- Theoretical perspective:** Our research is based off past studies on logos, logo redesign, and brand heritage.
- Empirical data:** This study uses online questionnaires. A total of 276 responses (52 pre-test and 224 main test) are obtained through a convenience sampling method performed online.
- Conclusion:** Our analysis indicates mixed results. Some that confirm past research and some that contradict it. Our study shows logo redesign does not affect brand attitudes for heritage brands. However, we observe an influence from logo redesign on perceived brand authenticity for one of the heritage brands: Versace. We expected Calvin Klein to be less affected from logo redesign, but our data shows no significant differences. Our results signify that there is some relevancy to logo redesign and heritage brands; however, further studies are needed. In addition, our analysis implies non-heritage brands may not be at a significant disadvantage when compared to heritage brands.

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Hinz Chan



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Introduction

One Picture is Worth Ten Thousand Words

-Fred R. Barnard, *Printers' Ink*, 1927

The brand logo is one of the most important assets an organisation possesses. One of the reasons is that more often than not, logos are the first point of contact between a company and its customers, and thus the key to establishing a long-term relationship with them. Think about the number of logos encountered daily - they are on physical objects such as billboards, benches, vehicles, buildings; they are on clothes, accessories, the back of mobile phones; and even exist in the digital world through televisions (TVs), computer monitors, and phone screens. Thus, it can be said that logos are ubiquitous in the modern world.

Brands use logos as a primary visual cue to communicate their identity, culture, personality, as well as to help build recognition (Buttle & Westoby, 2006; Henderson & Cote, 1998; van Riel, van den Ban & Heijmans, 2001). Using visual symbols such as logos is an efficient way at disseminating information to people (MacInnis, Shapiro & Mani, 1999); as a result, those symbols are also effective at breaking through language barriers and transferring across cultures (Park, Eisingerich, Pol & Park, 2013). In addition, Park et al. (2013) claim that brand logos can be a potent instrument to manage brand-customer relationships. Logos not only assist in distinguishing a brand from its competitors, but they can also help stakeholders associate meanings and values to the organisation the brand represents (Park et al. 2013; Roper & Fill, 2012). For instance, when people see the logo of the fashion brand, Burberry, they can immediately relate to the quality craftsmanship and elegance transferred into the product, as well as recognise the history and traditions behind the brand. Because logos provide multiple benefits, organisations spend significant amounts of time and resources investing in them (Henderson & Cote, 1998; van Riel, van den Ban & Heijmans, 2001)

Incorporating a brand's history can be an effective marketing tool; this is especially important in today's highly competitive world, where similar products and services are commonplace. Brands that use heritage as part of their identity are typically referred to as heritage brands. Enhancing brand's heritage is a powerful way to not only differentiate the brand from the competition through authenticity, but also makes it harder to imitate (Urde, Greyser & Balmer, 2007). Heritage also adds uniqueness to a brand, therefore, providing consumers with added value (Urde, Greyser & Balmer, 2007). While products and some service features can be replicated by competitors, the origin, mythology, history, or story are not so easily reproduced. As a result, this provides heritage brands with a very distinct characteristic. Because of their unique marketing power, heritage brands are omnipresent in many industries - some examples include Coca Cola in soft drinks; Nike in sportswear; or Burberry in fashion. These brands bridge together their past, present and future, as well as bring an authentic experience to its consumers in order to gain a competitive advantage (Boccardi, Ciappei, Zollo & Laudano, 2016).

Some heritage brands typically make use of symbolic elements, such as their logos, in order to emphasise its history and traditions (Boccardi et al. 2016; Urde, Greyser & Balmer, 2007). For example, the Swiss heritage watchmaker, Patek Philippe, has been using the emblem of a cross for the Order of Calatrava as part of its logo since 1887 (Chronext, 2019). The military Order of Calatrava dates back to the twelfth century and its Catholic symbolism represents “a spiritual meaning for the watchmaker” (Chronext, 2019, n.p.). The emphasis on heritage as its core identity and positioning, as well as the use of symbols are some of the reasons that have helped Patek Philippe become one of the world’s most distinguished watchmakers.

Still, regardless if it is a heritage brand or not, brand logos rarely remain static over time. Gray and Smeltzer (2007) believe that the demands of the fast-changing business environment may signify that logos typically lose their lustre after five to eight years; therefore, they may need to be updated in order to avoid appearing outdated. Whether that is the case or not, many recognisable brands today are altering their logos for various reasons. Consider internationally renowned brands such as Burberry, Zara and Apple that have recently undergone a redesign of their logo. Burberry, in particular, has removed its symbolic equestrian knight that has appeared in its logo for over 163 years. A more minimalistic and sleek typography is nowadays portraying Burberry - a style that is also common with other logos in the fashion industry. While this may seem meaningless to the casual observer, its implications have a wide-ranging impact.

1.1 Background

Logo changes, alterations or redesigns are not only complex but tend to become an expensive process (Banerjee, 2008a). Since a logo is one of the most salient elements of a brand, it appears in many different formats: from large billboards to TV and multimedia advertisements; posters to products; as well as company documents and supplies. Thus, in order to prevent inconsistencies in communication, any redesign will require organisations and brands to replace the old logo in all material that it is present in. It is, therefore, no surprise that organisations are estimated to spend over hundreds of millions of dollars in the process of logo redesign (Stamper, 2013). Indeed, one of the most expensive logo modernisations occurred in 2000, when British Petroleum (BP) introduced a more environmentally friendly logo that is still the face of the organisation today. According to the creative branding agency, Inkbots Design (2017), BP’s logo redesign and implementation is believed to be valued at over 210 million US dollars.

In addition to costs, organisations have been building up their brands and embodying their logos to them over many years. Still, logos undergo redesigns for a number of reasons, such as brand repositioning (Banerjee, 2008a). In a study of logo redesigns on brand modernity, Müller, Kocher and Crettaz (2011) discovered that logo changes can help consumers perceive a brand as more contemporary. As a result, it can be said that logo redesigns can alter stakeholders’ perceptions and attitudes towards the brand. Furthermore, Priester, Nayakankuppam, Fleming and Godek (2004) determined that attitudes can affect behaviour and thus, influence purchase intention. Brands that have the ability to steer consumers towards supporting and buying their products and services stand to greatly benefit in highly competitive marketplaces.

Consequently, managers must be aware of the effects of logo redesigns on stakeholders' perception and attitudes towards the brand.

It may be even more critical when dealing with logo changes for heritage brands. During the brand building process, heritage brands emphasise and leverage not only their history over time, but they have also communicated the symbols that are unique to them; thus, becoming elements that express their identity and reason of existence. Consequently, alterations of logos for heritage brands may have significant implications not only on consumers' perceptions and brand attitudes, but as well as the perceived authenticity of the brand. Authenticity is inherent in heritage brands and plays an important role in developing trust, consistency, and establishing a relationship between a brand and its consumers (Napoli, Dickinson-Delaporte & Beverland, 2015). By rooting themselves in its history and origin, heritage brands make use of authenticity to provide distinctiveness, sincerity and truthfulness, which helps to build relationships with its stakeholders (Urde, Greyser & Balmer, 2007). Strong relationships with customers and non-customers may be important for organisations and brands, for example, during crisis situations or in employee attraction and retention (Urde, Greyser & Balmer, 2007). As a result, managers of heritage brands that are considering logo redesigns must proceed with caution in order to prevent negative influence on perceived brand authenticity, as well as attitude. Detrimental effects on perceived brand authenticity could undermine the essence of heritage brands, minimising its uniqueness and, thus, affecting its ability to build a competitive advantage. Most importantly, brands that cannot differentiate themselves from the crowd may end up being forgotten in the plethora of brands, and run the risk of dying off.

Still, it is important to differentiate certain brands with heritage that do not incorporate it as part of their value proposition and identity; as a result, these are only classified as brands with heritage, and are not typically considered to be heritage brands (Urde, Greyser & Balmer, 2007). An example of this, as discussed by Urde and Greyser (2015), is the Swiss watchmaker, Tag Heuer. While it is a brand with a heritage, these authors argue that the luxury manufacturer's market positioning is based in the present time. Therefore, only when they intentionally position and identify themselves with their heritage, and strategically incorporate it into their identity, are brands considered heritage brands (Urde, Greyser & Balmer, 2007).

As previously discussed, logo changes or redesign have more relevance to business and marketing than just aesthetics. While it is important for brand managers and organisations to understand logo redesigns and heritage brands, past inquiries into the impact of logo redesign on heritage brands are extremely limited. Therefore, in order to address the gap in research, this quantitative paper studies the effects that logo changes have on consumers' perception of brand authenticity, as well as brand attitudes of heritage brands.

1.2 Aim and Objectives

Based on prior understanding and knowledge, and an attempt to bridge the research gap in logo redesigns for heritage brands, this paper has two aims. First, it seeks to measure the impact that logo redesign has on heritage brands in terms of consumers' brand attitudes by comparing the

effects on different logo versions. As attitudes have the capability to influence consumer behaviour, the effect of a heritage brand's logo redesign on brand attitudes will be of significant importance. While previous studies have provided with research regarding logo redesigns on brand attitudes (Walsh, Page Winterich & Mittal, 2010; Walsh, Page Winterich & Mittal, 2011), this paper not only attempts to confirm the validity of past research, but also seeks to observe if there are similar or dissimilar consequences when dealing with heritage brands.

The second aim is to evaluate perceived brand authenticity when heritage brands undergo logo redesign by comparing the effects on different logo versions. As previously mentioned, authenticity plays a powerful and unique role for heritage brands. Consequently, special attention must be directed into understanding how changes to logo design can affect a consumer's perceived authenticity of heritage brands.

In order to achieve these objectives and further understand heritage brands, these effects are also tested on a non-heritage brand. With this comparison between heritage and non-heritage brands, we intend to measure the differences between the degree of impact on brand attitudes, and perceived brand authenticity, when a logo redesign occurs. Overall, in order to build knowledge and understand of the role of logo redesign on consumers' perceived brand authenticity and brand attitudes, the main objective of this study is to research the very underdeveloped area of the effect of logo redesign on heritage brands.

1.3 Research Purpose

As this thesis explores logos, logo redesign and heritage brands, it not only builds upon any previous relevant knowledge, but also has a purpose in complementing and adapting new insights into those streams of research. Through the use of quantitative research methods, this study also contributes to understanding the significance of using visual symbols, such as logos, for heritage brands. Finally, this current study adds to the general importance of logos.

This research paper looks into several versions of brand logos, one that relates more to brand heritage and one that does not. By measuring consumers' perception of brand authenticity, as well as brand attitudes, we aim at investigating the effects brand logo redesigns have on heritage brands.

Accordingly, we seek answers to the following research question:

How significant are logo redesigns in heritage brands, in terms of their effects on consumers' brand attitudes and perceived brand authenticity?

Through this research study, we aspire to contribute to several key insights into essential research streams within marketing. Moreover, based on preliminary research, this quantitative study is one of the first exploratory investigations that combines the two research streams of heritage branding and logo redesign. As a result, this study encourages others into continuing further development into this field of research. This will not only help with a deeper

understanding of these two powerful marketing elements, but will also be of high value to marketing and business academia, as well as wider branding research.

1.4 Delimitations

This thesis focuses solely on the fashion industry, and here, it is interesting for a number of reasons. Similarly to other consumer goods industries, innovations in the fashion industry have led to significant developments in many areas such as logistics, customer relationship management and product innovation. In addition, the internet, online platforms such as Amazon and social media has helped create many direct-to-consumer brands and fast fashion, leading to considerable disruptions in the fashion industry. Consequently, this has created a turbulent and highly competitive market environment for many fashion brands. According to Hakala, Lätti and Sandberg (2011), brand heritage offers certainty and steadiness which can lead to enhanced quality, trustworthiness, and brand value. Therefore, integrating heritage as part of their positioning and value proposition may be a solution for brands that are found in these uncertain environments. This is the direction Boccardi et al. (2016) appeal for in their exploratory thesis for creating value in a fashion brand through brand heritage and authenticity; they believe heritage brings value and authenticity to fashion brands. In a study by Pecot and De Barnier (2017), it was discovered that the role of heritage is intensified for brands in traditional industries such as fashion. Consequently, we believe it will be highly beneficial to use the logos of fashion brands to observe whether different logo versions can affect consumers' perceived brand authenticity and brand attitudes based on their brand heritage. However, due to time constraints, only a limited number of fashion brands and their logos are chosen to be investigated.

Furthermore, the visual identity of a brand may consist of not only its logo, but also name, typography, colour scheme, slogan, and other graphical components (van den Bosch, de Jong & Elving, 2005). However, the sole focus in this paper is on brand logos and how they, distinctively, can affect consumers' perception of brand authenticity and brand attitudes. Thus, while these fashion brands may have additional visual elements that define their brand, such as specific design elements and patterns, these are not within the scope of this paper.

1.5 Outline of the Thesis

The thesis is separated into five sections, as shown in Figure 1.

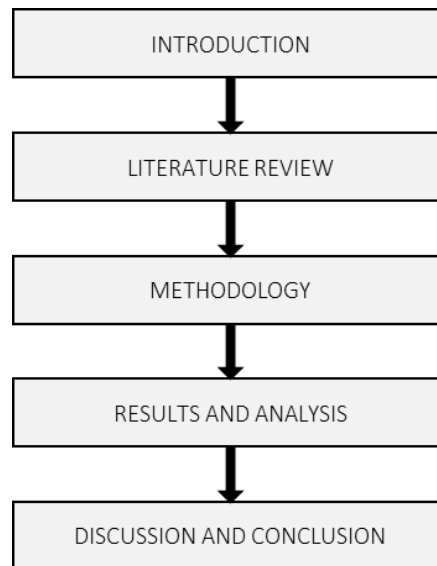


Figure 1. *Thesis Outline.*

Firstly, the reader is presented with an introduction to the paper. Here, some important terms are introduced, and the relevancy of the topic is discussed. Then, within the background it sets the stage for the problematisation, making way for the thesis' aims and objectives, research purpose, as well as delimitations and outline for the rest of the thesis.

In the next section, the literature review provides previous academic research on the topics relevant for this thesis: logos, logo redesign or changes and its effects, the definition of heritage brands and the effects of brand heritage. After the analysis of the literature review, a new conceptual framework ties together the elements of brand heritage, logo version, brand attitudes and perceived brand authenticity. Furthermore, the new conceptual framework leads to the formulation of testable hypotheses that directs the research stream.

In the third section, the methodology outlines how we intend to test the hypotheses and conduct the research. It defines the research approach, research design and states the validity and reliability of the paper. Moreover, a pre-test on the selected brands for study is also developed and conducted in this section which allows us to conduct our main research.

The penultimate section of this thesis presents the results and analysis of the main experiment conducted. Here, using past research and theoretical contributions assists us with explaining experimental results obtained, as well as adds to further discussion and insights on the outcomes.

Lastly, the discussion combines the obtained results with the existing knowledge provided in the literature review. The conclusion and the implications of the research summarise and provides an end to the thesis. In this section, we also present limitations of our study and suggest directions towards further development into this relatively new research stream.

2 Literature and Theoretical Review

The following section reviews the concepts, theories and established knowledge on the topics discussed during the introduction: on one hand, the relevance of logos and the effects of logo redesigns on the brand; on the other hand, insights on the concept of heritage brands and the effects of brand heritage on the brand. The knowledge presented is further applied in order to create a theoretical framework that establishes the basis of our research.

2.1 The Importance of Logos

A logo is an important component of a brand that “can be defined as a graphic representation or image that triggers memory associations of the target brand” (Walsh, Page Winterich & Mittal, 2010, p.76). According to van Riel, van den Ban and Heijmans (2001), logos are tools used by managers to express desired characteristics of an organisation or brand. During their study, the authors believed that the logo is most effective when it aligns with the coveted identity of an organisation or brand. Furthermore, they likened the logo as a key that can open a door to an intricate web of knowledge about the company. Therefore, while consumers may only be in contact with a logo for seconds, the amount of information conveyed can be comprehensive and complex (Henderson & Cote, 1998; van den Bosch, de Jong & Elving, 2005).

In their study, Henderson and Cote (1998), emphasised the importance of the logo due to its effectiveness at enhancing recognisability, as well as its ability to distinguish itself from others. Logos are powerful differentiators because they represent a useful and effective way to convey information (MacInnis, Shapiro & Mani, 1999). Roper and Fill (2012) stated that an organisation’s corporate identity is linked to its culture. Therefore, businesses can use logos to not only help communicate its corporate identity to both internal and external stakeholders, but can also use it to assist in its expression of the culture and values of the brand it represents (Buttle & Westoby, 2006; van Riel, van den Ban & Heijmans, 2001).

Macdonald and Sharp (2000) believed that brand awareness and recognition play an important role in influencing consumer purchase decisions. Thus, logos can not only produce conscious reminders towards a brand (Walsh, Page Winterich & Mittal, 2010), but by building awareness and recognition, they can also improve brand value (Keller, 2003). However, the power of the logo is much broader; it is believed logos can influence consumers’ emotions and attitudes (Henderson & Cote, 1998; Jun, Cho & Kwon, 2008); can impact a brand’s reputation (Baker & Balmer, 1997; van den Bosch, de Jong & Elving, 2005); shape purchase intentions (Jun, Cho & Kwon, 2008); and affect brand loyalty (Müller, Koehler & Crettaz, 2011). Furthermore, it is

believed that logos can influence consumers' brand commitment, as well as a firm's well-being and long-term growth (Park et al. 2013).

2.2 Logo redesign and its impact on the brand

When organisations change, oftentimes they use their logo to qualify this shift (Bolhuis, de Jong & van den Bosch, 2018). The rationale behind logos redesigns may be due to internal or external directives, including mergers and acquisitions (Banerjee, 2008a; van Riel, van den Ban & Heijmans, 2001), legal issues, cultural misalignments (Banerjee, 2008a), requiring a more innovative appearance, or signifying a change of corporate identity, culture or positioning (Banerjee, 2008a; Peterson, AlShebil & Bishop, 2015).

Redesigns can be revolutionary, which involves completely transforming the logo, or evolutionary, meaning the logo goes through minor refinements (van Grinsven & Das, 2015). Evolutionary redesigns allow organisations to extend the information inherent in the previous logo, such as culture or brand identity; in addition to improving its image to capture new market opportunities (Airey, 2009). On the other hand, revolutionary transformations may be used to communicate major shifts in strategy, identity, culture or alter the current conversation about an organisation or brand (Airey, 2009). As a result, organisations must be aware of the effects of logo redesigning, because it can have major impacts on perceptions of both internal and external stakeholders (Bolhuis, de Jong & van den Bosch, 2018). For example, in a study of the corporate visual identity re-branding of France Télécom, surveys indicated that a logo redesign was successful in generating positive post perception attitudes from not only the public, but internal employees as well (Melewar, Hussey & Srivoravilai, 2005). Brand attitudes relate to the consumer's general brand evaluation and, as previously mentioned, can influence consumer actions such as purchase behaviour (Percy & Rossiter, 1992; Priester et al. 2004), as well as can impact brand equity (Faircloth, Capella & Alford, 2001).

Therefore, logo redesigns are an important phenomenon to understand for organisations and they must be carefully managed because their effects can be wide ranging. For instance, in a study by Bolhuis, de Jong and van den Bosch (2018), they observed that a change in visual identity can impact employees more than customers due to their larger exposure to the logo. In addition, they believed effectiveness of redesign on various stakeholders depends on several factors including the specific design of the logo. In another study, Walsh, Page Winterich and Mittal (2010) found that brand attitudes of consumers for logo shape redesigns varied depending on the brand commitment level. In branding, the word, *commitment*, is defined "as the consumers' willingness to maintain relationships with the brands" (Japutra, Keni & Nguyen, 2015, pp.242). Their findings showed that consumers with high commitment experienced more negative brand attitudes after the redesign, and those with low commitment had higher evaluations of the brand after the change (Walsh, Page Winterich & Mittal, 2010). In a later study, the same authors found similar results and suggested that when the level of brand commitment increased, consumers evaluated a brand more negatively due to more inconsistent information from a redesigned logo (Walsh, Page Winterich & Mittal, 2011). Results from a study on visual rejuvenation by Müller, Kocher and Crettaz (2011) suggested that a logo

redesign can improve a brand's perception of modernity. Moreover, they believe there is an opportunity for radical changes because their data imply that significant redesigns are not always viewed negatively. Van Grinsven and Das (2015) observed that processing speeds were significantly lower when the change towards the logo is perceived as larger; however, through repeated exposure it can be counteracted. This list of studies is certainly not exhaustive and only partly show the complexities within this research stream.

2.3 Heritage Brands: Definition

The term heritage analysed in this paper is expressed in terms of its relation to brands; however, it also considers some aspects from its historical meaning. First, it is relevant to mention that brand heritage is considered an association that refers to the brand's past that results in a sustainable competitive advantage and source of differentiation when used (Hakala, Lätti & Sandberg, 2011; Keller & Lehmann, 2006). In this context, heritage brands can be defined as corporate brands that include and embrace the dimension of heritage in their identity during the brand building process (Urde, Greyser & Balmer, 2007). Therefore, this type of brand has heritage as the main element ingrained in their positioning and value proposition in order to build a competitive advantage (Hudson, 2011; Urde, Greyser & Balmer, 2007). In this sense, it is important to note that brands might have a heritage, but only those incorporating heritage in their identity are included in the definition (Urde, Greyser & Balmer, 2007). Pecot and De Barnier (2017) as well as Urde, Greyser and Balmer (2007) distinguished, as principal characteristics of heritage brands, the representation of the past rooted in the identity, as well as its conveyance towards the future. This last characteristic differentiates heritage from the concept of inheritance, as it stresses the transmission from the past to its use in the future (Pecot & De Barnier, 2017). Furthermore, Urde, Greyser and Balmer (2007, p.7) emphasised the temporal nature of heritage brands, stating that "heritage brands embrace *three* time-frames: *the past the present and the future*".

According to Banerjee (2008b), brand heritage is supported by four elements: brand history, brand image, brand expectancy and brand equity. With *brand history*, the author refers to the past events of the brand; whereas *brand image* is a consequence of the met or unmet stakeholders' expectations after the benefits offered have been communicated by the brand. *Brand equity* determines the value of the brand by internally enhancing its heritage and externally acting consistently on its history (Banerjee, 2008b). The dimension of heritage has also been conceptualised by Urde, Greyser and Balmer (2007), resulting in a brand stewardship for managerial purposes, comprised by five elements: history important to identity, track record, longevity, core values and use of symbols.

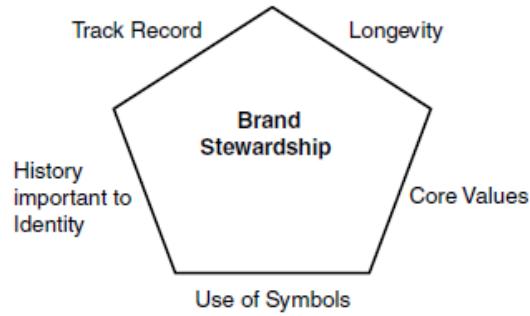


Figure 2. *The Elements of Heritage Brands.* Source: Urde, Greyser & Balmer, 2007

According to Urde, Greyser and Balmer (2007), *History Important to Identity* refers to the relevance of the past acts in the present and the future of the brand. It is closely related to *Track Record*, and the expectations that stakeholders have on the brand living up to its values and committing to its promises and actions over time. *Core values* refer to the most important values for the brand, rooted in its identity, that are continued and felt in every action undertaken by the brand. *Longevity* is the ability to carry the heritage over time and continue through changes of CEOs. Lastly, the authors described the *Use of Symbols* as closely related to the expression of the brand: these symbols are logos, designs, patterns or actions that reflect the past and are key to perceive the brand as a heritage brand. In special cases, these symbols can be powerful enough to have an identity on their own, or represent the brand without the need of more elements.

These five elements from Urde, Greyser and Balmer (2007) serve as a way to quantify the level of brand heritage with the use of the Heritage Quotient (HQ). Therefore, the more elements identified, the higher the HQ, and the greater the level of brand heritage. An example of the application of the HQ is found in the analysis of the Nobel Prize as a corporate heritage brand that was done by Urde and Greyser (2015). Through an exhaustive analysis of Nobel Prize's identity and structure, these authors recognised the level in which the brand heritage is portrayed and continued over time. Furthermore, they argued that one of the most explicit heritage dimensions is the use of symbols, found in distinct elements such as the medal and the diploma, as well as more intangible elements like the entire ceremonies and the phone call to the laureate. Although the authors expressed that the Nobel Prize is not the oldest existing award (longevity), what defines it as special is the track record dimension, through the laureates and their discoveries, which mankind has enjoyed since 1901. According to them, Nobel Prize's history is closely linked to its identity, with underlying core values that have guided the foundation over time. Overall, Urde and Greyser (2015) considered Nobel Prize as a corporate brand with a high HQ. Nevertheless, the ultimate purpose for the brand managers of heritage brands is to ensure the protection of their heritage through the brand stewardship (see Figure 2) (Urde, Greyser & Balmer, 2007). Throughout our paper, we interchangeably refer to the level of brand heritage using the concept, *heritageness*. Thus, high levels of brand heritage can also

be seen as having a high HQ, or a high degree of *heritageness*. On the other hand, low HQ refer to a low degree of *heritageness*.

Another view on these five characteristics forming Urde, Greyser and Balmer's brand stewardship (2007) was provided by Hakala, Lätti and Sandberg (2011), who had a preference for the terms *consistency* and *continuity* to refer to longevity. Pecot and De Barnier (2017) integrated the five elements into two dimensions from Merchant and Rose (2013), which are the expression of longevity, and stability through time to achieve an operationalisation of the term.

2.4 The Effects of Brand Heritage

Having defined what is meant by heritage brands and brand heritage, we state in this section the effects of brand heritage that have been found in the literature that we consider relevant for our study. Aaker (1996) described heritage as a source of brand equity, as well as managerial guidance and emotional links to other stakeholders. Merchant and Rose (2013) presented a quantitative study on nostalgia in advertising, whose findings showed that brand heritage evoked positive emotions. The outcome is aligned with other research, in which brand heritage drove positive emotions (Balmer, Greyser & Urde, 2006; Rose, Merchant, Orth & Horstmann, 2016). Heritage brands can use their history and traditions to either enrich, enable or entice an individual's brand connection; therefore, influencing attitudes and behaviours (Frizzo, Korelo & Müller Prado, 2018). The Italian fashion heritage brand, Salvatore Ferragamo, benefits from these positive outcomes through the use of a corporate museum dedicated to the brand (Iannone & Izzo, 2017). The Salvatore Ferragamo Museum embodies the brand identity: it takes the role as a storyteller by communicating the history of the brand through the exhibition of the most iconic products, as well as enhancing the entrepreneurial view of the founder; it links the brand's core values to its origin, the fashion industry in Italy; and also it embraces a sense of community by creating a shared memory of the brand over time (Iannone & Izzo, 2017). As a result, Salvatore Ferragamo gains credibility and brand authenticity among its stakeholders by the use of the brand's heritage (Iannone & Izzo, 2017). Furthermore, brand heritage is a source of reliability for consumers due to its role in guaranteeing consistent quality (Beverland, 2006), and consequently, it creates trust (Rose et al. 2016). In turn, Balmer (2011) found evidence that trust is an effect of brand authenticity, in the context of brand heritage.

Authenticity research in marketing has evolved in two directions: authenticity as a characteristic of a subject, or as an object (Fritz, Schoenmueller & Bruhn, 2017). In this thesis, authenticity as an object, such as brand authenticity, is our main focus. Many studies found in the literature have investigated how brand authenticity is constructed. Leigh, Peters and Shelton's (2006) study on an automotive manufacturer from a consumers' perspective suggested that authenticity is assessed by a high level of brand essence present in a product. Balmer (2011, p.1388) understands brand authenticity from an internal or organisational perspective, pointing out as the main factor, "the perseverance of salient corporate heritage features". Furthermore, Napoli, Dickinson, Beverland, and Farrelly (2014) defined seven dimensions of authenticity, that include brand heritage, sincerity, nostalgia and design consistency, among others. In line with

these findings, Fritz, Schoenmueller and Bruhn (2017) placed brand heritage as an antecedent of brand authenticity. They suggested that a perceived cultural alignment between a brand and the consumer produces the strongest perception of brand authenticity. Therefore, the authors emphasise it can be important for brands to understand the culture of their consumers and make use of symbols, such as brand logos, to represent these values and achieve the individual’s identification with the brand. From a perceptual point of view, brand heritage also produces authentic brand associations (Pecot & De Barnier, 2017). Moreover, authenticity provides higher value to both consumers and brands, as well as strengthens the bond between them (Napoli, Dickinson-Delaporte & Beverland, 2015). Brown, Kozinets and Sherry Jr. recognised that “the search for authenticity is one of the cornerstones of contemporary marketing,” (2003, p. 21). Gilmore and Pine (2007) believed it can play a more important role than quality in differentiation between brands. In managerial terms, awareness is needed for achieving effective and positive outcomes by the use of brand heritage in its identity (Burghausen & Balmer, 2015).

2.5 Proposed Theoretical Framework

The literature review has presented and examined the elements of logo, logo design and logo redesign, heritage brands and their effects on consumer attitudes and brand associations, such as authenticity. Considering past research, this paper aims at developing a new conceptual framework that allows us to respond to the research question formulated in previous section and pursue the main aims of the paper: to measure the effects of logo redesign in consumer attitudes towards heritage brands, as well as their effects on perceived brand authenticity in heritage brands.

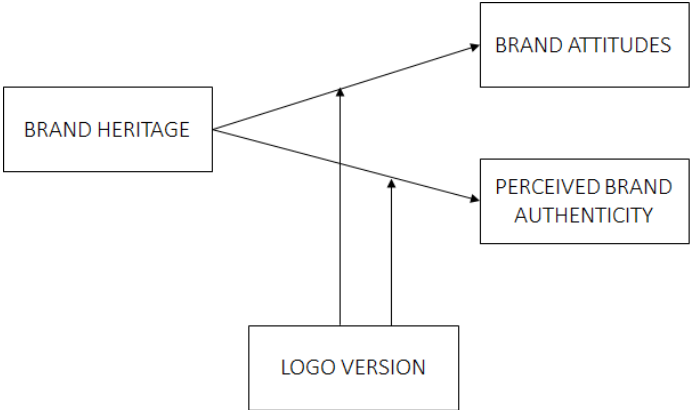


Figure 3. *The Effects of Logo Redesign on Heritage Brands.*

The model in Figure 3 consists of four elements that are interrelated. The first element, *Brand Heritage*, describes the level of brand heritage used in the brand building process. A high brand heritage is used to represent heritage brands, whereas a low brand heritage is used to represent

non-heritage brands – this includes brand that does not use its heritage in the brand building process. The elements *Brand Attitudes* and *Perceived Brand Authenticity* are the effects that brand heritage (or the absence of it) can produce. *Brand Attitudes* can be positive or negative and they relate to the perception or emotions towards a brand that emanate from consumers. *Perceived Brand Authenticity* refers to consumers' perception of authenticity towards the brand. Due to its nature as perception or attitude, it should be noted that authenticity is measured from an external point of view and not as the broad concept that can be found in the literature. *Logo Version* relates to two different logo designs: one symbolising more brand heritage and another with less or no brand heritage elements. It should also be mentioned that in this paper the word, *consumers*, is used to refer to people that has used or *consumed* the brand, and also potential consumers with a certain level of familiarity with the brand.

One of the main focus is set in testing the moderating effects of a logo and the brand attitudes (positive or negative) of consumers for a level of heritage in the brand. On one hand, the previous findings in the literature review support the theory that brand heritage creates positive emotions for consumers (Balmer, Greyser & Urde, 2006; Merchant & Rose, 2013; Rose et al. 2016). On the other hand, logos are a powerful element inside the brand that communicate the brand's identity (Buttle & Westoby, 2006; van Riel, van den Ban & Heijmans, 2001) and serve as a mean for creating relationships between a brand and the customer (Park et al. 2013). The effects of logo redesign can shape internal and external stakeholders' perception (Bolhuis, de Jong & van den Bosch, 2018). In the case of heritage brands (high HQ), the use of symbols, and specifically logos inside the category, have been proposed as one of the five dimensions that constitutes heritage brands; hence it is of a great importance (Urde, Greyser & Balmer, 2007). Therefore, it can be argued that for heritage brands, a higher representation of brand heritage in a logo will have a positive effect on consumer's attitudes. The first hypothesis refers to the expected effect that a logo version will have on consumers' brand attitudes for a heritage brand.

H1: *A heritage brand generates higher brand attitudes for the consumer when its logo represents more brand heritage.*

The second part of the research question will be tested by analysing the moderating effects of a logo and the consumers' perceived brand authenticity for a heritage brand. The literature suggests that brand heritage is a source of trust and authenticity (Balmer, 2011; Fritz, Schoenmueller & Bruhn, 2017; Napoli et al. 2014; Rose et al. 2016) and produces authentic brand associations among customers (Pecot & De Barnier, 2017). Following the argumentation in the previous paragraph that states the relevance of logos for the brands, and especially heritage brands, it can be argued that for heritage brands, a greater representation of brand heritage in a logo will generate higher perceived brand authenticity among consumers. Therefore, the second hypothesis refers to the expected effect that a logo version will have on consumers' perceived brand authenticity for a heritage brand.

H2: *A heritage brand generates a higher perceived brand authenticity for the consumer when its logo represents more brand heritage.*

Lastly, in the same way it is argued that logos are relevant elements for heritage brands, and that logo redesigns significantly affect consumers' brand attitudes and perceived brand

authenticity, it can be said that for non-heritage brands (low or no HQ) this effect will not be as significant. Accordingly, the last pair of hypotheses refers to the magnitude of the effect that a logo version will have on brand attitude and consumers' perceived brand authenticity for a non-heritage brand.

H3a: *A non-heritage brand has less impact on brand attitudes for the consumer when its logo represents less or no brand heritage.*

H3b: *A non-heritage brand has less impact on perceived brand authenticity for the consumer when its logo represents less or no brand heritage.*

During the next sections of this paper, these hypotheses will be tested according to the results obtained. As a result, they will be accepted or rejected, which will lead to adding new knowledge on how logo redesigns affect heritage brands.

3 Methodology

The following section describes the methods used in order to test the established theoretical framework and the hypotheses that precede. The research approach used in this paper is stated; its design is constructed, and the data collection strategy is defined. In this section, analysis of the data is also selected, and some validity and reliability conditions are established. The last subsections contain the design, results and analysis of a pre-test executed that establish a *common ground* for the main test.

3.1 Research Approach

In this subsection, we establish the basis in which the research is constructed. The method chosen, in combination to our view of the meaning of *reality* and the assumptions we make, are stated and explained below. The purpose of this section is to facilitate the reader to understand our mindset and, therefore, the approach to this research.

3.1.1 Research Method and Strategy

The method that has been used through the previous sections of the paper, including introduction, research question, literature review, the development of the theoretical framework and formulated hypotheses is integrative. This approach results in a combination of both deductive and inductive methods. The problem definition process has, at its point of departure, the observation of a current trend: logo redesign in the fashion industry for both heritage brands (high HQ) and non-heritage brands (low or no HQ). Concurrently, some theories had to be analysed not only to assess the relevance of logo changes for these particular types of brands, but also to determine the effects that logo redesigns and brand heritage have on the consumers, in terms of attitudes and perceptions towards the brand. At this point, the research question has been formulated and used as a guidance for the following sections. After a comprehensive analysis of the existing literature and research, we have been able to identify relevant variables useful for conceptualising the studied phenomena, and the relationships among those variables. This knowledge has been used to create a new theoretical framework that aims at answering the formulated research questions, as well as stating the hypotheses that are tested on some observations in the following sections. Consequently, the results obtained will serve as validation of the developed theoretical framework.

In order to test the theoretical framework and answer our research question, quantitative methods are used in the methods section. Quantitative research is aligned with deductive methods (Bryman & Bell, 2013); thus, it is also in agreement with the process in this paper due

to the fact that the theory developed is tested on some observations and confirmed after the process. Quantitative methods allow us to measure the dependent variables in numeric terms, as well as having indicators that allow the concepts to be framed and quantified (Bryman & Bell, 2013).

3.1.2 Research Philosophy

From an ontological point of view, we identify ourselves as having a realist approach, assuming that “physical and social worlds exist independently of any observations made about them” (Easterby-Smith, Thorpe & Jackson, 2015, n.p.). In this view, we are aware of the existence of reality as a single truth (Easterby-Smith, Thorpe & Jackson, 2015). However, our approach tends to lean towards internal realism because we acknowledge that the methods for data collection can alter the view of reality (Easterby-Smith, Thorpe & Jackson, 2015).

From the epistemology point of view, we have a positivist approach as we intend to measure consumers’ attitudes and perceptions using objective methods. Some assumptions that we take are the operationalisation of the measured variables and that the results obtained can be generalised, as long as the data is extracted from a randomly selected sample (Easterby-Smith, Thorpe & Jackson, 2015). Moreover, the positivist view is aligned with the realist approach and the quantitative methods (Easterby-Smith, Thorpe & Jackson, 2015)

However, there are limits to how far these ontological and epistemological views can be taken. The reasons are mainly the available resources, such as time, access to complete databases from where we can randomly select our sample, and professional tools to design and deliver our questions to the test subjects. In addition, each of our mental frames based on our knowledge and past experience can have an effect on the research process. In order to overcome these limitations, we must become fully aware of them and attempt to write from an objective, realist and positivist approach.

3.2 Research Design

This thesis aims to uncover the effects of logo redesign on brand attitude and perceived authenticity of heritage brands in the fashion industry using quantitative methods. As previously mentioned, fashion presents a context of interest due to its characteristics and numerous advantages, including a large variety of heritage and non-heritage brands, as well as several examples of brands that have engaged in logo redesigns in recent years. However, because of the importance of the concept of heritage in this study, and the subjective complexities and difficulties that arise from defining and classifying this type of brand, we believe it is important that the readers share an understanding of how to differentiate between heritage brands (high HQ) and non-heritage brands (low or no HQ). While several academic papers and online publications have clearly categorised Burberry as a heritage brand (Balmer, 2011; Cooper, Miller & Merrilees, 2015; Urde & Greyser, 2015), the other fashion brands in this study - Versace and Calvin Klein (CK) - are more uncertain. Therefore, in order to provide clarity and

a rationale for the chosen brands as well as ensure we align with our research philosophy, we have performed a pre-test that consists of a single cross-sectional survey that measures the perceived level of *heritageness* of the brands. In addition, the results are complemented with a high-level analysis that aims to determine the HQ of all three brands using Urde, Greyser and Balmer’s (2007) five dimensions of brand heritage. Further details will be outlined in the pre-test section.

To study the effects of logo redesign on heritage brands, this paper uses an experimental design, which investigates the cause-and-effect relationship between independent and dependent variables (Burns & Burns, 2008). In this study, the moderating variable (*Logo Version*) is manipulated for different elements of brand heritage in a logo, and the resulting effect is observed for *Brand Attitudes* and *Perceived Brand Authenticity*. The independent variable, *Brand Heritage*, has three conditions that indicates different levels of brand heritage by the usage of three brands: (1) Burberry, (2) Versace, (3) Calvin Klein. The other independent variable *Logo Version* has two conditions: (1) high heritage logo and (2) low heritage logo (see Figure 4). The brand logos for each of the brands have been selected and categorised into one of these two conditions and shown to two different experimental groups. We have considered as high heritage logos those that included symbols, design, words and dates that related to the heritage, origin of the brand, or years of existence. The low heritage logos appear to have a more standard design, with no symbols or dates present at all; however, the Burberry logo contains *London England*. The classification for the logos is obtained after analysing the information from the literature review, together with the observation of different logos from heritage brands and non-heritage brands. These logos can be found in the Appendix section A. Different results are expected from the groups. Our experimental design does not include a control group. A control group does not receive any manipulation or treatment in an experiment (Burns & Burns, 2008; Easterby-Smith, Thorpe, Jackson & Jaspersen, 2018); thus, in this study, it involves showing no brand logo and determining perception through brand name only. The brand logo is an integral part of our study; consequently, we do not consider a control group due to the nature of our research.

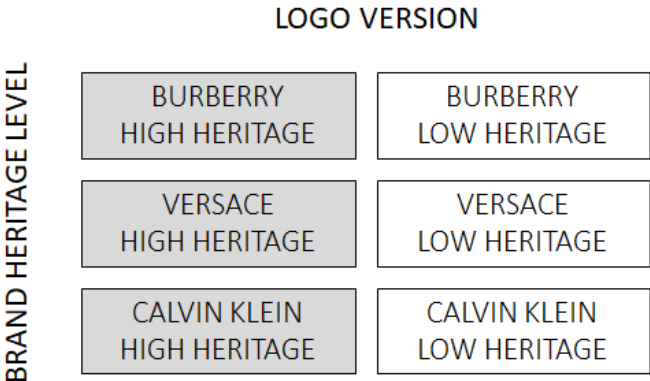


Figure 4. Six Conditions for Experimental Design.

The main experiment consists of two single cross-sectional surveys or questionnaires: the first showing three high heritage versions of the logos (represented in Figure 4 in grey) and the second consisting of the three low heritage versions of the logos (represented in Figure 4 in white). Contained in these surveys are a series of questions that attempt to measure *Logo Heritageness*, *Brand Attitude*, and *Perceived Brand Authenticity*. The *Brand Attitudes* and *Perceived Brand Authenticity* measures directly assist us with our research hypotheses. The questions to determine *Logo Heritageness* help to validate the pre-test analysis of the three fashion brands, and are used as a manipulation check. Furthermore, they also aid in disguising the true intent of the questionnaire. Manipulation checks are used to evaluate the validity of a treatment (Hauser, Ellsworth & Gonzalez, 2018). In our case, it ensures that our choice of logos and its allocation into the separate logo questionnaires are valid.

It is important to note that the high heritage logo version of Calvin Klein is modified slightly with an added heritage element to increase perception of a high heritage logo (see Appendix section A). Rationale is provided in the pre-test section.

3.2.1 Operationalisation and Scales

In the previous section, it has been stated that as positivists we make assumptions regarding the method we use to obtain the data. One of these assumptions is the operationalisation of several key variables in the theoretical framework, which consists of the agreement on what dimensions or values are used for measuring each concept (Bryman & Bell, 2013). The two dependent variables that are operationalised are *Brand Attitudes* and *Perceived Brand Authenticity*, together with the level of brand heritage in the logo or *Logo Heritageness* that is used as a manipulation check. Overall, the process is divided in two parts: first part includes a review of how past literature has operationalised these concepts; the second part consists of selecting and adapting the scales that we are going to use to measure each of the variables in our thesis.

Brand attitudes is a frequently used variable in marketing and brand studies aimed at obtaining insights from the consumer's point of view. During the course of this research, some papers are of interest due to their developed concepts, frameworks and findings. In relation to the theoretical framework shown in Figure 3, brand attitudes have been studied as a dependent variable of logo redesign, as well as brand heritage. With assistance of the brand attitude scale used by Ahluwalia, Burnkrant, and Rao Unnava (2000), Walsh, Page Winterich and Mittal (2010; 2011) used quantitative methods in two experimental designs to broaden the understanding on how consumers responded to logo redesign, with a focus on brand commitment. A similar approach was used by Bolhuis, de Jong and van den Bosch (2018) by studying the corporate visual identity changes and stakeholders' perceptions with three independent variables affecting the outcome: type of stakeholder, the organisation, and the communication of the change. This study used quantitative methods in the form of an experimental design. Müller, Kocher and Crettaz (2011) used quantitative methods and a brand attitude scale from Sujan and Bettman (1989) to find the relevant logo characteristics that led to positive attitudes during brand revitalisations. In contrast, both Merchant and Rose (2013) and Rose et al. (2016) studied consumer attitudes on brand heritage through combined methods - qualitative and quantitative - in order to understand the effects of nostalgia and brand heritage on consumers' attitudes. These authors developed several studies, combining focus groups to

obtain the first insights on the concepts of the study, then generated the scales needed to measure them and, finally, ran experiments in order to acquire findings on the effects they produced. In both of their cases, 7-item positive emotions scale was generated by the authors (Merchant & Rose, 2013; Rose et al. 2016).

Measuring brand authenticity is increasingly becoming important as it has been acknowledged as a marketing concept of significant relevance. The papers that we have reviewed have studied the concept of authenticity in relation to brand heritage (Balmer, 2011; Boccardi et al. 2016; Fritz, Schoenmueller & Bruhn, 2017; Napoli et al. 2014; Napoli, Dickinson-Delaporte & Beverland, 2015; Urde, Greyser & Balmer, 2007). The majority of these studies aim at defining authenticity, with many, the preferred methodology is qualitative. However, the authors' efforts for understanding authenticity has allowed the operationalisation of the concept. Napoli et al. (2014) created a scale for measuring consumer-based brand authenticity (CBBA). Throughout their analysis, the authors suggested three dimensions inside brand authenticity from a consumer perspective: quality commitment, sincerity and heritage, by the use of statements measured on a 7-point scale (Napoli et al. 2014). The same scale was later used in a study about the relations between brand authenticity and brand trust, brand reputation and brand equity (Napoli, Dickinson-Delaporte & Beverland, 2015). Fritz, Schoenmueller and Bruhn (2017) developed a series of hypotheses related to brand authenticity, one of them placing the concept as a result of brand heritage. For their paper, brand authenticity was measured using Bruhn, Schoenmüller, Schäfer and Heinrich (2012) scale, that identified four dimensions for brand authenticity: continuity, originality, reliability and naturalness. Pecot and De Barnier (2017) focused on brand heritage and narrowed the dimensions to longevity and stability, which created brand associations, such as perceived brand authenticity.

According to Urde, Greyser and Balmer (2007), brand heritage can be quantified with the heritage quotient (HQ), which is determined through an analysis of the brand identity. However, likely due to its subjectivity, the application of the HQ has not been widespread. Therefore, past research into brand heritage has attempted to measure heritage through the development of scales, similar to the ways attitude and authenticity are evaluated. Merchant and Rose (2013) suggested twelve short statements to measure brand heritage in advertisements. Fritz, Schoenmueller and Bruhn (2017) created a new scale for brand heritage in order to determine its relationship with brand authenticity. Based on their CBBA and their developed brand heritage measure, Napoli, Dickinson-Delaporte & Beverland (2015) measured brands on an authenticity continuum. Frizzo, Korelo, and Müller Prado (2018) adapted brand heritage in measures from Napoli, Dickinson-Delaporte & Beverland (2015) in their study.

In summary, it has been shown from this review that we have focused on analysing studies with similar objectives and methodology to those found in this paper. After considering the available options, the measures for the variables in study are directed by a combination of Ahluwalia, Burnkrant and Rao Unnava (2000) and Sujun and Bettman's (1989) statements to measure *Brand Attitudes*; a compound among Bruhn et al. (2012) and Napoli et al. (2014) to measure *Perceived Brand Authenticity*; and Napoli et al. (2014) to measure the level of brand heritage in the logo or *Logo Heritageness*. To follow Napoli et al. (2014), we choose to use a 7-point Likert scale and also adapt it to measure all statements as it allows for two extremes (very low and very high scores), a middle ground (neutral), and the option to lean towards either side of neutral.

Table 1. *Selected Items for Operationalisation of the Variables used in the Main Test.*

Variable	Item	Source
Logo Heritageness	The logo reflects sense of tradition	(Napoli et al.,2014)
	The logo reinforces and builds on heritage	(Napoli et al., 2014)
	The logo reflects a timeless design	(Napoli et al., 2014)
Brand Attitudes	The brand is bad/good	(Ahluwalia et al., 2000; Sujan and Bettman, 1989)
	The brand is desirable/undesirable	(Ahluwalia et al., 2000)
	The brand is nice/awful	(Ahluwalia et al., 2000)
Perceived Brand Authenticity	The brand is a potent symbol of quality	(Napoli et al., 2014)
	The brand makes a genuine impression	(Bruhn et al., 2012)
	The brand does not seem artificial	(Bruhn et al., 2012)

3.2.2 Measurement and Scaling Procedures

The measurements used in this study for both the pre-test and the main test are nominal for gender, age, nationality, and additional comments. For age, the question asks if the participant is above 18 years old, therefore, the measurement is nominal. The independent variable, *Brand Heritage*, is measured with a 7-point interval scale, with 1 indicating the lowest level of brand heritage (non-heritage brand) and 7 indicating the highest level of brand heritage (heritage brand). This variable is predetermined by us in the high-level analysis in the pre-test section; however, it is also measured in our pre-test to verify our analysis. The independent variable, *Logo Version*, is classified by the two questionnaire types – low heritage logo and high heritage logo. It is validated with our measurement in terms of *Logo Heritageness* with a 7-point interval scale, being 1 the lowest and 7 the highest level of logo *heritageness* Furthermore, it also operates as part of the manipulation check. *Brand Attitudes* are evaluated through an interval measurement using a 7-point semantic differential scale, in which 1 indicates the negative extreme point and 7 the positive extreme point. Finally, *Perceived Brand Authenticity* is evaluated through interval measurement using a 7-point Likert scale, in which 1 indicates a strong disagreement on the statement and 7 a strong agreement on the statement. These variables, *Logo Heritageness*, *Brand Attitudes* and *Perceived Brand Authenticity* are measured in the main test. A 7-point Likert scale permits us to obtain different scores when adding together the results obtained in each statement, and helps appreciate smaller differences in terms of brand attitudes and perceived brand authenticity among each brand’s logo redesign.

3.3 Data Collection

To assess the brand heritage level for each of the brands (Burberry, Calvin Klein and Versace), dissection of the official web pages and media interviews are used for the high-level analysis. Our study is single cross-sectional as it gathers data only once (Burns & Burns, 2008).

Moreover, primary data is extracted through web-based inferential questionnaires or surveys for the pre-test and the main test. Inferential surveys are commonly used tools in marketing academia, and not only align with our research philosophy, but also are useful in determining relationships between variable and concepts (Easterby-Smith et al. 2018). While increasing time and effort to accumulate, primary data allows for greater control over the sample and data; therefore, increasing confidence that information obtained aligns with the objectives of the research (Easterby-Smith et al. 2018). The benefits that can be extracted from these web-based systems are the ease of delivery and collection of the sample, accessibility through multiple mediums (phone, computer or tablet), the freedom it represents in terms of location - when and where to do it - and the fact that it is free of charge. The platform used to create the questionnaires is Google Forms. Data collected from Google Forms provides a significant advantage as it can be extracted directly into our data analysis program, SPSS, which decreases input error as well as time and resources required to transcribe the data (Easterby-Smith et al. 2018). The questionnaires are randomised through an online tool which commands a script to create a link that redirects participants to one of the two questionnaires, with an associated probability of 50% (Martin, personal communication, 2019). Therefore, when participants access the link to the questionnaires, one of the two questionnaires is randomly generated for the participants. This tool is found through a statistics blog, *Teaching Statistics is Awesome*, and used with permission from the creator (Martin, personal communication, 2019). It provides two advantages: first, it eliminates the need to collect personal information, such as email address in order to distribute the online questionnaire; and second it helps to randomise the assignment of participants into treatment groups to control for extraneous variables (Burns & Burns, 2008).

The pre-test online questionnaire created to validate heritage brands is done through a website called Surveyswap. On the other hand, the main test online questionnaire is promoted through social media websites, such as Reddit, Snapchat, Facebook, Instagram and LinkedIn, and other websites such as SurveyTandem and SurveyCircle. These channels allow for a broad reach, are easily shared, and open for interaction, if needed. Furthermore, the main test questionnaire has also been promoted through word-of-mouth by the researchers conducting this study. Each volunteer is only asked to participate in one questionnaire. Therefore, we do not expect a participant that has completed the pre-test to be involved in the main test questionnaire of our study.

3.3.1 Questionnaire Design

The questionnaire or survey is designed to evaluate consumers' responses to logo redesigns. In the beginning section, there is a small introduction followed by general demographic questions and consent for participation. Afterwards, a brand's logo is presented in the second section of the questionnaire and participants are asked if they are familiar with the brand. If so, the test subjects are asked to complete the section, comprised of a total of nine short statements. After completion, another logo from the next brand is shown and the process is repeated. The same process occurs for the third and final brand logo. In total, the test subjects are asked to answer 27 statements. Any additional comments can be entered at the end of each section in a text box provided. The statements in the questionnaire are designed to measure three variables: *Logo*

Heritageness, Brand Attitudes, and Perceived Brand Authenticity. As previously mentioned, respondents are evaluated on a 7-point Likert scale. The main part of the questionnaire is structured as follows. First, three questions are aimed at assessing the level of brand heritage in the logo, as part of the validation of its classification. This variable is also part of the manipulation check. Second, three questions are related to brand attitudes. Lastly, three questions measure perceived brand authenticity. Thus, a total of nine statements are stated for each brand.

The questionnaire or survey design selection process has offered other options different from the one described in the previous paragraph. The final option has been chosen because it allows a simpler representation of the two groups in an experimental design, the group with the high heritage version of the logos and the group with the low heritage version of the logos. Moreover, this option allows for the randomisation of the placement of the test subjects into either of these groups. An inconvenience that can be found in this design is the amount of statements for questionnaire, that can result in a decrease of interest from the test subject view. In order to overcome this problem, we have selected relatively short and easy to understand statements. Another possible option is to lower the number of conditions of the variable brand heritage down to two, and analyse two brands instead of three. However, we find that Versace and Calvin Klein will produce results that will strengthen the relevance of heritage brands and their impact on the described dependent variables. The low heritage logo version “Logotypes B” is shown in the section Appendix section B as an example representation of the questionnaire design for the main test.

3.3.2 Sampling Method

Our study examines logo redesign and the effect that the level of brand heritage has on brand attitudes and perceived brand authenticity. Thus, the target population are international consumers over the age of 18. International consumers are used because the cultural differences are not within the scope of this study. For ethical reasons, only participants over 18 are asked to participate (Easterby-Smith et al. 2018). For those that indicate they are not above 18, the results are not used. As previously mentioned, the term *consumers* refer to people that have already consumed the brand or are potential consumers, with certain level of familiarity with the brand. In order to ensure that the test subjects fall into this category, the questionnaire asks the participant if they have any knowledge of the brand, and if they do not, the section is omitted. Thus, only data from participants that complete all sections are used. The results from incomplete data are discarded.

A sample is obtained from the target population through an online non-probability convenience sampling method. Due to time limitations the intent is to collect 50 respondents for the pre-test. For the main test, the aim is to collect 300 responses to the online questionnaire, 150 for each questionnaire (high heritage logo versions and low heritage logo versions). The sample size for the main test is based on previous studies on logo redesign and brand attitudes (Jun, Cho & Kwon, 2008; Napoli et al. 2014; Napoli, Dickinson-Delaporte & Beverland, 2015; Walsh, Page Winterich & Mittal, 2011).

3.4 Data Analysis and Analytical Methods

In order to observe and compare the effects of logo redesign on brand attitudes and perceived brand authenticity for different brand heritage levels, the study identifies three brands: two heritage brands (Burberry and Versace) and one non-heritage brand (Calvin Klein). The *heritageness* level for each brand has been determined according to the procedure described in the beginning of the research design section, as well as the pre-test section.

To validate the pre-test high-level analysis, results from the Likert scale in the pre-test questionnaire are analysed in SPSS using a repeated-measures ANOVA. According to Burns and Burns (2008), the analysis of variance, or ANOVA, is a hypothesis test for two or more treatment conditions and several dependant variables; it helps to determine if there are mean differences between the treatment groups. The authors advise to use a repeated-measures ANOVA when each respondent is measured more than once for each level of the independent variable. Our pre-test uses this repeated-measures design as the same participant is measured three times in total – one set of observations for each brand.

In order to obtain data about brand attitudes and perceived brand authenticity for each logo version in the main test, statements measured by a Likert-scale are shown to the identified test-subjects. After the results are obtained, data is exported to SPSS and quantitative analysis is done using a mixed ANOVA (the process within SPSS is similar to the pre-test). As this paper uses a mixed experimental design, we apply a mixed ANOVA in which the between-groups is the variable *Logo Version* (the high and low heritage questionnaires), and the within-subjects or repeated measures is performed using the *Brand Heritage* variable. The mixed ANOVA combines the analytical methods of both repeated as well as between-groups ANOVA into one (Pallant, 2001). This mixed analysis can help us determine if there is an impact on brand attitudes and perceived brand authenticity from a certain level of brand heritage, as well as an interaction effect on those variables from the logo version.

3.5 Validity and Reliability

In order to achieve the highest amount of validity and reliability in this research paper, all details are carefully considered and discussed. The specifications and procedures in the experiment are delicately designed and items deliberately included or excluded are balanced in order to minimise bias, keep within scope of our paper and to achieve the aim of our study. For example, determining the HQ of a brand is highly subjective, consequently, the pre-test survey and the high-level analysis are used to complement each other in order to justify whether a brand is a heritage brand or not. Together with the logo *heritageness* items in the main questionnaire, it is an attempt to further provide reliability and validity to our research paper. Ultimately, the goal of high validity and reliability remains an overarching objective of this paper.

Burns and Burns (2008) state the importance of having reliable and precise measures in research. The authors state that unreliable measures can impact statistical validity. As a result,

the measures and scales used in our study's questionnaires are based off previous published research on brand attitudes, perceived brand authenticity and brand heritage. The measures used are also closely related with the theory applied to define the concepts we are studying. In addition, the Cronbach's alpha is calculated for each of the scales in both the pre-test (see Table 3) and the main test (see Table 8 and Table 9). The Cronbach's alpha measures reliability of scales in surveys to ensure items are evaluating the same concept (Burns & Burns, 2008). According to Burns and Burns (2008), alphas with 0.7 and above are considered sufficient, but alphas of 0.8 and above are highly satisfactory. However, Cronbach's alpha over 0.6 is also acceptable (Hinton, Brownlow, McMurray & Cozens, 2004; van Griethuijsen, van Eijck, Haste & den Brok, 2014). All Cronbach's alphas in our study are above the acceptable limits. Thus, we believe there is internal reliability as well as validity in the process used to create this research paper. However, due to the scope of our paper and the limited logo-specific measures from previous studies, we have slightly adapted some items to refer only to the brand logo. Therefore, the heritage items in the main questionnaire are similar to the ones used in previous research papers, except the word *brand* is replaced with *logo*.

As mentioned in the sampling method section, the particular sample size chosen (300) is not only based on studies in related research streams performed by other academics (Jun, Cho & Kwon, 2008; Napoli et al. 2014; Napoli, Dickinson-Delaporte & Beverland, 2015; Walsh, Page Winterich & Mittal, 2011), but also helps prevent issues regarding low statistical power from small samples that can lead to type II errors (Burns & Burns, 2008). Furthermore, the design of our experiment is carefully devised with full transparency to provide results that are consistent, dependable and reliable if it is replicated at another time. As experimental designs are more easily reproduced, it can also help to increase external validity (Easterby-Smith et al. 2018). In this paper, we include all the scales and measurements we used in both the pre-test and main test, as well as provide all the details regarding where the tests were posted on the Internet. In addition, the images used for the brand logos (section A), as well as the screenshots of the main test questionnaire (section B) and the pre-test questionnaire (section C) are shown in the Appendix.

While this study employs quantitative testing, limited time and resources results in a convenience sample that prevents us from being able to generalise the results, due to it being a non-representative sample of the population (Burns & Burns, 2008). Consequently, the use of a non-probability sampling design in this study prevents us from fully satisfying the conditions of external validity (Burns & Burns, 2008). However, we try to incorporate as much randomisation as possible to eliminate further selection bias. For example, the two versions of the main questionnaire are randomised through an online tool, which creates a link that automatically redirects participants of the study to one of the two questionnaires with a 50% probability (Martin, personal communication, 2019). This improves our experimental design through random assignment (Burns & Burns, 2008). We are aware that the variables that we intend to study, brand attitudes and perceived brand authenticity, can be affected by many other factors, such as gender, nationality, age group, income, etc. However, due to time limitations we are unable to control for all these external variables. For this reason, we believe randomisation improves our method. Furthermore, it helps to maximise internal validity by ensuring that individual differences are randomly distributed between the two experimental groups; therefore, reducing potential alternative causes for discrepancies in results (Easterby-Smith et al. 2018). While the results cannot be generalised, we believe they can be suggestive

and significant amounts of knowledge can be obtained that contributes to a wide range of marketing, management and business subjects.

Furthermore, our particular questionnaire design of evaluating three separate brands instead of performing a before and after examination of the same brand helps disguise the true intention of our experiment, which increases internal face validity of the paper (Burns & Burns, 2008). The heritage levels of the brands and logos are predetermined from the high-level analysis and pre-test. Therefore, the logo *heritageness* items in the main questionnaire also serve a dual purpose. They are included in the main test to not only verify our logo classification decisions through a manipulation check, but also act as filler items to conceal the intent of our questionnaire and, thus, further increase face validity (Burns & Burns, 2008).

Repeated testing is known to threaten internal validity (Burns & Burns, 2008). We are aware that participation in the pre-test may affect perception which can impact the statistical results of the main survey. There are no technical measures, such as IP address checks or required Google account sign-in to prevent participants from completing both tests. Nor do we collect personal information or emails to track the potential occurrence of this scenario. However, we believe that we have taken adequate steps in our research design that will diminish any threats to internal validity. First, the pre-test and main test questionnaires are posted on different websites in order to minimize the probability that the same person participates in both questionnaires. Moreover, different measures are also used in both tests. The pre-test questionnaire measures brand heritage, whereas, the main test measures logo *heritageness*. In addition, as previously mentioned, the logo heritage measurements in the main test are not considered fundamental but rather serve a dual ancillary purpose for validity and concealment. Therefore, it is unlikely there will be any significant impacts from repeated testing.

3.6 Pre-test

This subsection describes in detail the pre-test design and its results. As previously mentioned, the pre-test is formed by a combination of an online questionnaire, through which respondents assess the brand heritage of the three brands selected – Burberry, Versace and Calvin Klein; and a high-level analysis of each of the brands using Urde, Greyser and Balmer’s model (2007) (see Figure 2). The purpose of this pre-test is to correctly assess the brands into brand heritage levels, or classify them into heritage brands and non-heritage brands.

3.6.1 Pre-test Design

In order to test brand attitudes and perceived brand authenticity of logo redesigns on heritage brands, an experiment is conducted using three brand names from the fashion industry. This industry is characterised by a highly competitive environment, significant imagination and originality; consequently, creators will tend to look into heritage as a source of creative artistry (Pistilli, 2018). The three selected brands consist of Burberry, Versace and Calvin Klein. The images of the brand logos and their redesigns can all be found in the Appendix section A.

However, before we start our main experiment, a pre-test is performed in order check for the validity and reliability of our heritage brands. The pre-test consists of two main parts. The first part of the pre-test uses the research from Urde, Greyser and Balmer (2007). The authors' five major elements of heritage brands - track record, longevity, history important to identity, core values, and use of symbols - are adapted at a high level to determine the HQ for the three brands based on information obtained on their website, interviews, Annual General Meeting (AGM) of Shareholders reports, or other news releases from the companies. Secondly, an online questionnaire is designed, using brand heritage scales from previous research, to ask 50 consumers to assess the level of heritage of each of the brands. The questionnaire consists of five items per brand for a total of 15 questions, and the target group for the pre-test is similar to the one from the main test questionnaire. The five items used in the pre-test questionnaire to assist in determining brand heritage are shown in Table 2. The pre-test questionnaire is shown in the Appendix section C, and the results of the pre-test questionnaire are discussed after the high-level analysis shown below.

Table 2. *Items for Pre-Test Questionnaire.*

Variable	Item	Source
Brand Heritage	The brand has a strong connection to an historical period in time. culture and/or specific region.	(Napoli et al. 2014)
	The brand has a strong link to the past. which is still perpetuated and celebrated to this day.	(Napoli et al. 2014)
	The brand reminds me of a golden age	(Napoli et al. 2014)
	The brand exudes a sense of tradition	(Napoli et al. 2014)
	The brand reflects a timeless design	(Napoli et al. 2014)

3.6.2 Pre-Test High-Level Analysis

Firstly, the elements of heritage are applied to Burberry as a reference point. Burberry has the longest proven track record of the three brands: it has delivered high fashion, authenticity and quality for over 163 years (Burberry, online, a). Furthermore, it is also a brand with high longevity, shown by consistently carrying forward a unique English style and iconic Burberry pattern, which symbolises the brand's heritage and traditions (Burberry, online, a). Its three core values of protect, explore and inspire are ingrained in history and heritage, but also guides its strategy into the future (Burberry, online, a). Moreover, the company is persistent in the use of symbols, shown through its memorable pattern and its equestrian knight, which has been part of the logo for over a century, before recently being removed in the new logo version (Burberry, online, a). Finally, Burberry's history is strongly linked to its identity, this is emphasised not only with a dedicated page illustrating its history (Burberry, online, a), but is also expressed numerous times in Burberry's most recent AGM report (Burberry, 2018a). Overall, when examining the heritage elements for Burberry, it can be considered as a brand with a relatively high HQ. In support, multiple papers in academia have also referred to Burberry as a heritage brand (Balmer, 2011; Cooper, Miller & Merrilees, 2015; Urde & Greyser, 2015). However, the

recent logo redesign may have reduced the *heritageness* through the use of symbols by eliminating their iconic equestrian knight. Consequently, this study observes if this is the case. The new logo consists of only the brand name of Burberry with *London England* below in a sans-serif font (see Appendix A). The removal of an important and historic symbol from its logo, leads us to believe that the redesigned Burberry logo is the version with a lower heritage compared to its predecessor.

Versace represents an interesting brand due to the strong use of a distinct symbol, the Medusa head, in its logo. However, in the late 90s Versace's logo consisted only of its brand name in a black sans-serif font, that was later redesigned with the inclusion of the Medusa's head above its brand name (see Appendix section A). Medusa is a Gorgon of Greek mythology (Garcia, 2013), therefore represents a historic and cultural symbol. The use of cultural symbols is a common practice used by place branding campaigns that focus on heritage branding (Wilson, 2018). An analysis online shows Versace as a brand with a medium HQ. Firstly, it is a relatively young brand, having been around for 41 years (Versace, n.d.). Therefore, it has the shortest longevity of the three brands in this study. The track record can be perceived in the brand's style, that for years has been daring and bold (Versace, n.d.). It "represents its heritage through its strong and fearless designs, while addressing a new global audience which continues to strengthen Versace's position in contemporary culture." (Versace, n.d., n.p.). However, the change of CEOs since the murder of the founder, Gianni Versace, in 1997 have transformed the brand towards "a complete revolution, made by technology and social media" (Versace, 2018, 5:24). The latest acquisition of the brand by Capri Holdings Limited, together with Donatella Versace, sister of the founder and vice president of Versace, will decide the future of the brand (Capri Holdings Limited, 2018). Furthermore, an analysis of their website shows that there is not much of an origin story or mythology behind the brand. To provide with the "winning formula for a modern generation" the fashion brand's core values are "victory, consciousness, unity, positivity, diversity, adventure and integrity" (Versace, n.d., n.p.). In an interview, Donatella Versace states that the Italian luxury fashion brand must be adaptive and innovative to capture new consumers but must never forget its heritage, as it is part of its identity (D'Souza, 2018). Moreover, the fact that the brand is still managed by the Versace family, signifies continuity which enhances brand heritage (Hakala, Lähti & Sandberg, 2011). While it is evident that Versace links its heritage to its identity, overall, we believe the brand is inconsistent, especially on its website, at communicating its heritage, therefore, we consider it is a heritage brand with medium HQ.

Through an analysis online, there are no indications that Calvin Klein (CK) uses heritage as part of its value proposition nor positioning. This American fashion brand has a track record of creating clean and innovative designs for over fifty years (Calvin Klein, online, a). Furthermore, Calvin Klein can be considered as a brand driven by continuous evolution, as stated by their CEO, Steve Shiffman: "Calvin Klein has long been driven by its ability to balance art and commerce in a culturally relevant way - one that has defied the status quo." (Calvin Klein, 2019, n.p.). Its core identity is driven by consumer engagement "through provocative, modern, sensual and iconic lifestyle imagery" (Calvin Klein, online, a, n.p.). Moreover, the use of symbols for Calvin Klein is typically shown through its minimalist aesthetic design, which is also portrayed in its typographic logo. When examining Calvin Klein's website, there is rarely mention of heritage or history as part of their identity. Instead, it describes itself as *modern*, and as the CEO proclaims, one that focuses on "pushing fashion and culture forward." (Calvin

Klein, online, a, n.p.). Together, Calvin Klein’s brand story does not identify or position itself with heritage; therefore, it is likely that this brand has a low or no HQ. It is important to note that this study’s focal point is on the master brand, Calvin Klein, and not on the multiple sub-brands (Calvin Klein Jeans, Calvin Klein Underwear and Calvin Klein Performance). When comparing Calvin Klein’s logos, the redesigned logo is all capitalised and the letters are all the same size in contrast to the pre-redesign (see Appendix section A). According to Calvin Klein’s Instagram post (2017, n.p.), the new logo is “a return to the spirit of the original. An acknowledgement of the founder and foundations of the fashion house”. Consequently, we believe that the logo redesign is the version of high heritage. Nevertheless, to provide more clarity in our academic experimentation, we added, *Established in 1968*, to the current logo to increase the sense of *heritageness*. This addition of the origin year is a way to portray history which assists in operationalising brand heritage (Hakala, Lätti & Sanberg, 2011).

In summary, through our high-level analysis, we estimate that Burberry has the highest HQ, followed by Versace with medium HQ, and finally by Calvin Klein with no or low HQ. These expectations will be validated through the pre-test survey result analysis in the next subsection.

3.6.3 Pre-test Results

The Cronbach’s alpha calculated for Burberry ($\alpha = 0.837$), Calvin Klein ($\alpha = 0.848$) and Versace ($\alpha = 0.810$) are all highly satisfactory in measuring the brand heritage construct (Table 3).

Table 3. *Cronbach’s Alpha Results for the Pre-Test Brand Heritage Items.*

Variable	Item	Cronbach’s α per Brand		
		Burberry	Calvin Klein	Versace
Brand Heritage	The brand has a strong connection to an historical period in time, culture and/or specific region.	$\alpha = 0.84$	$\alpha = 0.85$	$\alpha = 0.81$
	The brand has a strong link to the past, which is still perpetuated and celebrated to this day.			
	The brand reminds me of a golden age			
	The brand exudes a sense of tradition			
	The brand reflects a timeless design			

Note: All items are measured on a 7-point Likert scale (1 = strongly disagree; 7 = strongly agree)

The pre-test questionnaire obtained 56 respondents; however, 4 were removed due to invalid data, resulting in 52 data sets. Through SPSS, the means were calculated from the total of the five brand heritage items from each of the three brands. As previously mentioned, the pre-test is based on a repeated-measures design; hence, we analyse our data through a repeated-measures ANOVA to determine if the differences are significant. According to Burns and Burns (2008), before we continue with the analysis, we must consider four important assumptions of the repeated-measures ANOVA: (1) normality, (2) homogeneous variance, (3) independent observations, and (4) sphericity. The authors advise assessing normality through histograms,

and based on our data, our distributions are normal (see Appendix section D). They also suggest that if the ratio between the largest and smallest variances is less than three, there is no violation of the assumption for homogenous variance. As this pre-test was posted only on one survey site and, through experience, it did not allow respondents to repeat any test once it has been completed. Therefore, we are confident that each response is independent from one another. Our last assumption of sphericity is tested through the repeated-measures ANOVA before we interpret our results.

We use the repeated-measures output, Mauchly’s Test of Sphericity (Table 4), to evaluate sphericity. According to Field (2005, p.429), Mauchly’s Test of Sphericity “tests the hypothesis that the variances of the differences between conditions are equal”. In other words, the assumption of sphericity is violated when we obtain a significant result in Mauchly’s Test of Sphericity. According to Table 4, our test is not significant ($p > 0.05$); therefore, we can assume sphericity. We can check for homogenous variance through the descriptive statistics (Table 5). As previously mentioned, by taking the ratio of the largest and smallest variance - squaring the standard deviation – our ratio is approximately 1.11; therefore, we can also assume there is homogenous variance. As our assumptions for the repeated-measures ANOVA are met, we can continue to interpret the results from our output.

Table 4. *Mauchly's Test of Sphericity for Variable Brand Heritage.*

BRAND HERITAGE: Mauchly's Test of Sphericity ^a		
Within Subjects Effect	Mauchly's W	Sig
Brand Heritage	0.94	0.195

^a Design: Intercept + Logo Version

Within Subjects Design: Brand Heritage

Note: Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables is proportional to an identity matrix.

The descriptive statistics (Table 5) show Burberry ($M=4.56$, $SD=1.09$) with the highest mean score, followed by Versace ($M=4.35$, $SD=1.29$) and then Calvin Klein ($M=2.93$, $SD=1.04$). These descriptive statistics concur with our high-level analysis; however, further inquiry is required to determine if they differ on a statistically significant level. Our test of within-subjects effects (Table 6) shows a statistically significant result $F(2,52)=38.96$, $p < 0.05$. In other words, the means of the three brands are different.

Table 5. Descriptive Statistics for Brand Heritage.

BRAND HERITAGE: Descriptive Statistics			
Brand	M	SD	N
Burberry	4.56	1.09	53
Versace	4.35	1.29	53
Calvin Klein	2.93	1.04	53

Note: Items for variable Brand Heritage are measured on a 7-point Likert scale (1 = strongly disagree; 7 = strongly agree)

Table 6. Within-Subjects Design (Repeated Measures ANOVA) for Variable Brand Heritage.

BRAND HERITAGE: Tests of Within-Subjects Effects						
	Source	df	Mean Square	F	Sig	Partial Eta Squared
Brand Heritage	Sphericity Assumed	2	41.47	38.96	<0.001	0.428
Error (Brand Heritage)	Sphericity Assumed	104	1.06			

A post-hoc analysis with pairwise comparisons helps determine where the differences lie. According to our comparisons (Table 7), the difference between Burberry and Versace are not statistically significant ($p > 0.05$); however, Calvin Klein has statistically significant differences with both Burberry and Versace ($p < 0.05$).

Table 7. Post-Hoc Test: Pairwise Comparisons for Brand Heritage.

BRAND HERITAGE: Pairwise Comparisons					
(I) Brand	(J) Brand	Mean difference (I-J)	Sig	95% Confidence Interval for Difference	
				Lower Bound	Upper Bound
Burberry	Versace	0.21	0.246	-0.15	0.57
	Calvin Klein	1.63*	< 0.001	1.23	2.02
Versace	Burberry	-0.21	0.246	-0.57	0.15
	Calvin Klein	1.42*	< 0.001	0.97	1.86
Calvin Klein	Burberry	-1.63*	< 0.001	-2.02	-1.23
	Versace	-1.42*	< 0.001	-1.86	-0.97

Based on estimated marginal means

* The mean difference is significant at the .05 level.

The results from the pre-test imply we correctly identified that both Burberry and Versace have more heritage than Calvin Klein. However, based on our observations with the data, Burberry may not have higher levels of brand heritage than Versace. While the data on Calvin Klein from the surveys cannot clearly indicate they are not a heritage brand; nevertheless, the important

observation is that they have a lower level of brand heritage than the other two brands. Overall, when combining the survey results with our high-level analysis, we strongly believe that our evaluation of Calvin Klein as a non-heritage brand is appropriate in our study. The brand logos presented in the pre-test are currently used by the brands (see Appendix section A). It must be noted that the logo used for Calvin Klein's is the fully capitalised version with no *Established in 1968*. For the heritage brands, the equestrian knight in the Burberry logo is absent, whereas, Versace includes the Medusa head. Consequently, we believe this use of symbols may play a role in the perception of heritage for Versace and Burberry, thus, affecting the mean scores for both of these brands. Results from the main study may assist in confirming the validity of this conclusion.

4 Results of Main Test

The goal of study was to obtain 300 total participants. Due to time constraints, we were only able to obtain a total of 291 respondents. Of those results, 67 were removed due to either participants' unfamiliarity with all three brands, or they were under the age of 18. Consequently, the final data set consists of 224 respondents with 115 responses for high heritage (logotypes A) questionnaire and 109 responses for low heritage (logotypes B). Our data is uploaded onto *figshare repository* online (the file name is the title of this paper), hence, any future researchers can download our data to do their own statistical analysis or for citational purposes. As this sample is relatively large and equal, we believe it is adequate to proceed with data analysis.

The Cronbach's alpha for the questions that make up the variables (*Logo Heritageness*, *Brand Attitudes*, and *Perceived Brand Authenticity*) for both questionnaires are all above the acceptable threshold (see Table 8 and Table 9). Therefore, the measures are reliable in assessing each variable construct.

Table 8. Cronbach's Alpha Results for the Main Test Dependent Variables Items, High Heritage Questionnaire "Logotypes A".

HIGH HERITAGE QUESTIONNAIRE "LOGOTYPES A"				
Variable	Item	Cronbach's α per Brand		
Logo Heritageness	The logo reflects sense of tradition			
	The logo reinforces and builds on heritage	Burberry $\alpha = 0.78$	Calvin Klein $\alpha = 0.79$	Versace $\alpha = 0.84$
	The logo reflects a timeless design			
Brand Attitudes	The brand is bad/good			
	The brand is undesirable/desirable	Burberry $\alpha = 0.84$	Calvin Klein $\alpha = 0.92$	Versace $\alpha = 0.89$
	The brand is awful/nice			
Perceived Brand Authenticity	The brand is a potent symbol of quality			
	The brand makes a genuine impression	Burberry $\alpha = 0.68$	Calvin Klein $\alpha = 0.79$	Versace $\alpha = 0.80$
	The brand does not seem artificial			

Note: Items for variables Logo "Heritageness" and Perceived Brand Authenticity are measured on a 7-point Likert scale (1 = strongly disagree; 7 = strongly agree); Items for variable Brand Attitudes are measured on a 7-point semantic differential scale (1= negative extreme point; 7 = positive extreme point)

Table 9. Cronbach’s Alpha Results for the Main Test Dependent Variables Items, Low Heritage Questionnaire “Logotypes B”.

LOW HERITAGE QUESTIONNAIRE “LOGOTYPES B”				
Variable	Item	Cronbach’s α per Brand		
Logo Heritageness	The logo reflects sense of tradition			
	The logo reinforces and builds on heritage	Burberry $\alpha = 0.84$	Calvin Klein $\alpha = 0.76$	Versace $\alpha = 0.85$
	The logo reflects a timeless design			
Brand Attitudes	The brand is bad/good			
	The brand is undesirable/desirable	Burberry $\alpha = 0.87$	Calvin Klein $\alpha = 0.92$	Versace $\alpha = 0.93$
	The brand is awful/nice			
Perceived Brand Authenticity	The brand is a potent symbol of quality			
	The brand makes a genuine impression	Burberry $\alpha = 0.83$	Calvin Klein $\alpha = 0.85$	Versace $\alpha = 0.82$
	The brand does not seem artificial			

Note: Items for variables Logo “Heritageness” and Perceived Brand Authenticity are measured on a 7-point Likert scale (1 = strongly disagree; 7 = strongly agree); Items for variable Brand Attitudes are measured on a 7-point semantic differential scale (1= negative extreme point; 7 = the positive extreme point)

A mixed ANOVA is conducted to determine the effect of the independent variables, *Logo version* and *Brand Heritage*, on the dependent variables of *Brand Attitude*, *Perceived Brand Heritage*, and *Logo Heritageness*. The varying levels of *Brand Heritage* are observed through Burberry, Calvin Klein, and Versace. For organisation, the results are divided up into sections by the variables of *Logo Heritageness*, *Brand Attitude*, and *Perceived Brand Authenticity*. For simplicity in the Results section, the created tables are a summary of required values from the outputs from SPSS.

Before we analyse the results, we must consider several underlying assumptions for the use of a mixed ANOVA. These assumptions are: level of measurement for dependent variable must be a scale measure; the sample is obtained through random sampling methods; the observations are independent of one another; the data follows a normal distribution; and the variance satisfies the assumptions of homogeneity; sphericity; and homogeneity of intercorrelations (Pallant, 2001). Firstly, our dependent variables are all in an interval scale. Secondly, our samples are measured through convenience sampling, therefore, the method used is not random; however, this assumption is oftentimes not met because non-random samples are common in real-life testing (Pallant, 2001). The third is independence of observations, in other words, the participant results must be independent of one another. While there are no technical measures in our study that prevent the same participants from repeatedly participating in our research, we presume that they only participate once, therefore, we assume this assumption is satisfied. Normality can be confirmed through the histogram and Q-Q plots from SPSS; nonetheless, it is important to note that ANOVAs are quite resistant to violations of this assumption and large sample sizes - more than 30 - are unlikely to cause significant issues (Burns & Burns, 2008; Pallant, 2001). Not only is our sample size over 30, the histograms and Q-Q plots (see Appendix

section E) from SPSS indicate our distributions are all approximately normal. The last three assumptions of homogeneity of variance, sphericity and homogeneity of correlations, are tested through analysis of our results in SPSS with Levene's test of Equality of Error Variance, Mauchly's Test of Sphericity, and Box's Test of Covariance Matrices, respectively. These will be continued in the Results subsections below.

4.1 Manipulation Check: Logo Heritageness

Our analysis of the main test begins with the manipulation check variable, *Logo Heritageness*. Recall that we use this variable as a manipulation check for two purposes: (1) to validate our treatment, confirming our decision to allocate the logos to high heritage questionnaire or low heritage questionnaire; and (2) disguise the true intention of our questionnaire. Before continuing with our analysis, as previously mentioned, there are specific assumptions that must be checked for each of the variables.

The null hypothesis for Box's Test of Equality of Covariance Matrices (Table 10) states that the observed covariance matrices of the dependent variables are equal across all groups. According to Table 10, Box's Test of Equality of Covariance Matrices is not statistically significant ($p > 0.05$), thus, we accept the null hypothesis that the correlation is homogeneous. The p value for Mauchly's Test of Sphericity is statistically significant ($p < 0.05$), therefore, we cannot assume sphericity. According to Field (2005), when there is a violation in sphericity the corrections from the Greenhouse-Geisser or Huynh-Feldt values can help create a valid F ratio to continue with the analysis. Field (2005) refers to Girden (1992) when determining which estimate to use. When the epsilon values are 0.75 the Huynh-Feldt correction is used, and when it is below 0.75 the Greenhouse-Geisser is used (Girden, 1992). As our epsilon values are above 0.75, we refer to the Huynh-Feldt estimates to continue our analysis. Finally, the null hypothesis of Levene's Test of Equality of Error Variances (Table 11) is that the error variance of the dependent variable is equal across all groups. The Calvin Klein and Versace p values of Levene's Test of Equality of Error Variances (Table 11) are not statistically significant ($p > 0.05$), consequently, the variances are homogenous. However, for Burberry the p value is statistically significant ($p < 0.05$). Because ANOVAs are robust to violations to homogenous variances and our sample size are fairly equal, we can continue with our analysis with the mixed ANOVA (Field, 2005).

Table 10. *Box's Test of Equality of Covariance Matrices and Mauchly's Test of Sphericity for Variable Logo Heritageness.*

LOGO HERITAGENESS: Box's Test of Equality of Covariance Matrices ^a			LOGO HERITAGENESS: Mauchly's Test of Sphericity ^a			
Box's M	F	Sig.	Within Subjects Effect	Mauchly's W	Sig	Epsilon (Huynh-Feldt)
6.17	1.01	0.414	Brand Heritage	0.95	0.005	0.968

^a Design: Intercept + Logo Version
 Within Subjects Design: Brand Heritage
 Note: Tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups.

^a Design: Intercept + Logo Version
 Within Subjects Design: Brand Heritage
 Note: Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables is proportional to an identity matrix.

Table 11. *Levene's Test of Equality of Error Variances for Variable Logo Heritageness.*

LOGO HERITAGENESS: Levene's Test of Equality of Error Variances ^a		
	F	Sig
Burberry Logo Heritageness (LH)	4.416	0.037
Calvin Klein Logo Heritageness (LH)	2.722	0.100
Versace Logo Heritageness (LH)	0.424	0.515

^a Design: Intercept + Logo Version
 Within Subjects Design: Brand Heritage
 Note: Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

Descriptive statistics obtained in SPSS (Table 12) show number of mean (*M*), standard deviation (*SD*) and sample number (*N*) for our manipulation check variable, *Logo Heritageness*, for the six conditions - each of the three brands (Burberry, Calvin Klein and Versace), separated by the two *Logo Versions* (low and high heritage). As previously mentioned, the number of respondents is 224 with 109 respondents in the low heritage logo questionnaire and 115 in the high heritage logo questionnaire. Furthermore, the *Logo Heritageness* is highest for Versace ($M=4.93$, $SD=1.39$), followed by Burberry ($M=4.56$, $SD=1.44$), and then Calvin Klein ($M=4.37$, $SD=1.28$), in the low heritage questionnaire. In the high heritage questionnaire, the highest is Versace ($M=5.25$, $SD=1.30$), followed by Burberry ($M=5.20$, $SD=1.25$) and then Calvin Klein ($M=4.31$, $SD=1.44$). The results generally illustrate that the high heritage questionnaire produced higher means across all brands than the low heritage, with exception of Calvin Klein. Further analysis below determines if the differences within the same questionnaire as well as between questionnaires are statistically significant.

Table 12. *Descriptive Statistics for Variable Logo Heritageness.*

LOGO HERITAGENESS: Descriptive Statistics				
Logo Version		M	SD	N
Burberry Logo Heritageness (LH)	Low Heritage	4.56	1.44	109
	High Heritage	5.20	1.25	115
	Total	4.89	1.38	224
Calvin Klein Logo Heritageness (LH)	Low Heritage	4.37	1.28	109
	High Heritage	4.31	1.44	115
	Total	4.34	1.36	224
Versace Logo Heritageness (LH)	Low Heritage	4.93	1.39	109
	High Heritage	5.25	1.30	115
	Total	5.09	1.35	224

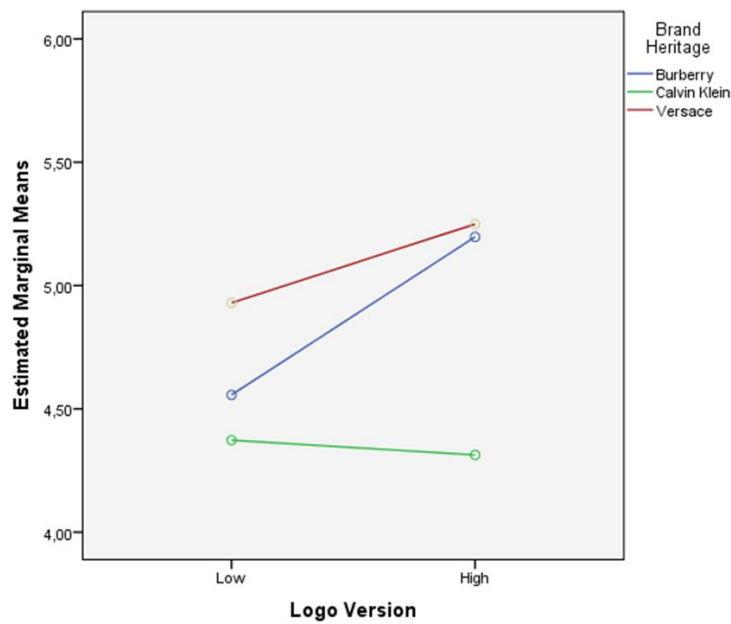
Note: Items for variable Logo Heritageness are measured on a 7-point Likert scale (1 = strongly disagree; 7 = strongly agree)

In order to assess the main effect as well as an interaction effect for the independent variables of *Logo Heritageness* and *Logo Version*, we refer to Table 13. According to this table, there is a statistically significant main effect for *Logo Heritageness*, $F(2,444)=32.730$, $p < 0.05$; however, according to Cohen (1988), the effect size is small (partial eta squared=0.13). In other words, this main effect indicates that, if we ignore whether the mean scores came from low or high questionnaires, the *Logo Heritageness* mean scores between Burberry, Calvin Klein and Versace were significantly different.

In addition, there is a statistically significant interaction effect for *Logo Heritageness* and *Logo Version*, $F(2,444)=6.805$, $p < 0.05$ (Table 13). However, the effect size is also small (partial eta squared=0.03) (Cohen, 1988). An interaction effect occurs when one of the independent variables interacts with another independent variable to impact the dependent variable (Burns & Burns, 2008). The profile plot on a graph (Figure 5) helps to interpret the interaction. There are indications of an interaction effect when lines plotted are not parallel (Burns & Burns, 2008). According to Figure 5, Burberry and Versace displayed higher *Logo Heritageness* mean scores in the high heritage logo questionnaire than for the low heritage logo questionnaire. However, the opposite is true for Calvin Klein, the mean score for *Logo Heritageness* is slightly higher in the low heritage version than in the high heritage version of the questionnaires. It is important to note the scale of the plots on the Y-axis is shortened in order to provide visual clarity.

Table 13. *Within-Subjects Design (Mixed ANOVA) for Variable Logo Heritageness.*

LOGO HERITAGENESS: Tests of Within-Subjects Effects						
Source		df	Mean Square	F	Sig	Partial Eta Squared
Brand Heritage	Huynh-Feldt	1.94	34.20	32.73	< 0.001	0.13
Brand Heritage * Logo Version	Huynh-Feldt	1.94	7.11	6.805	0.001	0.03
Error (Brand Heritage)	Huynh-Feldt	429.66	1.05			



Note: The scale used in the graph is 4 to 6. The variable Logo Heritageness range is from 1 to 7.

Figure 5. *Profile Plot of Differences in Logo Heritageness between Logo Version.*

To test the main effect from the *Logo Version* variable, it is shown separately from the table of the within-subjects. As shown in Table 14, the main effect of *Logo Version* is statistically significant, $F(1,222)=4.354$, $p < 0.05$. Consequently, there is a main effect from the *Logo Version* variable on *Logo Heritageness*. In other words, ignoring the variable *Heritage Brand*, there are differences on the mean scores between *Logo Versions*.

Table 14. *Test of Between Subjects Effects (Mixed ANOVA) for Variable Logo Heritageness.*

LOGO HERITAGENESS: Tests of Between-Subjects Effects

Source	df	Mean Square	F	Sig	Partial Eta Squared
Logo Version	1	15.11	4.354	0.038	0.019
Error	222	3.47			

Due to a statistically significant main effect for *Brand Heritage*, a post-hoc test is completed in SPSS. The Estimated Marginal Means (Table 15) combines the means of the *Logo Heritageness* scores from both logo questionnaires (low and high logo version) for each of the *three Brand Heritage* variables - Burberry, Calvin Klein, and Versace. In addition, the combined means (Table 15) are compared between the *Brand Heritage* variables (Table 16). The output (Table 16) indicates that the difference in combined mean *Logo Heritageness* scores between Burberry, Calvin Klein, and Versace are all statistically significant ($p < 0.05$). Versace ($M=5.09$, $SE=0.090$) has the highest mean score for *Logo Heritageness*, followed by Burberry ($M=4.88$, $SE=0.090$) and Calvin Klein ($M=4.34$, $SE=0.091$).

Table 15. *Post-Hoc Test: Estimated Marginal Means for Logo Heritageness.*

LOGO HERITAGENESS: Estimated Marginal Means - Estimates

Brand Heritage	Mean	Std. Error	95% Confidence Interval for Difference	
			Lower Bound	Upper Bound
Burberry	4.88	0.090	4.70	5.06
Calvin Klein	4.34	0.091	4.16	4.52
Versace	5.09	0.090	4.91	5.27

Table 16. *Post-Hoc Test: Pairwise Comparisons for Logo Heritageness.*

LOGO HERITAGENESS: Pairwise Comparisons

(I) Brand Heritage	(J) Brand Heritage	Mean Difference (I-J)	Sig	95% Confidence Interval for Difference	
				Lower Bound	Upper Bound
Burberry	Calvin Klein	0.53*	< 0.001	0.33	0.74
	Versace	-0.21*	0.014	-0.38	-0.04
Calvin Klein	Burberry	-0.53*	< 0.001	-0.74	0.33
	Versace	-0.75*	< 0.001	-0.93	-0.56
Versace	Burberry	0.21*	0.014	0.04	0.38
	Calvin Klein	0.75*	< 0.001	0.56	0.93

Based on estimated marginal means

* The mean difference is significant at the .05 level.

In addition, as there is a statistically significant main effect for *Logo Version*, we complete another post-hoc in SPSS. The Estimated Marginal Means (Table 17) combines the means of

all the brand scores (Burberry, Calvin Klein and Versace) and differentiates by low and high questionnaire. Table 17 indicates that the high *Logo Version* ($M=4.92$, $SE=0.10$) has a higher mean score than the low *Logo Version* ($M=4.62$, $SE=0.10$), and Table 18 confirms that the difference is statistically significant ($p < 0.05$).

Table 17. *Post-Hoc Test: Estimated Marginal Means of Logo Heritageness by Logo Version.*

LOGO HERITAGENESE: Estimated Marginal Means - Estimates

Logo Version	Mean	Std. Error	95% Confidence Interval for Difference	
			Lower Bound	Upper Bound
Low	4.62	0.10	4.42	4.82
High	4.92	0.10	4.72	5.12

Table 18. *Post-Hoc Test: Between Groups Pairwise of Logo Heritageness by Logo Version.*

LOGO HERITAGENESE: Estimated Marginal Means - Pairwise Comparisons

(I) Logo Version	(J) Logo Version	Mean difference (I-J)	Std. Error	Sig	95% Confidence Interval for Difference	
					Lower Bound	Upper Bound
Low	High	-0.30*	0.14	0.038	-0.58	-0.02
High	Low	0.30*	0.14	0.038	0.02	0.58

Based on estimated marginal means

* The mean difference is significant at the .05 level.

Since there is a statistically significant interaction effect, we can perform the simple effects post-hoc analysis, to illustrate the interaction. This method evaluates the impact of one independent variable within a specific level of another (Field, 2005). Table 19 shows the mean scores of *Logo Heritageness* when *Brand Heritage* is combined with *Logo Version*. The pairwise comparisons contrasts the differences when the variable, *Logo Version*, is within the other variable, *Brand Heritage* (Table 20). According to Table 20, when grouped by *Brand Heritage* there is a statistically significant difference ($p < 0.05$) for Burberry between low and high *Logo Version*. The mean score for *Logo Heritageness* is higher for the high *Logo Version* of Burberry ($M=5.20$, $SE=0.13$) compared to the low *Logo Version* of Burberry ($M=4.56$, $SE=0.13$). Neither Calvin Klein nor Versace have a statistically significant difference ($p > 0.05$) between *Logo Version*.

Table 19. *Post-Hoc Test: Interaction Estimated Marginal Means for Logo Heritageness and Logo Version.*

LOGO HERITAGENESS: Interaction Estimated Marginal Means					
Logo Version	Brand Heritage	Mean	Std. Error	95% Confidence Interval for Difference	
				Lower Bound	Upper Bound
Low	Burberry	4.56	0.13	4.30	4.81
	Calvin Klein	4.37	0.13	4.12	4.63
	Versace	4.93	0.13	4.68	5.18
High	Burberry	5.20	0.13	4.95	5.45
	Calvin Klein	4.31	0.13	4.06	4.56
	Versace	5.25	0.13	5.00	5.50

Table 20. *Post-Hoc Test: Interaction Pairwise Comparison Grouped by Brand Heritage.*

LOGO HERITAGENESS: Pairwise Comparisons						
Brand Heritage	(I) Logo Version	(J) Logo Version	Mean Difference (I-J)	Sig	95% Confidence Interval for Difference	
					Lower Bound	Upper Bound
Burberry	Low	High	-0.64*	< 0.001	-1.00	-0.29
	High	Low	0.64*	< 0.001	0.29	1.00
Calvin Klein	Low	High	0.06	0.742	-0.30	0.42
	High	Low	-0.06	0.742	-0.42	0.30
Versace	Low	High	-0.32	0.077	-0.67	0.04
	High	Low	0.32	0.077	0.04	0.67

Based on estimated marginal means

** The mean difference is significant at the ,05 level.*

When grouped by low *Logo Version* (Table 21), there is a statistically significant difference ($p < 0.05$) with the mean score of *Logo Heritageness* of Versace ($M=4.93$, $SE= 0.13$) higher than Burberry ($M=4.56$, $SE= 0.13$). In addition, there is a significant difference ($p < 0.05$) with Versace's mean score higher than Calvin Klein ($M=4.37$, $SE= 0.13$). However, there is no significant difference ($p > 0.05$) between Burberry and Calvin Klein. For high *Logo Version* (Table 21), there is a significant difference ($p < 0.05$) with Calvin Klein ($M=4.31$, $SE= 0.13$) lower than Burberry ($M=5.20$, $SE= 0.13$) as well as Versace ($M=5.25$, $SE= 0.13$). However, there is no significant difference ($p > 0.05$) between Burberry and Versace.

Table 21. *Post-Hoc Test: Interaction Pairwise Comparison Grouped by Logo Version.*

LOGO HERITAGENESS: Pairwise Comparisons

Logo Version	(I) Brand Heritage	(J) Brand Heritage	Mean Difference (I-J)	Sig	95% Confidence Interval for Difference	
					Lower Bound	Upper Bound
Low	Burberry	Calvin Klein	0.18	0.218	-0.11	0.48
		Versace	-0.37*	0.003	-0.62	-0.13
	Calvin Klein	Burberry	-0.18	0.218	-0.48	0.11
		Versace	-0.56*	< 0.001	-0.83	-0.29
	Versace	Burberry	0.37*	0.003	0.13	0.62
		Calvin Klein	0.56*	< 0.001	0.29	0.83
High	Burberry	Calvin Klein	0.88*	< 0.001	0.60	1.17
		Versace	-0.05	0.663	-0.29	-0.18
	Calvin Klein	Burberry	-0.88*	< 0.001	-1.17	-0.60
		Versace	-0.94*	< 0.001	-1.20	-0.68
	Versace	Burberry	0.05	0.663	-0.18	0.29
		Calvin Klein	0.94*	< 0.001	0.68	1.20

Based on estimated marginal means

* The mean difference is significant at the .05 level.

In summary, the analysis of the manipulation check, *Logo Heritageness*, indicates that there is a statistically significant main effect for both independent variables: *Brand Heritage* (Burberry, Calvin Klein and Versace); and *Logo Version* (low and high heritage logo versions). The main effects indicate that separately, *Brand Heritage* and *Logo Version*, both have an effect on the variable *Logo Heritageness*. In addition, there is also an interaction effect between the two independent variables. This implies that together they impact *Logo Heritageness*. The post hoc tests helped determine where the differences lie for the main effect of *Brand Heritage* as well as the interaction effect.

For the main effect of *Brand Heritage*, the post-hoc results show a statistically significant difference between the three brands, with Versace having the highest mean score, followed by Burberry and then Calvin Klein. The post-hoc test also demonstrates that there is a higher mean score for *Logo Heritageness* for the high *Logo Version* compared to the low *Logo Version*. This may indicate we were effective at allocating the logos between the two versions.

The analysis of the interaction effect showed a statistically significant difference for only Burberry, with higher mean scores for high *Logo Version* compared to the low *Logo Version*. Interestingly, this means that the respondents did not see a difference between the high and low heritage logo versions of Versace and Calvin Klein. This observation is further explained in the Discussion section. Furthermore, in the low *Logo Version* there were statistically significant differences between Burberry and Versace, and Versace and Calvin Klein. In this case, Versace obtained higher *Logo Heritageness* mean scores than both Burberry and Calvin Klein. In the high *Logo Version*, there were statistically significant differences with Calvin Klein obtaining mean scores lower than both Burberry and Versace. When taken together with the other post-

hoc tests and the profile plot, this result is unsurprising as the high heritage logo version has lower logo *heritageness* than the low heritage logo version.

4.2 Effects of Brand Attitudes

To begin testing the hypotheses from our Proposed Theoretical Framework section, recall for brand attitudes, we have two hypotheses:

H1: *A heritage brand generates higher brand attitudes for the consumer when its logo represents more brand heritage.*

First, if the hypothesis (H1) were true, the high heritage logos would be estimated to generate higher mean *Brand Attitudes* scores than the low heritage logos for the heritage brands of Burberry and Versace.

H3a: *A non-heritage brand has less impact on brand attitudes for the consumer when its logo represents less or no brand heritage.*

Second, if the hypothesis (H3a) were true, we would observe from the results the difference in magnitude of the mean scores of *Brand Attitudes* between the low and high heritage *Logo Version* of Calvin Klein would be less, in comparison, to the difference in magnitude of the mean scores of *Brand Attitude* between the *Logo Version* for the heritage brands of Burberry and Versace.

The analysis from our mixed ANOVA output helps evaluate the two hypotheses. However, before we continue our interpretation of the results, we must check our assumptions for the mixed ANOVA. The following assumption tests for this section and the next section are the same as *Logo Heritageness*. Because the full analysis of the assumption testing is performed in the above section, the complete details of the assumption testing in this section and in the following section are not repeated unless there is a different observation. Therefore, only the p values and the interpretation are discussed. Nonetheless, it is important to remark that under all the tables of the assumption tests is a note of the null hypothesis.

The p value of Box's Test (Table 22) is not statistically significant ($p > 0.05$), therefore, the correlation is homogenous. In addition, the p value for Mauchly's Test (Table 22) is also not statistically significant ($p > 0.05$), thus, the assumption of sphericity is not violated. Like the other two tests above, the p value for Levene's Test (Table 23) is not statistically significant ($p > 0.05$), as a result, the variances are homogenous. In addition to the assumptions above at the beginning of the Results section, all three tests indicate that we have no other violations in assumptions for the use of a mixed ANOVA.

Table 22. *Box's Test of Equality of Covariance Matrices and Mauchly's Test of Sphericity for variable Brand Attitudes.*

BRAND ATTITUDES: Box's Test of Equality of Covariance Matrices ^a			BRAND ATTITUDES: Mauchly's Test of Sphericity ^a		
Box's M	F	Sig.	Within Subjects Effect	Mauchly's W	Sig
10.65	1.75	0.105	Brand Heritage	0.99	0.398

^a Design: Intercept + Logo Version
 Within Subjects Design: Brand Heritage
 Note: Tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups.

^a Design: Intercept + Logo Version
 Within Subjects Design: Brand Heritage
 Note: Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables is proportional to an identity matrix.

Table 23. *Levene's Test of Equality of Error Variances for Variable Brand Attitudes.*

BRAND ATTITUDES: Levene's Test of Equality of Error Variances ^a		
	F	Sig
Burberry Attitudes (ATT)	0.009	0.923
Calvin Klein Attitudes (ATT)	0.021	0.886
Versace Attitudes (ATT)	1.692	0.195

^a Design: Intercept + Logo Version
 Within Subjects Design: Brand Heritage
 Note: Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

Like in *Logo Heritageness*, the descriptive statistics obtained in SPSS (Table 24) show number of mean (*M*), standard deviation (*SD*) and sample number (*N*) for *Brand Attitudes* for each of the six conditions. The respondents are the same as in the subsection *Logo Heritageness*. Furthermore, the *Brand Attitudes* are highest for Calvin Klein ($M=5.14$, $SD=1.15$), followed by Versace ($M=5.06$, $SD=1.39$), and then Burberry ($M=4.82$, $SD=1.26$), in the low heritage questionnaire. In the high heritage questionnaire, the highest is Versace ($M=5.34$, $SD=1.20$), followed by Calvin Klein ($M=5.04$, $SD=1.16$) and then Burberry ($M=5.01$, $SD=1.19$). As with *Logo Heritageness*, generally, the results show that the high heritage questionnaire produced higher means across all brands than the low heritage, except Calvin Klein. The analysis below determines if the differences within the same questionnaire as well as between questionnaires are statistically significant.

Table 24. *Descriptive Statistics for Variable Brand Attitudes.*

BRAND ATTITUDES: Descriptive Statistics				
Logo Version		M	SD	N
Burberry Attitudes (ATT)	Low Heritage	4.82	1.26	109
	High Heritage	5.01	1.19	115
	Total	4.91	1.22	224
Calvin Klein Attitudes (ATT)	Low Heritage	5.14	1.15	109
	High Heritage	5.04	1.16	115
	Total	5.09	1.15	224
Versace Attitudes (ATT)	Low Heritage	5.06	1.39	109
	High Heritage	5.34	1.20	115
	Total	5.21	1.30	224

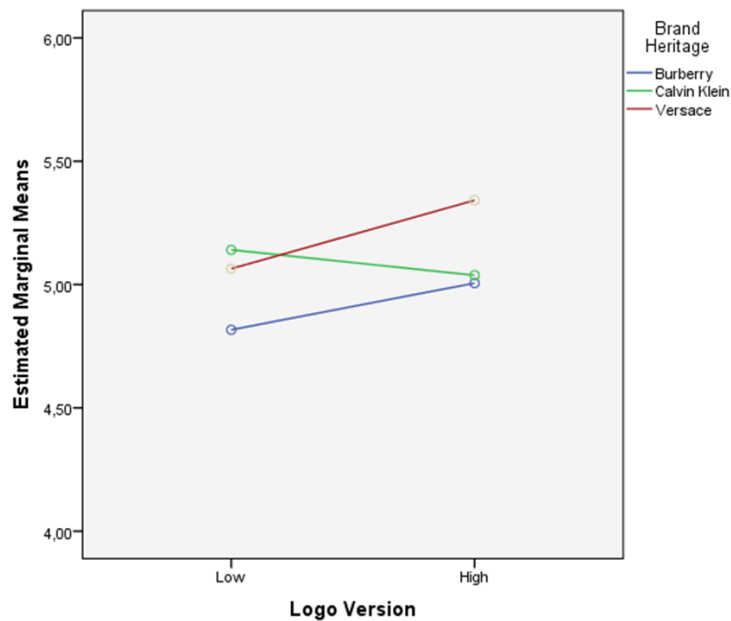
Note: Items for variable Brand Attitudes are measured on a 7-point semantic differential scale (1= negative extreme point; 7 = the best extreme point)

The analysis of the between-groups and repeated-groups is also similar to the previous section. In order to assess the main effect, as well as an interaction effect for the independent variables of *Brand Heritage* and *Logo Version*, we refer to Table 25. According to this table, there is a statistically significant main effect for *Brand Attitudes*, $F(2,444)=6.74$, $p < 0.05$; however, the effect size is small (partial eta squared=0.029) (Cohen, 1988). In other words, this main effect indicates that if we ignore whether the mean scores came from low or high questionnaires, the *Brand Attitudes* mean scores between Burberry, Calvin Klein and Versace were significantly different.

In addition, there is a statistically significant interaction effect for *Brand Attitudes* and *Logo version*, $F(2,444)=3.09$, $p < 0.05$ (Table 25). However, the effect size is also small (partial eta squared=0.014) (Cohen, 1988). As with *Logo Heritageness*, the profile plot (Figure 6) helps interpret the interaction. Figure 6 implies that the magnitude of *Brand Attitudes* mean scores depends on the *Logo Version* questionnaires. In this case, Burberry and Versace displayed higher *Brand Attitudes* mean scores in the high heritage logo questionnaire than for the low heritage version. Similarly to *Logo Heritageness*, the mean score for *Brand Attitudes* of Calvin Klein is higher in the low heritage logo questionnaire than in the high heritage logo questionnaire.

Table 25. *Test of Within Subjects Effects (Mixed ANOVA) for Variable Brand Attitudes.*

BRAND ATTITUDES: Tests of Within-Subjects Effects						
Source		df	Mean Square	F	Sig	Partial Eta Squared
Brand Heritage	Sphericity Assumed	2	4.85	6.74	0.001	0.029
Brand Heritage * Logo Version	Sphericity Assumed	2	2.22	3.09	0.046	0.014
Error (Brand Heritage)	Sphericity Assumed	444	0.72			



Note: The scale used in the graph is 4 to 6. The variable Brand Attitudes range is from 1 to 7.

Figure 6. *Profile Plot of Differences in Brand Attitudes between Logo Version.*

To test the main effect from the *Logo Version* variable, it is shown separately from the table of the within-subjects. As shown in Table 26, the main effect of *Logo Version* is not statistically significant, $F(1,222)=0.81$, $p > 0.05$. Consequently, there is no main effect from the between-groups *Logo Version* variable on *Brand Attitudes*.

Table 26. *Test of Between Subjects Effects (Mixed ANOVA) for Variable Brand Attitudes.*

BRAND ATTITUDES: Tests of Between-Subjects Effects					
Source	df	Mean Square	F	Sig	Partial Eta Squared
Logo Version	1	2.47	0.81	0.371	0.004
Error	222	3.07			

Due to a statistically significant main effect for *Brand Attitudes*, we analyse the post-hoc test from SPSS. The Estimated Marginal Means (Table 27) combines the means of the *Brand Attitudes* scores from both *Logo Version* questionnaires (low and high heritage version) for each of the three *Brand Heritage* variables - Burberry, Calvin Klein, and Versace. Moreover, the combined means (Table 27) are compared between the *Brand Heritage* variables (Table 28). The output (Table 28) indicates that the combined mean *Brand Attitudes* scores between Burberry ($M=4.91$, $SE=0.082$) and Calvin Klein ($M=5.09$, $SE=0.077$), and Burberry and Versace ($M=5.20$, $SE=0.087$) are statistically significantly ($p < 0.05$) with Burberry being lower than the other two brands. However, the mean *Brand Attitudes* scores between Calvin Klein and Versace were not statistically different ($p > 0.05$).

Table 27. *Post-Hoc Test: Estimated Marginal Means for Brand Attitudes.*

BRAND ATTITUDES: Estimated Marginal Means - Estimates

Brand Heritage	Mean	Std. Error	95% Confidence Interval for Difference	
			Lower Bound	Upper Bound
Burberry	4.91	0.082	4.75	5.07
Calvin Klein	5.09	0.077	4.94	5.24
Versace	5.20	0.087	5.03	5.37

Table 28. *Post-Hoc Test: Pairwise Comparisons for Brand Attitudes.*

BRAND ATTITUDES: Pairwise Comparisons

(I) Brand Heritage	(J) Brand Heritage	Mean Difference (I-J)	Sig.	95% Confidence Interval for Difference	
				Lower Bound	Upper Bound
Burberry	Calvin Klein	-0.18*	0.031	-0.34	-0.02
	Versace	-0.29*	< 0.001	-0.44	-0.14
Calvin Klein	Burberry	0.18*	0.031	0.02	0.34
	Versace	-0.11	0.165	-0.28	0.05
Versace	Burberry	0.29*	< 0.001	0.14	0.44
	Calvin Klein	0.11	0.165	-0.05	0.28

Based on estimated marginal means

* *The mean difference is significant at the .05 level.*

As with the main effect, since there is a statistically significant interaction effect, we analyse the post-hoc test for the interaction. Table 29 shows the mean scores of *Brand Attitudes* when *Brand Heritage* is combined with *Logo Version*. The pairwise comparisons contrasts the differences when the variable, *Logo Version*, is within the other variable, *Brand Heritage* (Table 30). According to Table 30, when grouped by *Brand Heritage* there is no statistically significant difference in *Logo Versions*.

Table 29. *Post Hoc Test: Interaction Estimated Marginal Means of Brand Attitude by Logo Version.*

BRAND ATTITUDES: Estimated Marginal Means - Estimates					
Logo Version	Brand Heritage	Mean	Std. Error	95% Confidence Interval for Difference	
				Lower Bound	Upper Bound
Low	Burberry	4.82	0.12	4.59	5.05
	Calvin Klein	5.14	0.11	4.92	5.36
	Versace	5.06	0.12	4.82	5.31
High	Burberry	5.01	0.11	4.78	5.23
	Calvin Klein	5.04	0.11	4.83	5.25
	Versace	5.34	0.12	5.10	5.58

Table 30. *Post-Hoc Test: Interaction Pairwise Comparisons for Brand Attitudes grouped by Brand Heritage.*

BRAND ATTITUDES: Pairwise Comparisons						
Brand heritage	(I) Logo Version	(J) Logo Version	Mean Difference (I-J)	Sig	95% Confidence Interval for Difference	
					Lower Bound	Upper Bound
Burberry	Low	High	-0.19	0.248	-0.51	0.13
	High	Low	0.19	0.248	-0.13	0.51
Calvin Klein	Low	High	0.10	0.506	-0.20	0.41
	High	Low	-0.10	0.506	-0.41	0.20
Versace	Low	High	-0.28	0.110	-0.62	0.06
	High	Low	0.28	0.110	-0.06	0.62

Based on estimated marginal means

On the other hand, when grouped by low heritage *Logo Version* (Table 31), there is a statistically significant difference ($p < 0.05$) with the mean score of *Brand Attitudes* of Burberry ($M=4.82$, $SE= 0.12$) lower than Calvin Klein ($M=5.14$, $SE= 0.11$). In addition, there is also a significant difference ($p < 0.05$) with Burberry lower than Versace ($M=5.06$, $SE= 0.12$). However, there is no statistically significant difference ($p > 0.05$) for Calvin Klein and Versace. For high heritage *Logo Version* (Table 31) there is a significant difference ($p < 0.05$) with Versace higher than Burberry ($M=5.01$, $SE= 0.11$) as well as Calvin Klein ($M=5.34$, $SE= 0.12$). However, there is no significant difference ($p > 0.05$) between Burberry and Calvin Klein.

Table 31. *Post-Hoc Test: Pairwise Comparisons for Brand Attitudes grouped by Logo Version.*

BRAND ATTITUDES: Pairwise Comparisons						
Logo Version	(I) Brand Heritage	(J) Brand Heritage	Mean Difference (I-J)	Sig	95% Confidence Interval for Difference	
					Lower Bound	Upper Bound
Low	Burberry	Calvin Klein	-0.32*	0.006	-0.56	-0.09
		Versace	-0.25*	0.025	-0.46	-0.03
	Calvin Klein	Burberry	0.32*	0.006	0.09	0.56
		Versace	0.08	0.515	-0.15	0.31
	Versace	Burberry	0.25*	0.025	0.03	0.46
		Calvin Klein	-0.08	0.515	-0.31	0.15
High	Burberry	Calvin Klein	-0.03	0.781	-0.26	0.19
		Versace	-0.34*	0.002	-0.55	-0.13
	Calvin Klein	Burberry	0.03	0.781	-0.19	0.26
		Versace	-0.30*	0.008	-0.53	-0.08
	Versace	Burberry	0.34*	0.002	0.13	0.55
		Calvin Klein	0.30*	0.008	0.08	0.53

Based on estimated marginal means

* The mean difference is significant at the .05 level.

To summarise, for the dependent variable of *Brand Attitudes*, we found statistical significance for the main effect of *Brand Heritage*; however, we did not obtain a significant result for *Logo Version*. Our analysis of the post-hoc test for *Brand Heritage* indicated a statistically significant difference between Burberry and Calvin Klein, and Versace and Burberry. In this case, Burberry's *Brand Attitudes* score is lower than both Calvin Klein and Versace. As Burberry is a brand with higher HQ than Calvin Klein, this is an unexpected result, which will be analysed in the Discussion section.

Moreover, we also observed an interaction effect between *Logo Version* and *Brand Heritage*. The analysis of the post-hoc test for this interaction effect showed statistical significance when *Brand Heritage* was grouped by *Logo Version*. In the low *Logo Version*, there were statistically significant differences between Burberry and Calvin Klein as well as Burberry and Versace. According to the data, Burberry, once again, obtained a lower score than both Calvin Klein and Versace. As mentioned, this contradictory result is discussed in the following sections. On the other hand, in the high *Logo Version*, there was a significant difference between Versace and Burberry, as well as Versace and Calvin Klein. In this logo version, when compared to Burberry and Calvin Klein, Versace collected higher mean scores for *Brand Attitudes*. This may indicate that Versace's high heritage logo was a factor that influenced brand attitudes. Further discussion is continued later, in the Discussion section.

As we did not observe a statistically significant difference for the heritage brands of Burberry and Versace between high and low *Logo Versions*, we reject H1. Furthermore, since we are unable to make a comparison of the magnitude of change between Calvin Klein's results and both Burberry or Versace's, we also reject H3a.

4.3 Effects on Perceived Brand Authenticity

Our hypotheses for *Perceived Brand Authenticity* are similar to those of *Brand Attitudes*:

H2: *A heritage brand generates a higher perceived brand authenticity for the consumer when its logo represents more brand heritage.*

If the hypothesis (H2) were true, we would observe from the results that the high heritage *Logo Version* is estimated to generate higher mean *Perceived Brand Authenticity* scores than the low version for Burberry and Versace.

H3b: *A non-heritage brand has less impact on perceived brand authenticity for the consumer when its logo represents less or no brand heritage.*

On the other hand, if the hypothesis (H3b) were true, we would observe that the difference in mean scores of *Perceived Brand Authenticity* between the low and high heritage *Logo Version* of Calvin Klein would be less, in comparison, to the difference in magnitude of the mean scores of *Perceived Brand Authenticity* between the *Logo Versions* for Burberry and Versace.

Once again, our hypotheses are evaluated through a mixed ANOVA. As with *Brand Attitudes* we must first consider the assumptions. According to Table 32, Box's Test of Equality of Covariance Matrices is not statistically significant ($p > 0.05$), thus, the correlation is homogenous. In the same table, the p value for Mauchly's Test of Sphericity is also not statistically significant ($p > 0.05$), therefore, we can assume sphericity. Moreover, all the p values of Levene's Test of Equality of Error Variances (Table 33) are not statistically significant ($p > 0.05$), consequently, the variances are homogenous. Like *Brand Attitudes*, we also have no violations of the assumptions to run a mixed ANOVA.

Table 32. *Box's Test of Equality of Covariance Matrices and Mauchly's Test of Sphericity for Variable Perceived Brand Authenticity.*

PERCEIVED BRAND AUTHENTICITY: Box's Test of Equality of Covariance Matrices ^a			PERCEIVED BRAND AUTHENTICITY: Mauchly's Test of Sphericity ^a		
Box's M	F	Sig	Within Subjects Effect	Mauchly's W	Sig
7.03	1.16	0.327	Brand Heritage	0.99	0.213

^a Design: Intercept + Logo Version
 Within Subjects Design: Brand Heritage
 Note: Tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups.

^a Design: Intercept + Logo Version
 Within Subjects Design: Brand Heritage
 Note: Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables is proportional to an identity matrix.

Table 33. *Levene's Test of Equality of Error Variances for Variable Perceived Brand Authenticity.*

PERCEIVED BRAND AUTHENTICITY: Levene's Test of Equality of Error Variances ^a		
	F	Sig
Burberry Perceived Authenticity (AU)	0.084	0.773
Calvin Klein Perceived Authenticity (AU)	0.063	0.802
Versace Perceived Authenticity (AU)	1.521	0.219

^a Design: Intercept + Logo Version

Within Subjects Design: Brand Heritage

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

Like the above variables, the descriptive statistics obtained in SPSS (Table 34) show number of mean (*M*), standard deviation (*SD*) and sample number (*N*) for *Perceived Brand Authenticity* for Burberry, Calvin Klein and Versace separated by low and high *Logo Versions*. The number of respondents is the same as in the other dependent variables. In the low heritage logo questionnaire, Versace (*M*=4.99, *SD*=1.30) has the highest mean *Perceived Brand Authenticity* scores, followed by Calvin Klein (*M*=4.90, *SD*=1.20), and finally Burberry (*M*=4.87, *SD*=1.28). In the high heritage logo questionnaire, the highest mean score is Versace (*M*=5.33, *SD*=1.15), followed by Burberry (*M*=5.03, *SD*=1.19) and then Calvin Klein (*M*=4.76, *SD*=1.22). Similarly to the other two variables, the results illustrate that the high heritage logo questionnaire produced higher means across the heritage brands, whereas the opposite is true for the non-heritage brand, Calvin Klein, which had greater mean score for the low heritage logo questionnaire than for the high heritage. However, further analysis will determine if the differences within the same questionnaire as well as between questionnaires are statistically significant.

Table 34. *Descriptive Statistics for Variable Perceived Brand Authenticity.*

PERCEIVED BRAND AUTHENTICITY: Descriptive Statistics				
	Logo Version	M	SD	N
Burberry Perceived Authenticity (AU)	Low Heritage	4.87	1.28	109
	High Heritage	5.03	1.19	115
	Total	4.95	1.24	224
Calvin Klein Perceived Authenticity (AU)	Low Heritage	4.90	1.20	109
	High Heritage	4.76	1.22	115
	Total	4.83	1.21	224
Versace Perceived Authenticity (AU)	Low Heritage	4.99	1.30	109
	High Heritage	5.33	1.15	115
	Total	5.17	1.24	224

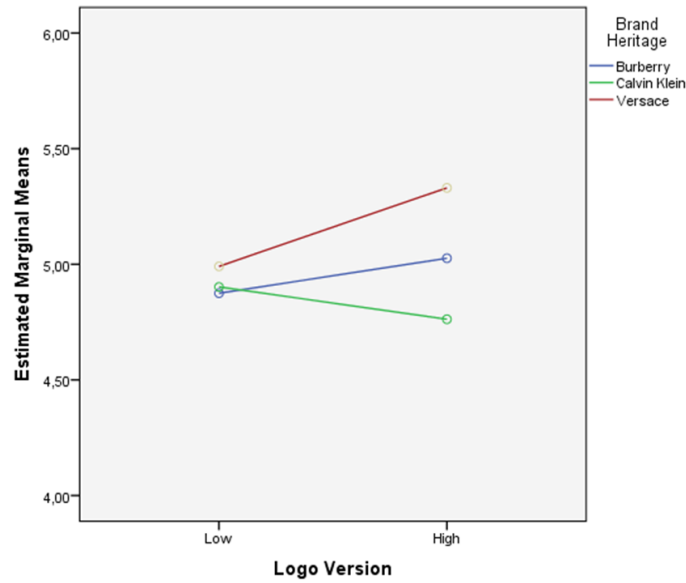
Note: Items for variable *Perceived Brand Authenticity* are measured on a 7-point Likert scale (1 = strongly disagree; 7 = strongly agree)

The analysis of the between-groups and repeated-groups also similar to the above sections. In order to assess the main effect as well as an interaction effect for the independent variables of *Brand Heritage* and *Logo Version*, we refer to Table 35. According to this table, there is a statistically significant main effect for *Perceived Brand Authenticity*, $F(2,444)=9.62$, $p < 0.05$; however, the effect size is small (partial eta squared=0.042) (Cohen, 1988). This main effect implies that when ignoring the *Logo Version*, the *Perceived Brand Authenticity* mean scores among Burberry, Calvin Klein and Versace were significantly different.

In addition, there is a statistically significant interaction effect for *Brand Heritage* and *Logo Version*, $F(2,444)=5.07$, $p < 0.05$ (Table 35). However, the effect size is also small (partial eta squared=0.022) (Cohen, 1988). Once more, the profile plot (Figure 7) helps interpret the interaction. According to the figure, Burberry and Versace displayed higher *Perceived Brand Authenticity* mean scores in the high heritage logo questionnaire than for the low heritage logo questionnaire. As mentioned, the opposite is true for Calvin Klein, the mean score for *Perceived Brand Authenticity* is higher in the low logo heritage questionnaire than in the high.

Table 35. *Test of Within Subjects Effects (Mixed ANOVA) for Variable Perceived Brand Authenticity.*

PERCEIVED BRAND AUTHENTICITY: Tests of Within-Subjects Effects							
	Source	df	Mean Square	F	Sig	Partial Eta Squared	
	Brand Heritage	Sphericity Assumed	2	6.19	9.62	< 0.001	0.042
	Brand Heritage * Logo Version	Sphericity Assumed	2	3.27	5.07	0.007	0.022
	Error (Brand Heritage)	Sphericity Assumed	444	0.64			



Note: The scale used in the graph is 4 to 6. The variable Perceived Brand Authenticity range is from 1 to 7.

Figure 7. Profile Plot of Differences in Perceived Brand Authenticity between Logo Version.

As shown in Table 36, the main effect of *Logo Version* is not statistically significant, $F(1,222)=0.72$, $p > 0.05$. Consequently, there is no main effect from the *Logo Version* variable on *Perceived Brand Authenticity*.

Table 36. Test of Between Subjects Effects (Mixed ANOVA) for Variable Perceived Brand Authenticity.

PERCEIVED BRAND AUTHENTICITY: Tests of Between-Subjects Effects					
Source	df	Mean Square	F	Sig	Partial Eta Squared
Logo Version	1	2.30	0.72	0.399	0.003
Error	222	3.22			

The post-hoc tests for the main effect for *Perceived Brand Authenticity* are shown below. Like the above variables, the Estimated Marginal Means (Table 37) combines the means of the *Perceived Brand Authenticity* scores from both logo questionnaires (low and high heritage logo version) for Burberry, Calvin Klein, and Versace. In addition, the combined means (Table 37) are compared between the *Brand Heritage* variables (Table 38). This output indicates that the difference in combined mean *Perceived Brand Authenticity* scores between Burberry ($M=4.95$, $SE=0.083$) and Calvin Klein ($M=4.83$, $SE=0.081$) are not statistically significant ($p > 0.05$). However, the mean scores for Burberry and Versace ($M=5.16$, $SE=0.082$) are statistically significantly ($p < 0.05$) with Burberry having lower mean scores. Furthermore, there is also a

significant difference ($p < 0.05$) for Calvin Klein and Versace, with *Perceived Brand Authenticity* scores for Calvin Klein being lower than Versace.

Table 37. *Post-Hoc Test: Estimated Marginal Means for Perceived Brand Authenticity.*

PERCEIVED BRAND AUTHENTICITY: Estimated Marginal Means - Estimates

Brand Heritage	Mean	Std. Error	95% Confidence Interval for Difference	
			Lower Bound	Upper Bound
Burberry	4.95	0.083	4.79	5.11
Calvin Klein	4.83	0.081	4.67	4.99
Versace	5.16	0.082	5.00	5.32

Table 38. *Post-Hoc Test: Pairwise Comparisons for Perceived Brand Authenticity.*

PERCEIVED BRAND AUTHENTICITY: Pairwise Comparisons

(I) Brand Heritage	(J) Brand Heritage	Mean difference (I-J)	Sig	95% Confidence Interval for Difference	
				Lower Bound	Upper Bound
Burberry	Calvin Klein	0.12	0.133	-0.04	0.27
	Versace	-0.21*	0.004	-0.35	-0.07
Calvin Klein	Burberry	-0.12	0.133	-0.27	0.04
	Versace	-0.33*	< 0.001	-0.48	-0.18
Versace	Burberry	0.21*	0.004	0.07	0.35
	Calvin Klein	0.33*	< 0.001	0.18	0.48

Based on estimated marginal means

* *The mean difference is significant at the .05 level.*

The next three tables show the post-hoc tests for the significant interaction effect. Table 39 shows the mean scores of *Perceived Brand Authenticity* when *Brand Heritage* is combined with *Logo Version*. The pairwise comparisons contrasts the differences when the variable, *Logo Version*, is within the other variable, *Brand Heritage* (Table 40). According to this table, when grouped by *Brand Heritage* there is a statistically significant difference ($p < 0.05$) only for Versace with a higher mean score for the high heritage *Logo Version* ($M=5.33$, $SE= 0.12$) compared to the low heritage *Logo Version* ($M=4.99$, $SE= 0.12$).

Table 39. *Post-Hoc Test: Interaction Estimated Marginal Means for Perceived Brand Authenticity.*

PERCEIVED BRAND AUTHENTICITY: Estimated Marginal Means - Estimates					
Logo Version	Brand Heritage	Mean	Std. Error	95% Confidence Interval for Difference	
				Lower Bound	Upper Bound
Low	Burberry	4.88	0.12	4.64	5.11
	Calvin Klein	4.90	0.12	4.67	5.13
	Versace	4.99	0.12	4.76	5.22
High	Burberry	5.03	0.12	4.80	5.25
	Calvin Klein	4.76	0.11	4.54	4.98
	Versace	5.33	0.12	5.11	5.56

Table 40. *Post-Hoc Test: Pairwise Comparisons for Perceived Brand Authenticity grouped by Brand Heritage.*

PERCEIVED BRAND AUTHENTICITY: Pairwise Comparisons						
Brand Heritage	(I) Logo Version	(J) Logo Version	Mean Difference (I-J)	Sig.	95% Confidence Interval for Difference	
					Lower Bound	Upper Bound
Burberry	Low	High	-0.15	0.361	-0.48	0.18
	High	Low	0.15	0.361	-0.18	0.48
Calvin Klein	Low	High	0.14	0.388	-0.18	0.46
	High	Low	-0.14	0.388	-0.46	0.18
Versace	Low	High	-0.34*	0.040	-0.66	-0.02
	High	Low	0.34*	0.040	0.02	0.66

Based on estimated marginal means

** The mean difference is significant at the ,05 level.*

When grouped by low heritage *Logo Version* (Table 41), there is no statistically significant difference ($p > 0.05$) with the mean scores of *Perceived Brand Authenticity* for *Brand Heritage*. However, for high heritage *Logo Version* (Table 41), the differences between all three *Brand Heritage* variables are statistically significant ($p < 0.05$). More specifically, Versace is the highest ($M=5.33$, $SE= 0.12$), followed by Burberry ($M=5.03$, $SE= 0.12$), and finally Calvin Klein ($M=4.76$, $SE= 0.11$).

Table 41. *Post-Hoc Test: Interaction Pairwise Comparisons for Perceived Brand Authenticity grouped by Logo Version.*

PERCEIVED BRAND AUTHENTICITY: Pairwise Comparisons						
Logo Version	(I) Brand Heritage	(J) Brand Heritage	Mean Difference (I-J)	Sig	95% Confidence Interval for Difference	
					Lower Bound	Upper Bound
Low	Burberry	Calvin Klein	-0.03	0.807	-0.25	0.19
		Versace	-0.12	0.256	-0.32	0.09
	Calvin Klein	Burberry	0.03	0.807	-0.19	0.25
		Versace	-0.09	0.427	-0.31	0.13
	Versace	Burberry	0.12	0.256	-0.09	0.32
		Calvin Klein	0.09	0.427	-0.13	0.31
High	Burberry	Calvin Klein	0.26*	0.017	0.05	0.48
		Versace	-0.30*	0.002	-0.50	-0.11
	Calvin Klein	Burberry	-0.26*	0.017	-0.48	-0.05
		Versace	-0.57*	< 0.001	-0.78	-0.35
	Versace	Burberry	0.30*	0.002	0.11	0.50
		Calvin Klein	0.57*	< 0.001	0.35	0.78

Based on estimated marginal means

* The mean difference is significant at the .05 level.

In our final analysis, the dependent variable, *Perceived Brand Authenticity*, showed similar results to *Brand Attitudes*, which are main effect for only *Brand Heritage* and interaction effect between *Logo Version* and *Brand Heritage*. The post-hoc test of the main effect of *Brand Heritage* illustrates a statistically significant difference between the mean scores of *Perceived Brand Authenticity* for Burberry and Versace, as well as between Calvin Klein and Versace. In both cases, the mean scores for Burberry and Calvin Klein are lower than Versace. This is not a completely unexpected result, as Versace is a heritage brand and it is anticipated to have higher perceived authenticity than Calvin Klein. The explanation of the non-difference between Burberry and Calvin Klein, however, is continued in the Discussion section.

Moreover, there is a statistically significant difference attained when *Brand Heritage* is grouped by the high *Logo Version*. According to our analysis, the mean scores for *Perceived Brand Authenticity* are highest for Versace, followed by Burberry, and finally, Calvin Klein. This may indicate that heritage brands with logos that have more brand heritage elements effectively generate higher perceived authenticity than the non-heritage brand. However, this result may also be impacted from the low heritage logo of Calvin Klein obtaining higher values than the high heritage logo of Calvin Klein. In addition, the post-hoc tests for the interaction effect indicate that for Versace, there is a statistically significant difference between the *Logo Version* with high heritage logo questionnaire obtaining higher mean scores than the low heritage logo questionnaire. This result confirms our hypothesis (H2) for the heritage brand Versace; however, since we do not observe a difference for the other heritage brand, Burberry, we only accept H2 for Versace.

Since we did not observe a statistically significant difference for Calvin Klein, we are unable to compare the magnitude of the differences between Calvin Klein and Versace. As a result, we do not accept our hypothesis (H3b).

4.4 Results Summary

The analysis of our results indicates three main findings. First, our data implies that there is no impact from the high heritage logo of the heritage brands on brand attitudes. Second, we did not find evidence that the non-heritage brand was less influenced from *Logo Version* compared to heritage brands, for brand attitudes nor perceived brand heritage. Finally, we were able to observe for one heritage brand, Versace, that having a high heritage logo instead of a low heritage logo was beneficial in increasing perceived brand authenticity. However, the same effect was not detected in the other heritage brand, Burberry. Table 42 summarises the results of our hypotheses, it shows that our proposed theoretical framework has only limited support. Further discussion is provided in the next section.

Table 42. *Summary of the Hypotheses Evaluation.*

Hypothesis	Result
H1 A heritage brand generates higher brand attitudes for the consumer when its logo represents more brand heritage.	Rejected
H2 A heritage brand generates a higher perceived brand authenticity for the consumer when its logo represents more brand heritage.	Partially Accepted <i>Accepted for Versace</i> <i>Rejected for Burberry</i>
H3a A non-heritage brand has less impact on brand attitudes for the consumer when its logo represents less or no brand heritage.	Rejected
H3b A non-heritage brand has less impact on perceived brand authenticity for the consumer when its logo represents less or no brand heritage.	Rejected

5 Discussion

The following section offers a broader perspective and new insights that intend to reveal the factors that could have explained the hypotheses confirmation or rejection. This is achieved by adding the results and analysis and linking them to either existing research on logotypes, heritage brands and brand heritage; actions generated by the studied brands – Burberry, Versace and Calvin Klein; and our general thoughts and perceptions. This section also intends to foster new thoughts and discussion streams among academics, practitioners and in general, the readers.

5.1.1 Importance of Logos and Effects of Logo Redesign

The Introduction section has established the relevance of logos for brands, companies and other stakeholders: they are the first contact point between a customer and the brand; they have the ability to communicate what the brand stands for (Park et al. 2013, Roper & Fill, 2012); and they represent significant investments for the company (Henderson & Cote, 1998; Melewar, Bassett & Simões, 2006; van Riel, van den Ban & Heijmans, 2001). They are present in every occasion a brand is present in, and there are as many as brands exist. For this reason, it is likely that some brands can enhance their logos until they become symbols for themselves (e.g. Louis Vuitton) or symbols that become part of generations (e.g. Nike), and simultaneously, others can fail to succeed with logos that are not recognisable or representative enough. Burberry, Calvin Klein and Versace constitute three successful brands in the fashion sector, whose logos are internationally recognised.

Our results of the manipulation variable, *Logo Heritageness*, imply some mixed results for the heritage brands of Burberry and Versace. On one hand, as predicted from the theory and knowledge gathered in the literature review, it confirms that logos effectively make use of symbols to disseminate heritage (Urde, Greyser & Balmer, 2007). For example, Burberry's high heritage logo with an equestrian knight carrying a flag that contains a *B* and the Latin word, *prorsum*, obtained higher logo heritage scores than its low heritage logo which only contained the written Burberry word and *London England* (see Appendix section A). However, for Versace, no difference was obtained between its high heritage logo with the mythological Medusa head and its low heritage logo that only contains the written word of Versace (see Appendix section A). This may indicate that while some cultural and historical symbols can give personality, depth and mystery to the brands, it does not automatically create an aura of *heritageness* in a logo.

Furthermore, if the logos in the low heritage logo version are compared visually (see Appendix section A), they are similar due to lack of symbols and elements of brand heritage. It can be argued that the low heritage logo version of Burberry contains some element of brand heritage with *London England*; nevertheless, our results show Versace with higher logo *heritageness*

score than Burberry. This provides evidence that elements of brand heritage in logos may not be as influential as believed. In addition, it can imply that other factors involved have the potential of impacting logo *heritageness*, such as respondents seeing the low heritage logo and subconsciously relating back to the high heritage logo, which they are using as a reference point. The many possibilities further illustrate the complexities of logos and brands in general.

Our data on *Logo Heritageness* for the non-heritage brand of Calvin Klein shows that the redesigned logo – with our modification of adding, *Established in 1968* – was perceived to have lower heritage levels than the pre-redesign logo. A possible explanation for this result is the modification makes the high heritage logo unfamiliar to consumers; therefore, affecting the evaluation of *Logo Heritageness*. For Calvin Klein, a more simplified font is also used to write the brand's name. Other fashion brands such as Chanel, Céline and Saint Laurent's recent logo redesigns and chosen logo font are also in harmony with simplification. This appears to be a trend in this sector; hence, it seems reasonable that other fashion brands' logos are evolving too. The same way branding professionals can appreciate the current trends when designing the logos, they would also have strong reasons to redesign those logos and, in the case of Burberry, adapt them to new times. Currently, Burberry's logo is using a simplified font, but it maintains its English origin with the use of *London England* below its name in its logo (see Appendix A). The new version does not contain the equestrian knight; however, an element that relates to the provenance of the brand remains.

Consequently, this may indicate that the key aspect regarding the logo redesign for prosperous and recognisable brands is to find the balance between making adjustments that can successfully be perceived by the consumers, without fully losing its essence or completely redefining the logo (Müller, Kocher & Crettaz, 2011). Through visual comparison, the current version of Calvin Klein's logo (without our modification) is similar to the previous version. In addition, through Calvin Klein's Instagram post, the brand communicated that the intention of the redesigned logo is to “return to the spirit of the original” (Calvin Klein, 2017, n.p.). Thus, it is possible the new design purposely made only minor adjustments to ensure its logo maintains familiarity to its consumers.

Another possible explanation is the use of the previous logo, which has been an important part of Calvin Klein's identity for 25 years (Ahmed, 2017). According to an interview conducted with one of the fashion industry's leading art directors, Fabien Baron, the Calvin Klein logo was used so ubiquitously it became a “cultural reference” (Ahmed, 2017, n.p.). Thus, this may imply that our effort to further increase the *heritageness* of the new logo redesign was not effective; rather, it may have been more prudent to switch the Calvin Klein logos in the two questionnaires. Based on our observations of the low heritage logo version of Calvin Klein scoring higher than the high heritage logo version, this finding may have heavily impacted our analysis. However, based on the past research on logos, we interpret this more as a finding than a limitation. Additions of cultural, historic symbols or linkages to year of origin are methods to operationalise brand heritage (Hakala, Lätti & Sandberg, 2011). Yet in this case, it was not effective; hence, this illustrates that some ways to invoke brand heritage are not always adequate. Once again, it only supports our claim that the science behind logos are sophisticated.

5.1.2 Effects of Logo Redesign and Brand Heritage

Previous studies indicated that brand heritage can generate positive emotions (Balmer, Greyser & Urde, 2006; Merchant & Rose, 2013; Rose et al. 2016) and also increase perceptions of brand authenticity (Fritz, Schoenmueller & Bruhn, 2017; Pecot & De Barnier, 2017). The results in our study indicate some confirmation of past research; however, in the case of Burberry, we have observed some contradictions. Before we further discuss the mixed results, recall that in our pre-test high level analysis, we believed Burberry would have the highest HQ, followed by Versace, and then Calvin Klein with no or low HQ. While the mean scores in the pre-test survey met our expectations, further analysis showed that consumers perceive both heritage brands – Burberry and Versace - about the same level of *heritageness*, but still higher than Calvin Klein.

There are a couple of explanations for the pre-test results. First, the evaluation of brand heritage through a measurement such as the HQ is an extremely subjective process. We do not assume that all participants who responded to the survey performed a high-level analysis of the brand before or while being tested through the questionnaire. Therefore, it is likely participants have a preconceived notion of the brands through either past experience or previous exposure that may have affected their assessment of *heritageness* of the brands. Secondly, we also did not expect participants to fully understand the concept of brand heritage, which may also affect the interpretation of the statements, as well as the responses. Overall, we are satisfied with the results displaying that both Burberry and Versace had higher heritage mean scores than Calvin Klein. Regardless, there are a number of future improvements that can be made to our pre-test design. These future recommendations as well as pre-test limitations are expanded upon in the Conclusion section.

In our analysis, we saw that Burberry obtained a lower score on brand attitudes and perceived brand authenticity scores than Versace, even though our pre-test indicated they had similar brand heritage. To understand the reasons behind this, we may need to focus on how these heritage brands communicate. We have set a special focus on how Urde, Greyser and Balmer (2007) study heritage brands into five dimensions, one of them being the use of symbols, where logos are included. This paper has solely focused on logos to represent this dimension, nevertheless, a brand's visual identity are more than logos (Melewar, Basset & Simões, 2006; Melewar, Hussey & Srivoravilai, 2005; Urde, Greyser & Balmer, 2007). Some examples include patterns, uniforms, traditions, and even people that represent the brand. In the same manner it is imperative for a brand to stay true to its identity with the use of these symbols, it is also important that they are communicated and understood by the public, from customers to shareholders and employees.

In terms of use of symbols, Burberry is recognised by a pattern that has been used in textiles for decades. Their representative colours are light brown, red, white and black and the brand has achieved to be identified by it. In order to increase consumers' engagement on the new Burberry logo, the brand has created the Thomas Burberry monogram, using the same colours, that includes the letter *B* (Burberry, online, b). The same purpose has led the brand to create *The B Series*, with apparel using the pattern and the letter, *B*, as well as collaboration with artist to allow them to reinterpret the pattern by producing art (Burberry, 2018b). In contrast, the Medusa head represents a strong symbol for Versace, as the brand currently portrays the Medusa head made in gold as their identification for online sites – website and social media (Versace, n.d). Furthermore, it is believed that the Medusa head has origins from the founder's hometown in Reggio di Calabria in southern Italy, a region heavily influenced by the Greeks

for centuries (Gevril Group, 2019). Consequently, Versace's emblem not only represents a cultural symbol, but has roots in origins as well. Other symbols that the brand uses are Donatella Versace as a personification of the brand (Versace, 2018) and 'impossible' designs for runways and special events, such as the Met Gala, where celebrities display Versace's unique designs (Versace, 2019). Furthermore, Donatella Versace represents a continuity of the family name which, according to Bruhn et al. 2012, is an important aspect of brand heritage. Consequently, this continuation of the family name may be increasing perceived brand authenticity which improves brand heritage, and thus, boost brand attitudes.

Both brands are considered to be designing and producing upscale, high quality fashion, and owning and wearing it has attached certain level of social status. On one hand, Burberry has represented the classic English style for 163 years, and it has earned the reputation of being a reliable brand in terms of quality and sartorial style design (Burberry, 2019; Cooper, Miller and Merrilees, 2015). On the other hand, Versace's style is modern, unique and it embraces art and authenticity in every piece of fashion (Versace, n.d.). In terms of brand heritage, both are shielded on their place of origin: Burberry with England; Versace with one of the most fashionable countries by excellence: Italy. Although the target customer for both brands share some characteristics – middle and upper class, with high income and mostly adults from the age of thirty and onwards – their demographics, behaviour, interests and their objective when consuming any of the brands may differ. Consequently, the two brands may communicate in different manners.

Another possible explanation of Versace performance in our study is due to the media exposure of the Versace name. In 2018, a TV series was produced called, *The Assassination of Gianni Versace: American Crime Story* (Frost, 2018). According to Frost (2018), the series created popularity for the Versace name, and in the same year after it was released, Gianni and Donatella Versace's names appeared, first and third, on the list of top search queries on Google in the UK for fashion. Furthermore, the author states the show was nominated nine times at the 2018 Emmys and won three awards. This show is currently on the online streaming site, Netflix (Netflix, 2019). While the Versace family released a statement expressing that the family did not authorise production of the show and suggested that the story is fictitious (Miller, 2018); nonetheless, it is likely to have generated interest which may have an effect on brand attitudes and perceived brand authenticity of Versace.

On the other hand, from the non-heritage brand perspective, we selected Calvin Klein as the fashion brand that would be compared against the heritage brands. Contrary to past research in which brand heritage is linked with authenticity (Napoli et al 2014; Pecot & De Barnier, 2017), our study showed that Calvin Klein did not differ in perceived brand authenticity compared to Burberry (when ignoring logo version). Possible reasoning for this may relate less about brand heritage, and more about brand authenticity through consumer-brand connection. Furthermore, we also observed Calvin Klein having higher brand attitudes than Burberry. At other times, we did not see differences in brands when they were expected. There may be multiple reasons for these results in our study.

For instance, the last campaign, "I speak MY truth in MY Calvins" (Calvin Klein, online, b), Calvin Klein encourages the audience to be honest with themselves while creating a sense of a *safe* community, that eventually can lead to connection with the consumer. As a result, the

brand adds value to their offering and is able to connect with their target group. Moreover, Calvin Klein pursues a comfortable but inspirational and minimalistic style that can express “bold, progressive ideals” (Calvin Klein, online, c). The brand’s target group are young people, from teenagers to young adults, that are authentic and true to themselves (Calvin Klein, online, b). Therefore, Calvin Klein’s campaign and marketing helps the consumer build self-authentication with the Calvin Klein brand, thus increasing consumer-derived value that helps develop brand authenticity (Napoli, Dickinson-Delaporte & Beverland, 2015). The success of this campaign, together with the engagement achieved with the target group may explain the mixed results in our study.

In addition, the preconceived bias that a consumer has towards the brand may affect how the brand is evaluated. Communication through different forms of advertising as well as brand exposure is likely to influence the perception of the brand. Some of the optional comments in the survey for Calvin Klein included mention of influencer marketing. As we posted the surveys on social media, it is likely many participants were exposed to Calvin Klein’s use of influencer marketing such as through Kendall Jenner and Billie Eilish (Calvin Klein, online, b). Calvin Klein is also currently running advertisements on Facebook, as we have seen through on our Facebook Timelines. As a result, it is likely this played a role in the brand’s image.

The heritage brands of Burberry and Versace, and the non-heritage brand, Calvin Klein, represent different values, they have different target segments and they have different positioning; for this reason, they may be difficult to compare. This limitation is discussed in the following sections. Our sample is obtained through a convenience sampling method and was posted on social media, that included groups consisting of students. Moreover, students were likely to be found on the survey websites that we also posted on. Students may not typically be the target consumer for luxury fashion brands like Burberry or Versace. In fact, some participants in our questionnaire commented that Burberry was *too expensive, too pricey* or more related to having *status*. As a result, the demographics may play a role in affecting brand attitudes as well as perceived brand authenticity.

5.1.3 Moderating Effects of Logos on Brand Heritage

Our research into past studies from both brand heritage and logo redesign inspired us to hypothesise if there would be a moderating effect from logo redesign on brand heritage. In one of our results, we were able to observe that high heritage logo of Versace produced higher perceived brand authenticity than the low heritage version. This result was not repeated for Burberry. As previously mentioned, our data showed some expected results for brand heritage and logo version; however, it also contained unexpected observations. As a result, this only demonstrates the complexity surrounding these two variables.

Still, our study was able to uncover some interesting insights. For example, in the high logo heritage questionnaire, we observed Versace with higher brand attitudes than not only Burberry, but also Calvin Klein. This may imply that in this study, Versace’s Medusa head was most effective at communicating heritage, thus leading to higher mean values of brand attitudes. If this is the case, it would indicate cultural or historical symbols are indeed effective at expressing heritage. However, as implied by other results (e.g. *Logo Heritageness*), this observation should

be interpreted with caution. Since this is out of scope of our research, no additional quantitative tests are performed to test this premise.

Overall, our mixed results show that we cannot confidently conclude that there is no impact from logos on brand heritage; nor can we confirm that there is. The research we conducted only allows us to gather a small amount of insight into a very complex subject. There are many alternative theoretical frameworks that can be built to investigate this new stream of research. Moreover, the discussion we have had on our results and on the reasons behind the results are certainly not exhaustive. Further research must be conducted to investigate the full meanings behind our observations. Our analysis has allowed us to uncover some important implications that are both theoretical and practical, these will be discussed in the next section. In addition, the Conclusion section will provide limitations and lessons learned, as well as suggestions for future research.

6 Conclusion

The observation of trends in branding in several industries, and specially in fashion, has led us to wonder how logo changes are perceived for several stakeholders in general. Concurrently, this paper has reviewed the topics of logos, logo redesigns and heritage brands, and how these elements are either defined as broad concepts; as causalities to successful brands; and as motivators for positive outcomes and valuable brand perceptions. The combination of detecting the new trends that lead fashion companies to simplify their logos, along with searching for theories that permitted a further understanding about that issue has led us to pursue our aim in this paper: to investigate in which manner a logo redesign can affect heritage brands, in terms of brand attitudes and perceived brand authenticity generated among consumers.

From this position, we have successfully found arguments that have been able to support our intentions to do research. The starting point we have established is the relevance of logos in several roles. First, they constitute the very first stage of the brand-customer relationship. Second, they provide the brand with a sign that enables identification and differentiation from the competition. Third, they have the potential to generate revenues when the logos are perceived positively, and those attitudes motivate actions, such as sales. Finally, large investments are needed for the brand redesign implementation. We have found heritage brands to be the appropriate match in order to strengthen our point of view, due to their inclusion of brand heritage in the brand building process and their use of symbols to communicate it to other stakeholders, especially consumers. Previous studies and theories relating brand heritage and its effects have also supported our claim. They have served as a guiding point to elaborate our theoretical framework, linking four suitable variables and establishing the relationships between them in order to lead our research purposes: *Brand Heritage*, affecting *Brand Attitudes* and *Perceived Brand Authenticity*; and *Logo Version* as a variable with the potential to moderate these relationships. Some hypotheses have been phrased to respond to the research question previously formulated, splitting the aim into smaller parts that can be more easily tested.

The methodology we have pursued consists of the use of quantitative methods, linked to an internal realism and positivist approach as research philosophy. The sampling method and questionnaire design have been effective in order to obtain our data during the data collection process. After the data analysis, the results have shown that H1 and H2 that explicitly related to heritage brands have been rejected for the Burberry case; however, Versace's case is significant in H2, where it is established that heritage brands would generate a higher perceived brand authenticity when the logo version represents more brand heritage. The results are aligned with the previous literature in terms of the brand heritage effect, that produces positive attitudes. Nevertheless, only one of the cases has been satisfactory, with Versace's logo having an impact on perceived brand authenticity for a heritage brand. This sets a precedent for further exploration on the topic, with either repetition with other cases, or some other considerations that could improve the theoretical framework or the research method. More details regarding these considerations can be found in the subsection, Limitations. Furthermore, our hypotheses

that relate to the non-heritage brands could not be supported by the results obtained. As explained earlier, the use of other brands or differences in the Methodology section could alter this result.

Overall, this constitutes one of the first research papers in attempting to create theoretical and managerial knowledge that combines two aspects in branding that we find to have potential: the effects of different logo versions for heritage brands. After setting the precedent, we encourage new types of research to be performed, which can broaden the understanding of this new stream.

6.1 Theoretical Implications

Our examination on brand heritage and logo redesigns has several theoretical implications. Firstly, our study combines two important streams of academic research. One of these streams relates to the study of logos, logo redesign and the effects of logos on consumers, from changes on brand perception and logo attitudes to the actual consumption of the brand. The other stream is dedicated to the study of brand heritage and its enhancement in a brand's identity, converting it into a heritage brand with certain features that make them special. We consider the combination of these two streams to be relevant as we have proved there exists a connection between them. As far as we are aware, analysis on the potential synergies from these two topics is extremely underdeveloped. As a result, we believe this study is one of the first of its kind. Therefore, the methods, data collected, and analysis completed in our thesis provides important knowledge that not only helps develop this nascent field of research on the effects of logos for heritage brands, but operates as a constructive starting point for any future studies. While our main focus is only on the fashion industry, we believe many similar concepts can be translated to other industries as well, an exercise that allows for the generalisation of this knowledge.

Secondly, our thesis contributes to previous studies on logos and logo redesign. The results from our analysis on the manipulation variable *Logo Version*, measured in terms of logo *heritageness* confirms that a logo redesign, and the use of symbols, especially those that closely relate to the brand, can influence how consumers perceive the logo. In our case, the use of symbols such as the equestrian knight may play a role in influencing the participant to perceive the logos as more heritage. Furthermore, our results for Versace support previous literature, stating that logos may be able to shape brand perceptions. Consequently, this signifies that the degree of logo redesign is relevant. Brands may use recognisable cultural or historical elements in their logos to communicate their value proposition, brand promise, origin or history, as part of their identity. Nonetheless, our *Logo Heritageness* results with the non-difference between the Versace logo versions reminds us to not become fully reliant on logos. Instead, the brand's identity and communication with key stakeholders might also play an important role in the heritage brand's success, as the connection between those symbols and consumers can increase brand commitment (Walsh, Page Winterich & Mittal, 2010).

Our study also adds to the importance of brand management. Based on our pre-test, it is important to note that logo redesigns do not immediately erase the time invested to build a

brand. For example, Burberry's logo redesign occurred August of last year (Burberry, 2018c); however, the results show it scored the highest in terms of brand heritage, even though, the logo used is the low heritage version. This implies that while logos are important to a brand, the strategies and investments that built up the brand over the years are not only essential, but can provide long-term benefits.

Lastly, our research also adds to the literature for brand heritage. Previous research in brand heritage found that heritage can influence attitudes (Balmer, Greyser & Urde, 2006; Frizzo, Korelo & Müller Prado, 2018; Rose et al. 2016; Merchant and Rose, 2013). In our case, we confirmed this result: the highest brand attitudes score was obtained by the brand Versace, whereas for perceived brand authenticity, both heritage brands (Burberry and Versace) scored the highest. For instance, past studies have also suggested that brand heritage can provide brand value through authenticity (Merchant and Rose, 2013; Urde, Greyser & Balmer, 2007). With respect to our expectations during this research, we predicted to find significant differences on the effects that logo versions generate on heritage brands. Nonetheless, only one out of six of the cases was successful. There are many possible explanations for the reason of divergence in our study; however, our study suggests that high heritage logos may not be as impactful to attitudes for heritage brands. In summary, we can reiterate that logo redesigns are relevant in some cases, for example in some situations involving the use of cultural symbols. Still, there is much exploration to be done regarding brand heritage and the use of high heritage logotypes, and our thesis contributes to academia by providing additional knowledge to this developing subject.

6.2 Managerial Implications

In addition to our theoretical implications, there are also managerial implications that result from our paper. First, in accordance with other research (Bolhuis, de Jong & van den Bosch, 2018; Walsh, Page Winterich & Mittal, 2010; Walsh, Page Winterich & Mittal, 2011), logo redesigns should be carefully managed. Not only can they be extremely expensive (Stamper, 2013) but our research results indicate that they may not be as impactful as previously recognised. Nonetheless, it is not to say they are unimportant, but rather managers should weigh the cost and benefits before undertaking a process that affects the entire organisation.

Another important implication for managers is that while realising logo redesigns can be used to signify change (Banerjee, 2008a); the perception of the customer does not immediately shift. Previous existing attitudes for brands can persist even after a logo is redesigned. This also means that certain attributes and characteristics, positive or negative, can endure. Consequently, managers should not only look to logo redesigns for the all-inclusive solution to their problems, instead, it should be used to complement their overall brand management strategy. In other words, the logo redesign is only one tool in a manager's toolbox that can assist with brand management.

Lastly, it is believed that brand managers can implement heritage in order to differentiate and add value to their consumers (Urde, Greyser & Balmer, 2007). Results in our studies show that

some brand managers may be able to see some advantages from implementing brand heritage. However, it is important to note that this may not always be the case. One example in the fashion industry is Tiger of Sweden, a brand that recently redesigned its logo and included more elements that related to its brand heritage, as part of a new era for the brand (Tiger of Sweden, 2019a). As previously mentioned, these brand and business strategies are complex and it takes time for their effects to be noticed. For this reason, the results of this case are not available yet. In addition, our analysis implies that embracing brand heritage in the brand's identity does not automatically translate into having better performance than a brand with no or low heritage. For instance, as seen with the non-heritage brand, Calvin Klein, it is possible to have higher brand attitude than a heritage brand (e.g. Burberry). As a result, we argue that brand managers should choose whether or not to incorporate brand heritage by ensuring it aligns with the overall message of the brand. Through strategic brand management, managers with consistent communication in all aspects of the brand including the logo, are likely to be the most effective.

6.3 Limitations

This subsection contains limitations to our study. These limitations are not to discredit our research thesis, but rather are *lessons learned* while conducting our experiment and interpreting our results and analysis. Furthermore, it is used to build constructive criticism and a self-evaluation of our study that can lead to potential solutions and better designs that can be recommended to future researchers.

6.3.1 Research Design

Our research study is based on a quantitative design, thus, the results obtained are closely related to the type of method chosen for this paper. In combination with these, we encourage the use of other research designs in order to broaden the knowledge on how different logo versions can affect heritage brands. For instance, the use of qualitative methods can provide a greater understanding behind the responses in a more authentic and real-world environment (Easterby-Smith et al. 2018). In our study, implementation of qualitative methods can provide more in-depth comprehension behind our results, for example, understanding the basis for why the outcome for the heritage brand, Burberry, did not perform as expected. It is important to note; our research method is closely linked to the research philosophy to which we identified ourselves. Thus, when using qualitative methods, it is essential to review the author's perception of reality and the assumptions they establish to ensure they are aligned.

Specifics about the questionnaire design should also be considered. Participants may be affected when seeing three brands consecutively. For example, in our questionnaires, Burberry's logo is presented, then Calvin Klein, followed by Versace. Seeing Burberry logo first, then Calvin Klein's, or seeing the Versace logo last may cause respondents to subconsciously compare logos when undergoing testing. This may have unintended consequences on our results. A possible solution is to create an alternative design which separates the two questionnaires into six individual ones. Another issue with the questionnaire design may be the specific use of a

certain statement for *Perceived Brand Authenticity*. While all measures we implemented into our experiments are from published articles from the past and have likely been reapplied for other studies over many years, it is important nonetheless to be critical. Again, this is not done in order to discredit work from previous researchers, but rather seek improvements for the future. One of the statements we use to measure authenticity includes the use of a negative statement. According to Easterby-Smith et al. (2018, pp.493), one of their principles in survey design “is to avoid the use of negatives”. The authors state that in the English language, negatives are used to give a sentence or statement the contradictory meaning by adding *no* or *not* to verbs. Therefore, they argue that this can not only confuse the reader which decreases accuracy of results, but can also create interpretation issues when responding on a Likert scale – which we use in our thesis. Consequently, a simple solution for future research is to refrain from using measurements that consist of negatives in their statements.

From our observations of the two logo versions of Calvin Klein, it is possible our results were strongly impacted by our misallocation of the high and low heritage logos of Calvin Klein. Surprisingly, our adaptation of the redesigned version of the Calvin Klein logo was ineffective at portraying high levels of logo *heritageness*. This is a possible limitation to our study; however, as previously mentioned, we interpret this more as a finding.

6.3.2 Sampling Method

Another limitation is the sampling method applied to obtain the sample for this research. As previously mentioned, our samples are obtained through a convenience sample using social media, as well as survey websites. While less time and resources are required for this method, we are unable to determine sampling error or dependability of the sample (Burns & Burns, 2008). In addition, convenience sampling limits our ability to generalise the results to the larger population (Burns & Burns, 2008; Easterby-Smith et al. 2018).

In addition, the demographics of our sample is constituted by any adult (over 18) with no preference to a particular nationality. Due to time constraints, we believe this is the most effective way of quickly obtaining our desired sample size. However, differences in demographics can have an impact on our results. For example, people that are older may have a different perception than younger people for the different brands. Additionally, there can also be ethnic or cultural differences that may affect attitudes towards the brands. For instance, Burberry ran a Lunar New Year advertisement in China that was criticised by people of Chinese descent (Handley, 2019). We asked our sample for their continent of origin in our study; however, the sample sizes within each nationality are not only too small, but they are also not within the scope of this thesis for that type of analysis. Other demographic factors such as, marital status, education and employment, are also likely to affect our study. The section below on Future Research provides recommendations to collect this information.

6.3.3 Time and Budget Constraints

As previously mentioned, time and budget constraints are both limitations to our study. With more time, we may be able to implement probability sampling as well as obtain a larger sample size. In addition, our study could include, as an example, supplemental qualitative interviews that could provide a greater understanding in some of our research results. With a budget, we would be able to adopt specialised software in statistics and market research, such as Qualtrics, which can help provide a number of benefits, for instance increasing flexibility and a better visual design of our survey (Qualtrics, 2019). Furthermore, a budget would allow us to gift participants with a small reward, or provide them with the opportunity to enter a draw for a larger prize, which can enhance data quality (Easterby-Smith et al. 2018).

6.3.4 Industry and Brand Selection

Our study focuses on fashion brands, therefore, research findings and insights may not be relatable to other industries, for example, the automotive industry. As previously mentioned, our introduction and argumentation start with the observation of logo redesign in this specific industry, thus, we believed our paper should investigate fashion brands for consistency. Moreover, the fashion industry offers some advantages, such as the ease to find heritage and non-heritage brands that had undergone logo redesigns. Furthermore, fashion brands are quite prevalent on social media and popular culture; therefore, their high brand exposure increases their recognisability among more people. This sector is also characterised by fast and saturated market where brands need to add value to their offering, as well as connect with their customers to succeed. Sectors with other characteristics might obtain different results.

In regard to our brand selection, we are confident with our selection of heritage and non-heritage brands. In order to ensure the recognisability of the brands, we stated as an important factor in our study that participants needed to be able to answer each brand's section in the questionnaires, otherwise, their data would not be used. In our original planning phase, Tiger of Sweden was the fashion brand chosen before Versace. However, this brand has less international presence, and in general, its scope is lower compared to any of the brands selected for the research (Tiger of Sweden, 2019b). For this reason, we decided to continue with Versace instead. This was likely the correct choice, as approximately 67 respondents were not aware of either Burberry or Versace. We believe this number would have been significantly higher if Tiger of Sweden had been included.

Finally, we believe that choosing closer competitors to the brands selected may have different results in our study. The selected brands might not be comparable, as their promise, value proposition and positioning are very different. More homogeneous brands can provide with other insights. For example, while Burberry and Versace are both in the luxury fashion market, it can be debated that Calvin Klein is not. Still, the brand selection process had some difficulties attached when attempting to find a non-heritage brand in the luxury market with different logo versions, as our research indicated many fashion houses in this market attach their brand with their heritage.

6.4 Future Research

As previously mentioned, while there is research in both heritage brands and logo design or redesign, the studies combining the two are scarce. Therefore, there is significant potential for not only academic discovery but also business insights that can be obtained to help build this underdeveloped subject. We believe there is more exploration needed to fully understand the complexities of this topic, thus, our research can inspire and generate more interest for other academics and researchers. We also have several suggestions that can assist future research.

First, we would recommend incorporating brand commitment into the experimental design. Due to time constraints, we were unable to include this aspect into our research study. As was pointed out in the literature review, brand commitment relates to the consumers' readiness to be engaged with the brand (Japutra, Keni & Nguyen, 2015). However, previous studies on logo redesign found important insights when integrating brand commitment into their research. For example, in their study, Walsh, Page Winterich and Mittal (2010) found that consumer brand attitudes varied when logos were redesigned, depending on their level of commitment. In their study, after a logo is redesigned, they observed that consumers with weak brand commitment had higher brand attitudes than those with strong brand commitment. In another study by the same authors (2011), as consumer brand commitment increases, their brand attitude decreases when exposed to inconsistent information such a redesign in the logo. If related back to our study, it can be argued that brand commitment may have played a role in our study; however, this speculation cannot be proven. Overall, brand commitment can be relevant in not only our research, if it were to be repeated, but to other future studies as well. Our recommendation in order to use brand commitment is to operationalise this concept, so that different levels of brand commitment can be assessed to each test-subject. This suggestion is specially provided for future research that aims at repeating the research approach taken in this paper.

Another recommendation is to attempt to control for past experience or knowledge of a brand. In our study, we used real brands and real logos, with exception to the high heritage logo of Calvin Klein that included a minor modification. As mentioned, fashion brands have the benefit of being well-known internationally; however, the same universality may have also impacted our results as previous knowledge, current events, or familiarity with the brand may influence brand attitudes and perceived brand authenticity. For instance, it is possible the TV show about Gianni Versace, the recent campaign ad by Burberry in China, and Calvin Klein's current advertising campaign all have influenced the respondents in our surveys, therefore, impacting their brand attitudes, as well as perceived brand authenticity for each of the brands in different ways. As a result, suggestions for future research include participant testing through the creation of fictitious brands. The fictional heritage brand can be created through narrative storytelling elements or providing a myth (Hudson & Balmer, 2013).

While our study collected nationalities, other important demographic information was omitted. Age range, ethnicity, as well as employment and income data can provide valuable insights. By obtaining this knowledge, a more complete picture can be created that provides understanding towards how differences between individuals influence brand attitudes and perceived brand authenticity. For example, a larger sample with demographic data could potentially allow us to

see if brand attitude or perceived brand authenticity was skewed from the Lunar New Year campaign Burberry ran in China (Handley, 2019). Another insight can be obtained by observing if the results for the luxury heritage brands are different for older respondents with higher income levels. These are all important factors that allow for more comprehensive understanding of this subject. Therefore, future research should include these demographic statistics to improve analysis. In addition, by including random probability sampling with demographic information, findings may be generalised to a larger population (Easterby-Smith et al. 2018).

Moreover, subsequent research can employ mixed research methods that combine both quantitative as well as qualitative methods. According to Easterby-Smith et al. (2018, p.233), proponents for mixed methods argue that it “will increase the validity and generalizability of results and the potential theoretical contribution”. Furthermore, mixed methods can not only allow for observations of results, but also the motivations behind the results. By combining qualitative research with our quantitative methods, future researchers can uncover the reasons for the unexpected results of the heritage brand, Burberry, when compared to Calvin Klein. In addition, we suggest further investigation on some of the other mixed results of our studies, such as the explanation for not observing significant differences between the heritage brands and the non-heritage brands. This allows for a greater understanding and analysis for the outcomes of research.

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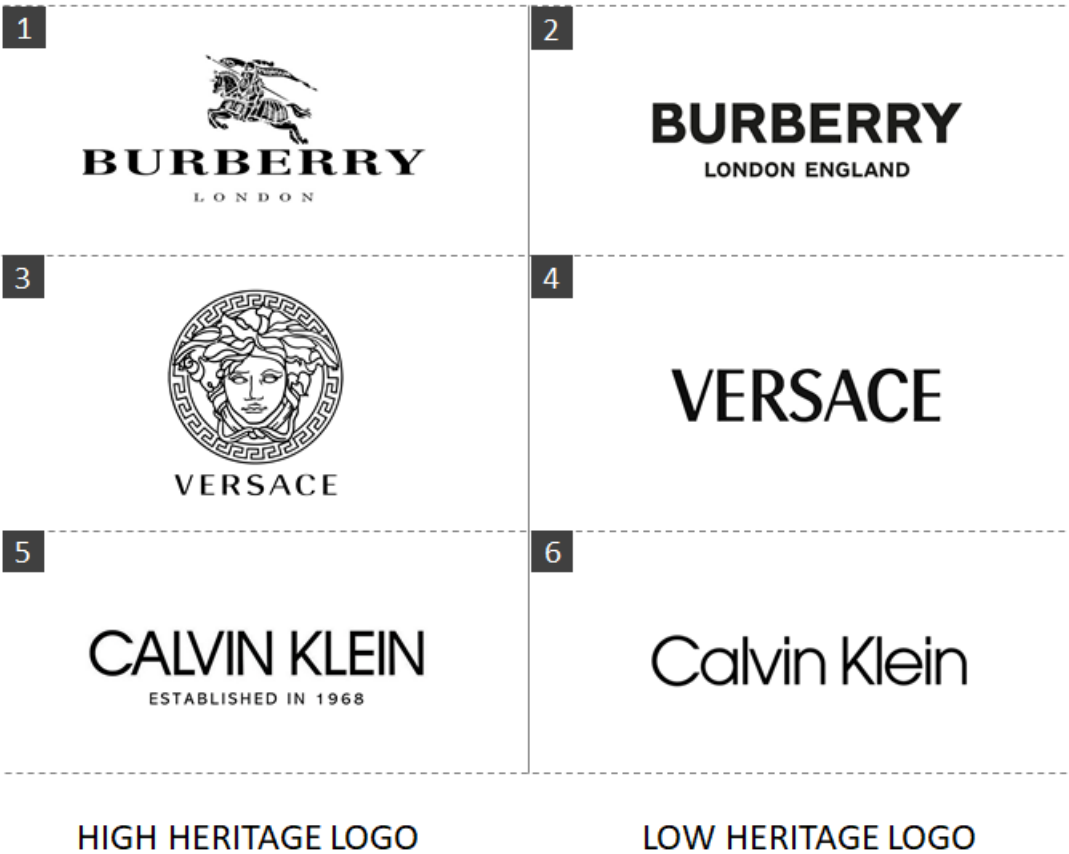
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Appendix A: Brand logos

Brand logos used in the main test. On the left, the logos that represent brand heritage in the questionnaire “Logotypes A”. On the right, the logos that represent some or no brand-heritage in the questionnaire “Logotypes B”. The brands represented, from top to bottom, are Burberry (1 and 2), Versace (3 and 4) and Calvin Klein (5 and 6).

The logos that these brands are currently using are Burberry (2), Versace (3) and Calvin Klein (7) (see next page).



Source: (1) World Vector Logo (online, a); (2) Burberry (2018c); (3) Gianni Versace S.p.A. (2015); (4) World Vector Logo (online, b); (5) adapted from Calvin Klein (2017); (6) World Vector Logo (online, c). The figure above is adapted by authors.

Calvin Klein logo modification for its use in the main test. To the left, the original and current Calvin Klein logo. To the right, the modified logo used in the main test.

7

CALVIN KLEIN

CALVIN KLEIN

ESTABLISHED IN 1968

CURRENT CALVIN KLEIN LOGO

MODIFIED CALVIN KLEIN LOGO

Source: (7) Calvin Klein (2017). The figure above is adapted by authors.

Appendix B: Main test online questionnaire

First page of the online questionnaire “Logotypes B” used for the main test.

Logotypes B

Thank you for taking time to participate in this questionnaire for and Master's thesis research. Please take time to carefully read through the instructions.

There are a total of 4 sections. Through the first one we collect demographic information for the study. For sections 2 to 4 show you will be shown an image and some statements below, please read carefully and select the response that is closer to your thoughts. There are no right or wrong answers and you are not timed.

It is estimated to take approximately 10 mins to finish the whole questionnaire.

There is no collection of personal information. Any information collected is for the purpose of the study.

* Required

1. Are you above 18 years old? *

Mark only one oval.

- Yes
 No *After the last question in this section, stop filling out this form.*

2. What is your gender? *

Mark only one oval.

- Male
 Female
 Other
 Prefer not to say

3. Continent of origin *

Mark only one oval.

- Europe
 North America
 South America
 Asia
 Africa
 Australia/Oceania
 Prefer not to say

4. Do you consent with us using your responses for research purposes? *

Mark only one oval.

- Yes
- No *Stop filling out this form.*

<https://docs.google.com/forms/d/1uOBCLpsACHO2JAvLoXq3OeSUYMCKFRLKOtFTo7vdHX4/edit>

Second page of the online questionnaire “Logotypes B” used for the main test, including the Burberry brand pre-section. This section’s purpose is to ensure that the respondents recognise the brand before proceeding to respond to the statements related to it.

Section 2

BURBERRY
LONDON ENGLAND

5. I have heard of, seen, bought or used this brand *

Mark only one oval.

- Yes
- No *Skip to question 16.*

<https://docs.google.com/forms/d/1uOBCLpsACHO2JAvLoXq3OeSUYMCKFRLKOtFTo7vdHX4/edit>

Third page of the online questionnaire “Logotypes B” used for the main test, including the Burberry brand section. This section’s purpose is to collect respondents’ perception of logo *heritageness*, brand attitudes and perceived brand authenticity.

Burberry

Please view the logo and select appropriate responses.

BURBERRY

LONDON ENGLAND

6. The logo reflects a sense of tradition *

Mark only one oval.

	1	2	3	4	5	6	7	
Strongly disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly agree

7. The logo reinforces and builds on heritage *

Mark only one oval.

	1	2	3	4	5	6	7	
Strongly disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly agree

8. The logo reflects a timeless design *

Mark only one oval.

	1	2	3	4	5	6	7	
Strongly disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly agree

9. The brand is bad/good *

Mark only one oval.

	1	2	3	4	5	6	7	
Very bad	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very good

10. The brand is a potent symbol of quality *

Mark only one oval.

	1	2	3	4	5	6	7	
Strongly disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly agree

11. The brand is undesirable/desirable *

Mark only one oval.

	1	2	3	4	5	6	7	
Very undesirable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very desirable

12. The brand makes a genuine impression *

Mark only one oval.

	1	2	3	4	5	6	7	
Strongly disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly agree

13. The brand is awful/nice *

Mark only one oval.

	1	2	3	4	5	6	7	
Very awful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very nice

14. The brand does not seem artificial *

Mark only one oval.

	1	2	3	4	5	6	7	
Strongly disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly agree

15. Additional Comments (optional)

<https://docs.google.com/forms/d/1uOBClpsACHO2JAvLoXq3OeSUYMCKFRLKOiFTo7vdHX4/edit>

After the Burberry brand section, the next brand is shown in the same format (question number 16). However, the Calvin Klein brand and Versace brand sections are omitted in the Appendix due to spatial reasons.

The last page of the questionnaire “Logotypes B” used for the main test.

Thank you for your participation

If you would like to know the results of the study, please email us:

@student.lu.se

@student.lu.se

<https://docs.google.com/forms/d/1uOBClpsACHO2JAvLoXq3OeSUYMCKFRLKOiFTo7vdHX4/edit>

The second questionnaire “Logotypes A” used in the main test follows the same structure and includes the same questions. However, the logos used are the high heritage logos shown in Appendix A. This questionnaire is omitted in the Appendix due to spatial reasons.

Appendix C: Pre-test online questionnaire

First page of the online questionnaire “Brand Heritage” used for the pre-test.

Brand Heritage

Thank you for taking time to participate in this questionnaire for _____ and _____ Master’s thesis research. Please take time to carefully read through the instructions.

This is the first part of our research about brands with heritage in the fashion sector. We would like to know your opinion on this aspect for three different brands. There are a total of 4 sections. Through the first one we collect demographic information for the study. For sections 2 to 4 show you will be shown an image and some statements below, please read carefully and select the response that is closer to your thoughts. There are no right or wrong answers and you are not timed.

It is estimated to take approximately 7 mins to finish the whole questionnaire.

There is no collection of personal information. Any information collected is for the purpose of the study.

* Required

1. Are you above 18 years old? *

Mark only one oval.

Yes

No *After the last question in this section, stop filling out this form.*

2. What is your gender? *

Mark only one oval.

Male

Female

3. Continent of origin *

Mark only one oval.

Europe

North America

South America

Asia

Africa

Australia/Oceania

Prefer not to say

4. Do you consent with us using your responses for research purposes? *

Mark only one oval.

Yes

No *Stop filling out this form.*

https://docs.google.com/forms/d/1ZM1mFjy29C2DLrbSktO_E6fogFGPJ2H6ZBHlsUT0IJ4/edit

Second page of the online questionnaire “Brand Heritage” used for the pre-test, including the Burberry brand pre-section. This section’s purpose is to ensure that the respondents recognise the brand before proceeding to respond to the statements related to it.

Section 2

Please see the brand below and input the appropriate responses.

BURBERRY
LONDON ENGLAND

5. I have heard of, seen, bought or used this brand *

Mark only one oval.

Yes

No *Skip to question 12.*

https://docs.google.com/forms/d/1ZM1mFjy29C2DLrbSktO_E6fogFGPJ2H6ZBHlsUT0IJ4/edit

Third page of the online questionnaire “Brand Heritage” used for the pre-test, including the Burberry brand section. This section’s purpose is to collect respondents’ perception of brand Heritageness.

Burberry

BURBERRY

LONDON ENGLAND

6. The brand has a strong connection to an historical period in time, culture and/or specific region. *

Mark only one oval.

	1	2	3	4	5	6	7	
Strongly disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly agree

7. The brand has a strong link to the past, which is still perpetuated and celebrated to this day. *

Mark only one oval.

	1	2	3	4	5	6	7	
Strongly disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly agree

8. The brand reminds me of a golden age *

Mark only one oval.

	1	2	3	4	5	6	7	
Strongly disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly agree

9. The brand exudes a sense of tradition *

Mark only one oval.

	1	2	3	4	5	6	7	
Strongly disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly agree

10. The brand reflects a timeless design *

Mark only one oval.

	1	2	3	4	5	6	7	
Strongly disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly agree

11. Additional Comments (optional)

https://docs.google.com/forms/d/1ZM1mFjy29C2DLrbSktO_E6fogFGPJ2H6ZBHlsUT0IJ4/edit

After the Burberry brand section, the next brand is shown in the same format (question number 12). However, the Calvin Klein brand and Versace brand sections are omitted in the Appendix due to spatial reasons.

The last page of the questionnaire “Brand Heritage” used for the pre-test.

Thank you for your participation

If you would like to know the results of the study, please email us:

@student.lu.se

@student.lu.se

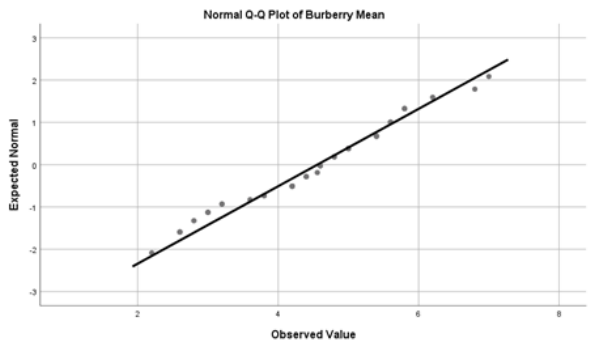
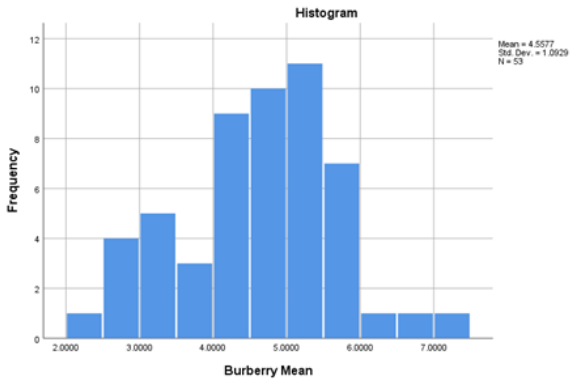
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Appendix D: Normality tests for the Pre-Test

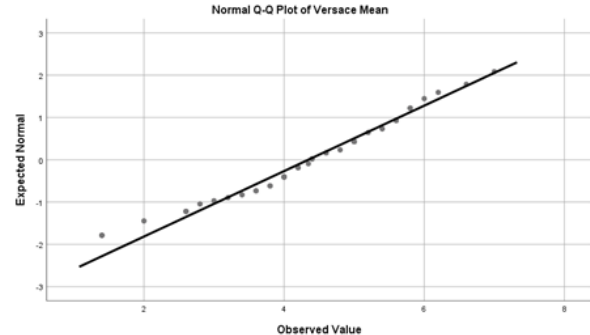
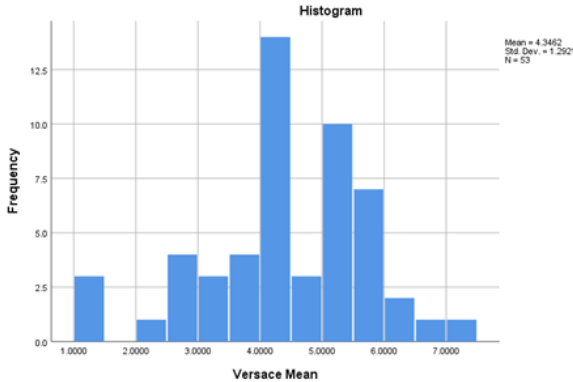
The following figure includes the Histogram and Normal Q-Q Plot for the variable Brand Heritage in three levels: Burberry, Versace and Calvin Klein.

NORMALITY TESTS: BRAND HERITAGE

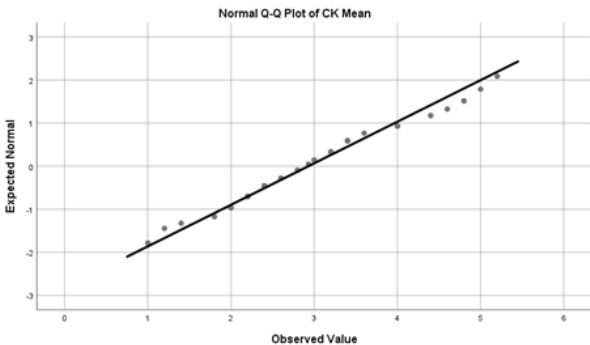
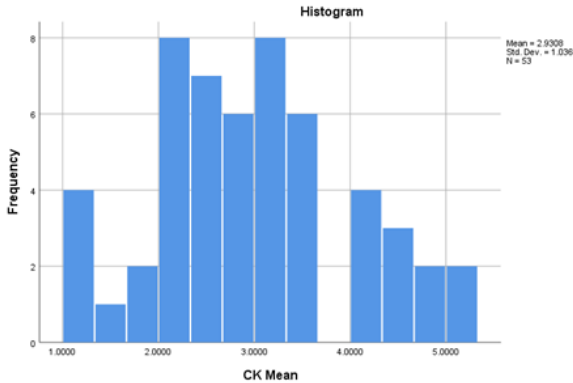
BURBERRY



VERSACE



CALVIN KLEIN

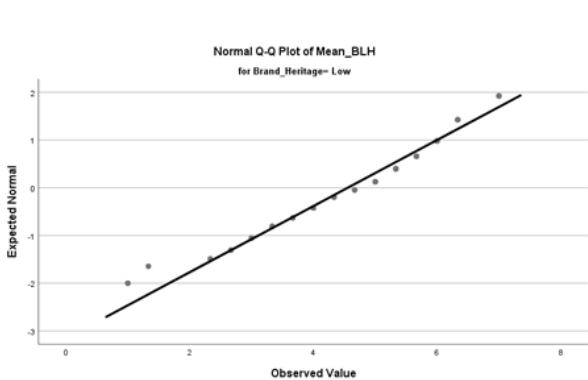
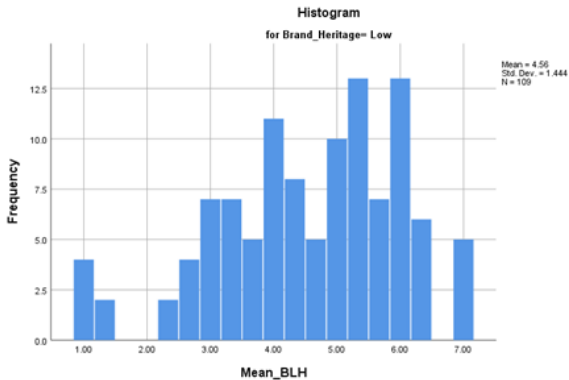


Appendix E: Normality tests for the Main Test

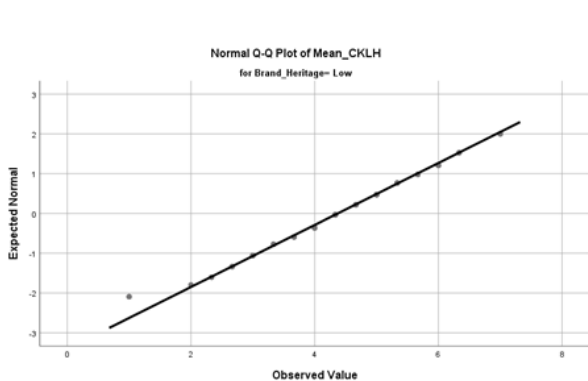
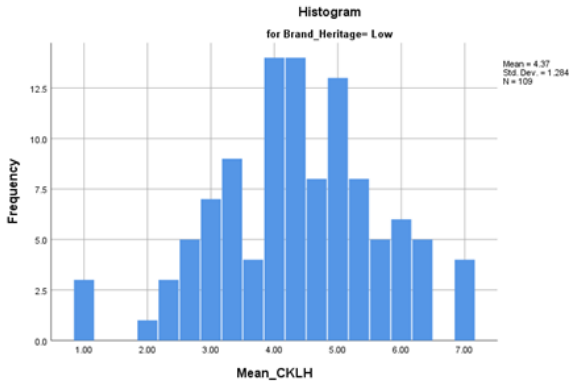
The following figure includes the Histograms and Normal Q-Q Plots for the variable Logo *Heritageness* in the low heritage logo questionnaire, in three levels: Burberry, Calvin Klein and Versace.

NORMALITY TESTS: LOGO HERITAGENESS – LOW HERITAGE LOGO QUESTIONNAIRE

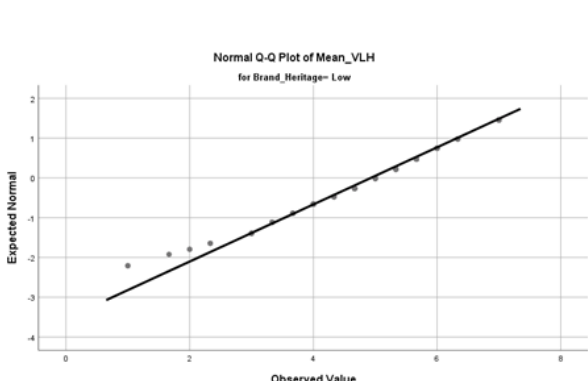
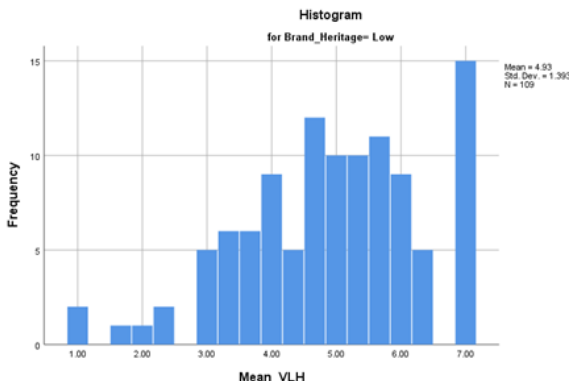
BURBERRY



CALVIN KLEIN



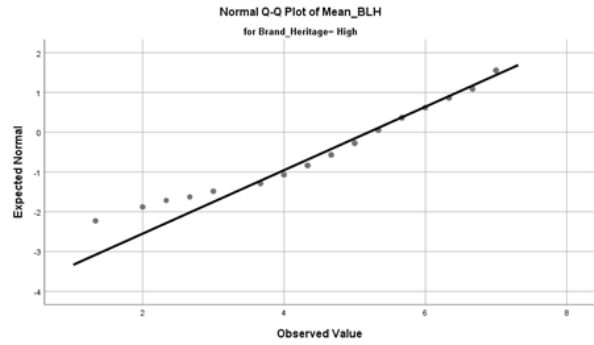
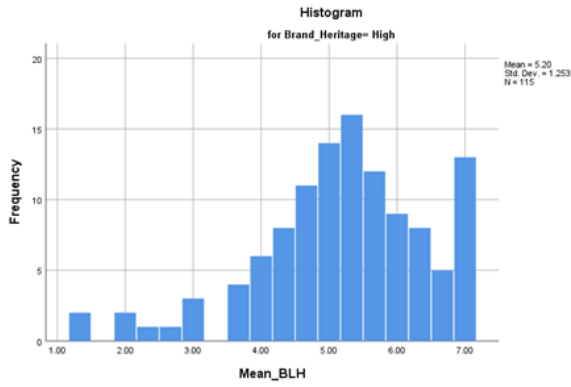
VERSACE



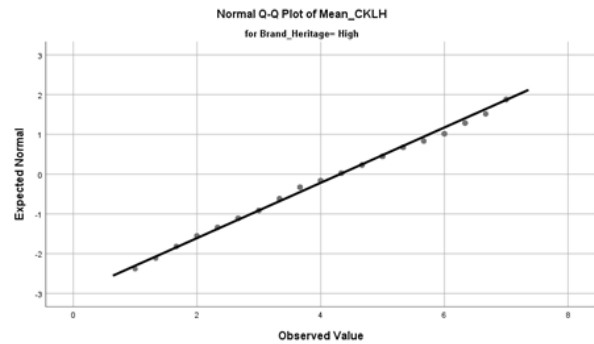
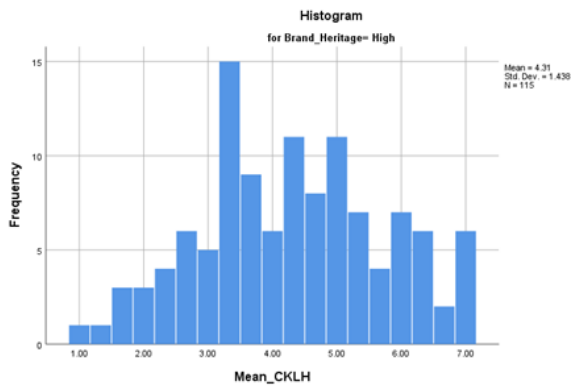
The next figure includes the Histograms and Normal Q-Q Plots for the variable Logo *Heritageness* in the high heritage logo questionnaire, in three levels: Burberry, Calvin Klein and Versace.

NORMALITY TESTS: LOGO *HERITAGENESS* – HIGH HERITAGE LOGO QUESTIONNAIRE

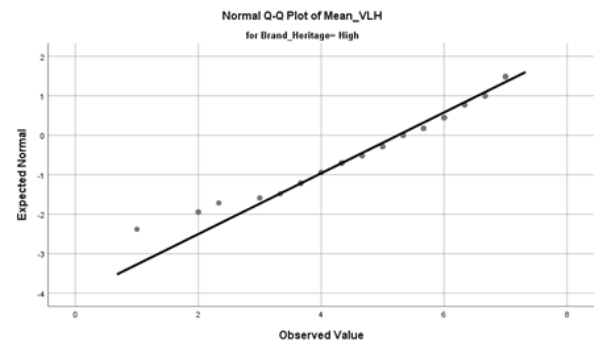
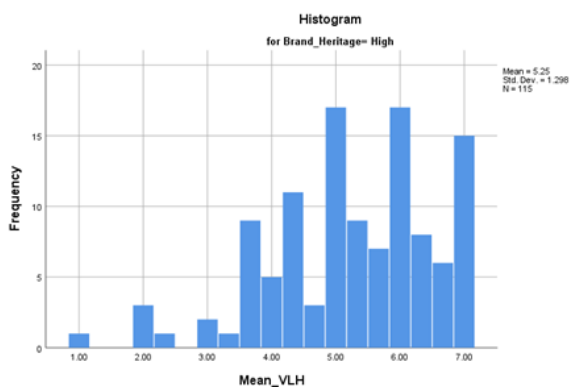
BURBERRY



CALVIN KLEIN



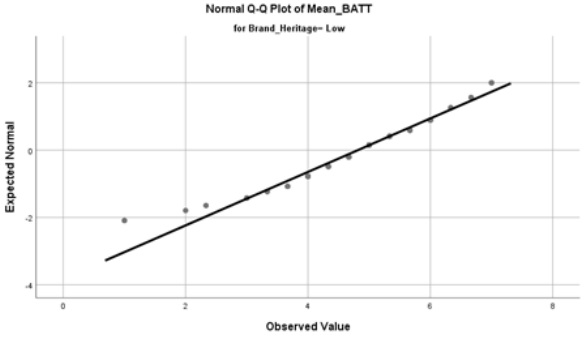
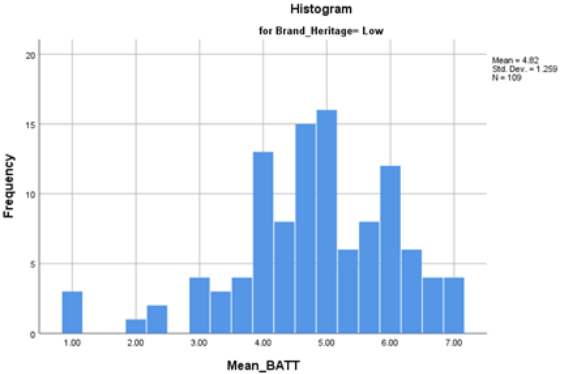
VERSACE



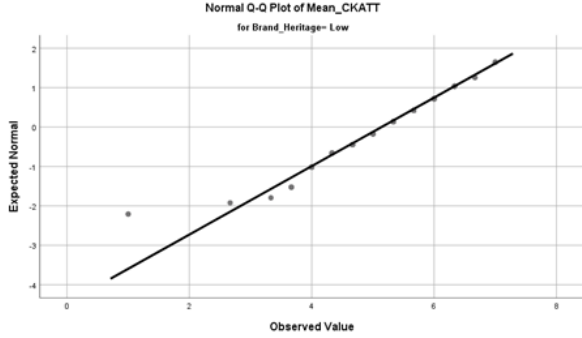
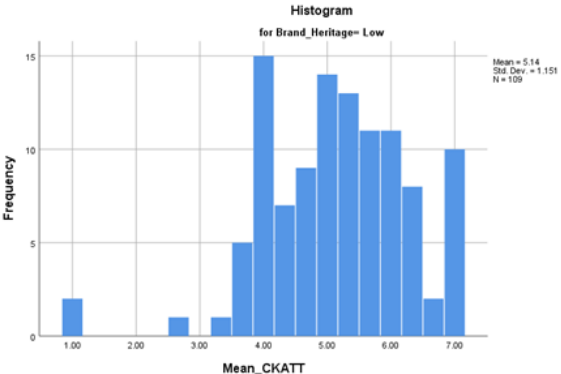
The following figure includes the Histograms and Normal Q-Q Plots for the variable Brand Attitudes in the low heritage logo questionnaire, in three levels: Burberry, Calvin Klein and Versace.

NORMALITY TESTS: BRAND ATTITUDES – LOW HERITAGE LOGO QUESTIONNAIRE

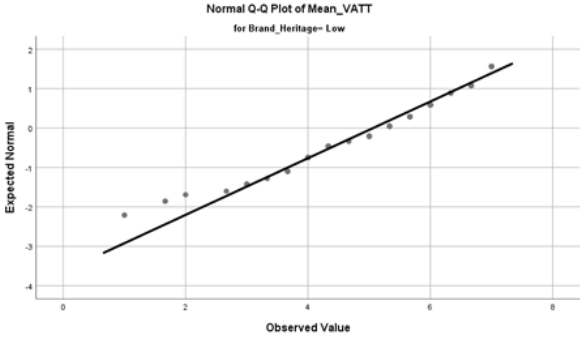
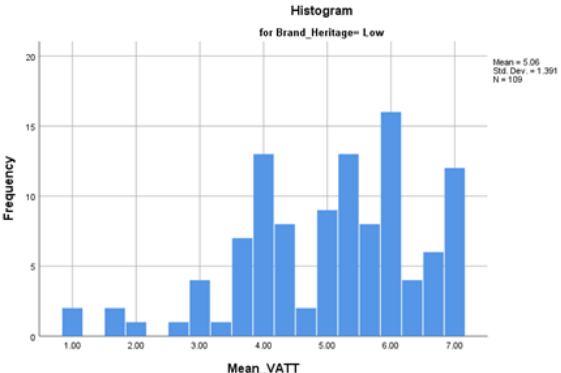
BURBERRY



CALVIN KLEIN



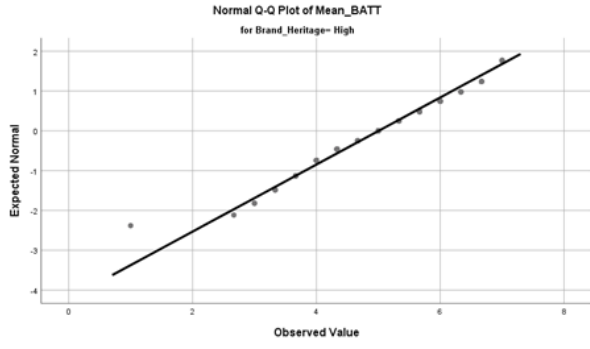
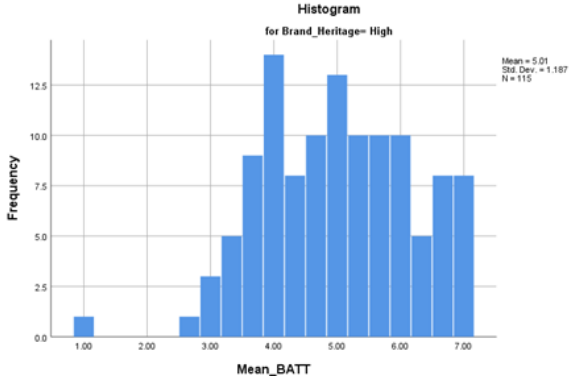
VERSACE



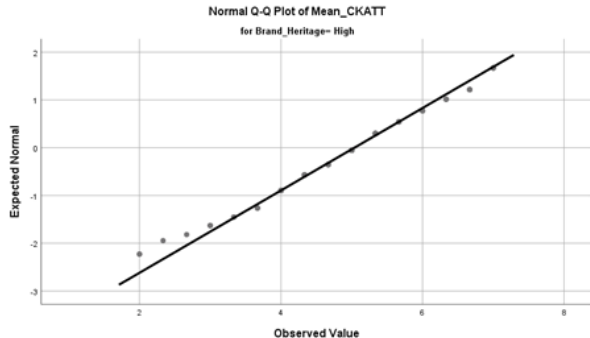
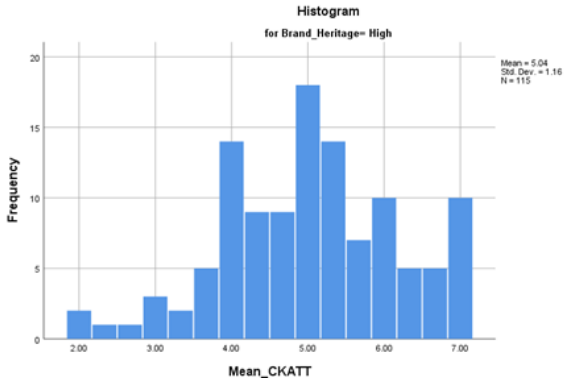
The next figure includes the Histograms and Normal Q-Q Plots for the variable Brand Attitudes in the high heritage logo questionnaire, in three levels: Burberry, Calvin Klein and Versace.

NORMALITY TESTS: BRAND ATTITUDES – HIGH HERITAGE LOGO QUESTIONNAIRE

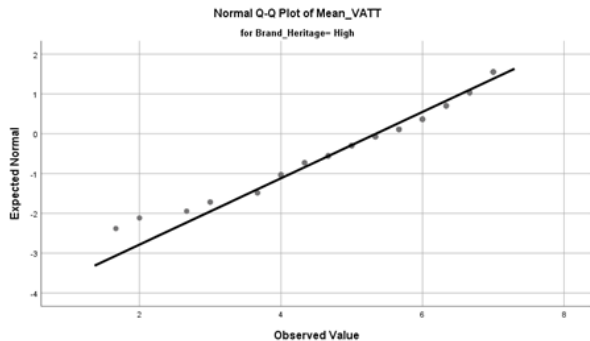
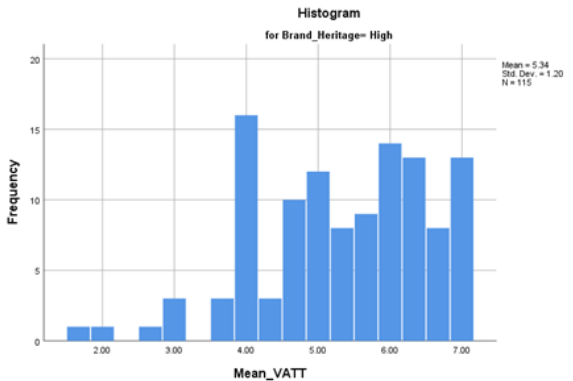
BURBERRY



CALVIN KLEIN



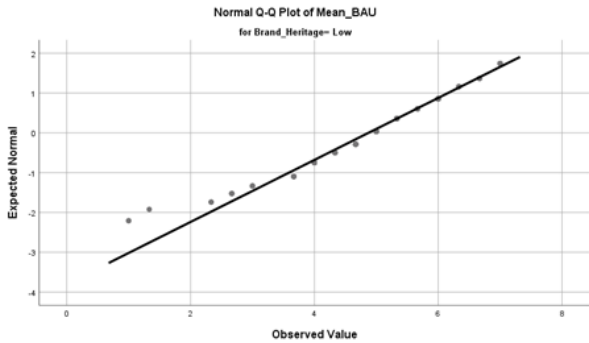
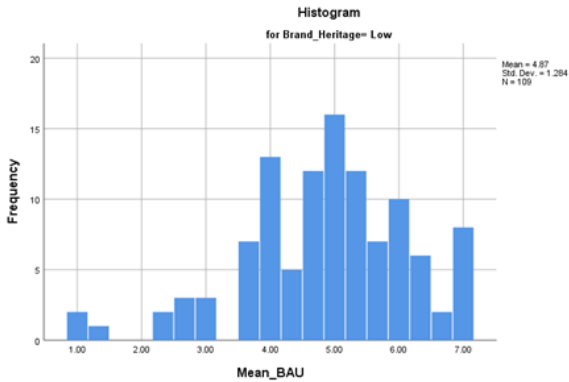
VERSACE



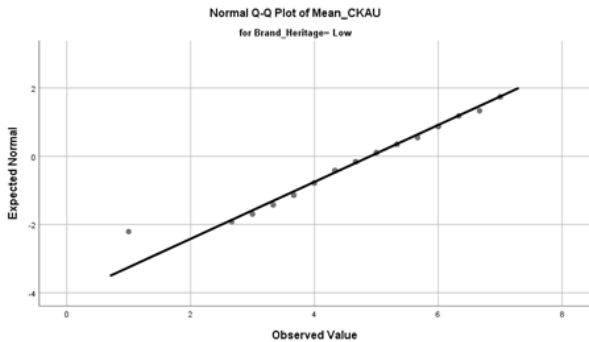
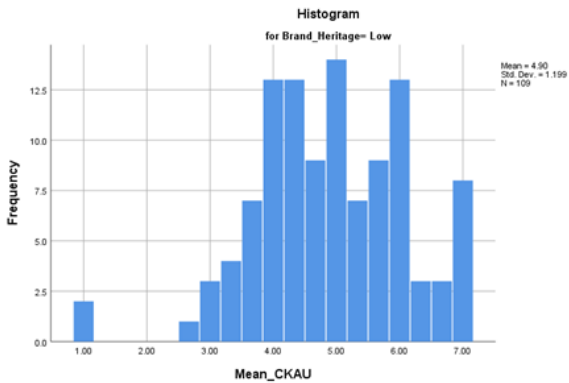
The last two figure includes the Histograms and Normal Q-Q Plots for the variable Perceived Brand Authenticity. The following one belongs to the low heritage logo questionnaire, in three levels: Burberry, Calvin Klein and Versace.

NORMALITY TESTS: PERCEIVED BRAND AUTHENTICITY – LOW HERITAGE LOGO QUESTIONNAIRE

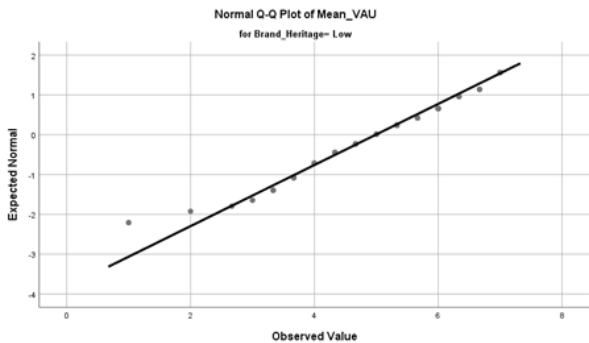
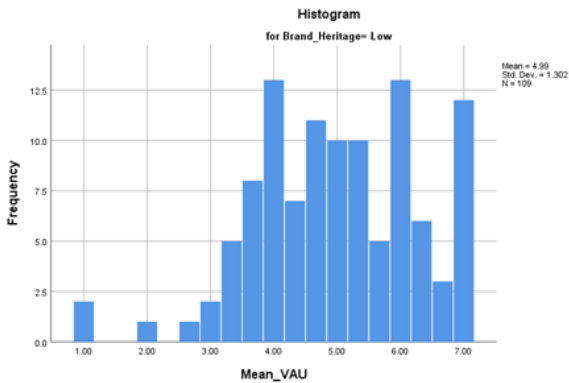
BURBERRY



CALVIN KLEIN



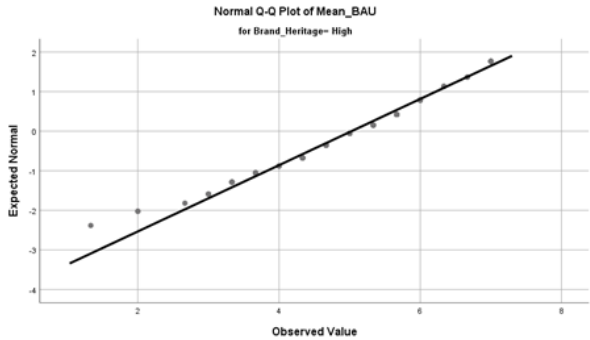
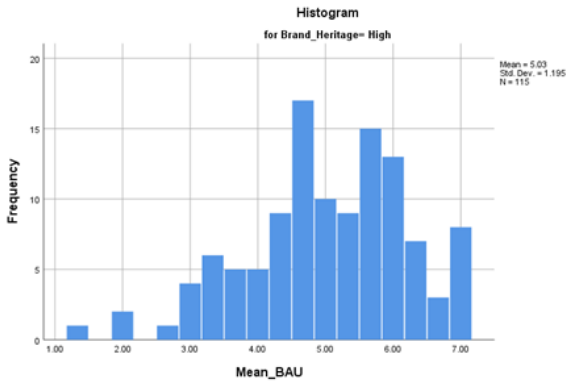
VERSACE



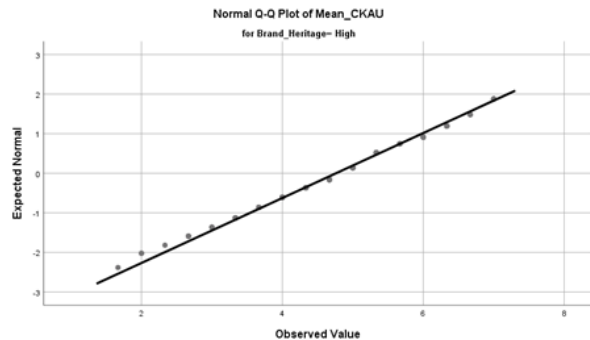
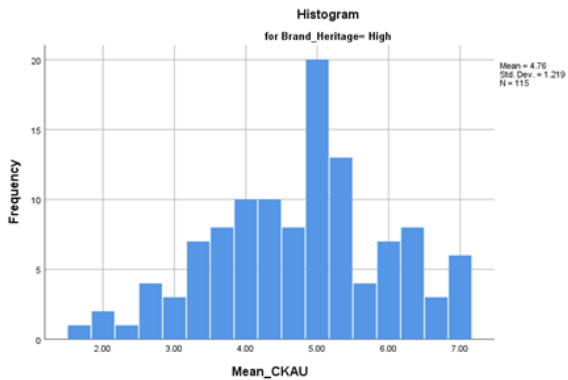
To finish with, this figure includes the Histograms and Normal Q-Q Plots for the variable Perceived Brand Authenticity in the high heritage logo questionnaire, in three levels: Burberry, Calvin Klein and Versace.

NORMALITY TESTS: PERCEIVED BRAND AUTHENTICITY – HIGH HERITAGE LOGO QUESTIONNAIRE

BURBERRY



CALVIN KLEIN



VERSACE

